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RADIO'S MASTER

SIXTEENTH EDITION

OFFICIAL

PARTS and EQUIPMENT MANUAL

of the

RADIO, TELEVISION & ELECTRONIC INDUSTRY

What to Buy and Where to Buy It

- **ILLUSTRATIONS**
- **DESCRIPTIONS**
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SIXTEENTH EDITION

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F-55	Electro-Mechanical Instrument Co.
F-56, 57	Shurite Meters
F-58, 59	Sterling Manufacturing Co.
F-60, 61	Chicago Industrial Instrument Co.
F-62 to 67	J-B-T Instruments, Inc.
F-68 to 71	Radio City Products Co., Inc.
F-72 to 74	Jackson Electrical Instrument Co.
F-75 to 79	Boonton Radio Corporation
F-80 to 85	Browning Laboratories, Inc.
F-86	Precise Measurements Co.
F-87 to 89	Electronic Measurements Corp.
F-90 to 99	Hickok Electrical Instrument Co.
F-100	Freed Transformer Co., Inc.
F-101	Oak Ridge Products
F-102, 103	Industrial Instruments, Inc.
F-104, 105	Superior Instruments Co.
F-106, 107	Waterman Products Co., Inc.
F-108, 109	Beam Instruments Corp.
F-110 to 112	Electronic Instrument Co., Inc.

SECTION G

PILOT, DIAL LIGHTS AND ASSEMBLIES—INSTRUMENT FUSES—DRY DISC, INSTRUMENT RECTIFIERS

G-1	General Electric Company
G-2 to 11	Dial Light Co. of America
G-12, 13	Bussmann Manufacturing Co.
G-14 to 17	Littelfuse, Inc.
G-18, 19	Sarkes Tarzian, Inc.
G-20	Federal Telephone & Radio Corp.
G-21	Conant Laboratories
G-22	Radio Receptor Co., Inc.
G-23	Schauer Mfg. Corp.
G-24	Bradley Laboratories, Inc.
G-25	International Rectifier Corp.

SECTION H

BOOKS—MANUALS—RADIO DATA SERVICES

H-1 to 6	John F. Rider Publisher, Inc.
H-7	American Radio Relay League
H-8, 9	Howard W. Sams & Co., Inc.
H-10, 11	Rinehart Books, Inc.
H-12, 13	Editors & Engineers, Ltd.
H-14	D. Van Nostrand Co., Inc.
H-15	Radio Corporation of America
H-16	Boyce-Roche Book Co.

SECTION J

COMMUNICATION RECEIVERS—TRANSMITTERS—AMATEUR EQUIPMENT AND ACCESSORIES—VARIABLE CAPACITORS—COILS—INSULATORS—METAL RACKS, CABINETS, PANELS, ETC.

J-1 to 18	National Company, Inc.
J-19	Harvey-Wells Electronics, Inc.
J-20 to 23	The Hallicrafters Company
J-24, 25	Radio Mfg. Engineers, Inc.
J-26 to 32	James Millen Mfg. Co., Inc.
J-33 to 44	E. F. Johnson Company
J-45 to 47	Hammarlund Mfg. Co., Inc.
J-48 to 50	J. W. Miller Company
J-51 to 55	Allen D. Cardwell Mfg. Corp.
J-56 to 59	Barker & Williamson, Inc.

SECTION J (Con.)

Section & Page	*Name of Manufacturer*
J-60 to 62	Meissner Div. Maguire Industries
J-63	Stanwyck Winding Co.
J-64	Decimeter, Inc.
J-66 to 71	Par-Metal Products Corp.
J-72 to 81	Bud Radio, Inc.
J-82 to 86	Insuline Corporation of America

SECTION K

RECEIVER KITS—TELEVISION KITS—TELEVISION ACCESSORIES—CRYSTALS

K-1	The Radio Craftsmen, Inc.
K-2, 3	Espey Mfg. Co., Inc.
K-4, 5	Tech-Master Products Co.
K-6 to 8	Philmore Mfg. Co., Inc.
K-9	Allen B. DuMont Labs.
K-10, 11	Radio Corporation of America
K-12, 13	Radio Merchandise Sales, Inc.
K-14	Brach Mfg. Corp.
K-15	Anchor Radio Corporation
K-16	Standard Coil Products Co., Inc.
K-17	Regency Div. I.D.E.A., Inc.
K-18, 19	Bliley Electric Company
K-20 to 22	Petersen Radio Co., Inc.
K-23	James Knights Co.

SECTION L

SWITCHES—JACKS—PLUGS—RELAYS—PHOTO ELECTRIC UNITS—TELEGRAPH KEYS & PRACTICE SETS

L-1 to 7	P. R. Mallory & Co., Inc.
L-8, 9	Switchcraft, Inc.
L-10, 11	Micro Switch
L-12	General Electric Company
L-13	General Control Company
L-14, 15	Centralab Div. Globe-Union, Inc.
L-16	Tech Laboratories, Inc.
L-17	Federal Anti-Capacity Switch Corp.
L-18, 19	Guardian Electric Mfg. Co.
L-20 to 23	Potter & Brumfield
L-24 to 26	Advance Electric & Relay Co.
L-27	Amperite Company, Inc.
L-28	Standard Electrical Products Co.
L-30, 31	Worner Electronic Devices
L-32	Vibroplex Co., Inc.

SECTION M

DRY BATTERIES—BATTERY ELIMINATORS, CHARGERS, POWER SUPPLIES—POWER CONVERSION EQUIPMENT—GENERATORS, CONVERTERS—VIBRATORS, PACKS—VARIABIE VOLTAGE TRANSFORMERS & CONTROLS

M-1	Radio Corporation of America
M-2 to 5	Burgess Battery Company
M-6 to 9	National Carbon Division
M-10, 11	General Dry Batteries, Inc.
M-12 to 14	Specialty Battery Co.
M-16, 17	Mueller Electric Co.
M-18	James Vibrapowr Co.
M-19 to 29	P. R. Mallory & Co., Inc.
M-30 to 37	American Television & Radio Co.
M-38, 39	Cornell-Dubilier Electric Corp.
M-40	Schauer Mfg. Corp.
M-41	Electro Products Labs., Inc.
M-42, 43	Superior Electric Co.
M-44 to 47	Carter Motor Company
M-48	Gothard Manufacturing Co.
M-49 to 51	Sola Electric Company
M-52 to 55	Radiart Corporation
M-56	Raytheon Mfg. Co.

(For Detailed General Index of Specific Items and Their Page Numbers, Refer to Back of Book)

Numerical Index of Manufacturers' Display Pages *(Concl.)*

SECTION N

TRANSFORMERS, ALL TYPES—REACTORS—CHOKES

Section & Page	*Name of Manufacturer*
N-1 to 16	Standard Transformer Corp.
N-17	General Electric Company
N-18 to 28	Triad Transformer Mfg. Co.
N-29	The Gramer Company
N-30 to 33	Thordarson Div., Maguire Industries
N-34	Freed Transformer Co., Inc.
N-35 to 53	United Transformer Corporation
N-54, 55	Halldorson Company
N-56 to 59	SNC Manufacturing Company
N-60 to 67	Merit Transformer Corp.
N-68 to 70	Altec Lansing Corp., Peerless Div.
N-71	Thermador Electrical Mfg. Co., Inc.
N-72 to 77	Chicago Transformer Div. Essex Wire
N-78, 79	Crest Transformer Corp.
N-80 to 82	Standard Electrical Products Co.

SECTION P

FIXED CAPACITORS, ALL TYPES—
NOISE & INTERFERENCE FILTERS—
CAPACITOR TEST INSTRUMENTS
(See Section J for Variable Capacitors)

P-1 to 20	P. R. Mallory & Co., Inc.
P-21 to 23	General Electric Company
P-24 to 45	Cornell-Dubilier Electric Corp.
P-46	Condenser Products Co., Inc.
P-47 to 66B	Aerovox Corporation
P-67	Chicago Condenser Corp.
P-68, 69	Jennings Radio Mfg. Co.
P-70 to 81	Sprague Products Company
P-82 to 85	Industrial Condenser Corp.
P-86 to 91	Arco Electronics, Inc.
P-92 to 95	Erie Resistor Corporation
P-96 to 105	Sangamo Electric Company
P-106 to 109	Centralab Div. Globe-Union, Inc.
P-110, 111	Astron Corporation
P-112 to 118	Illinois Condenser Corp.

SECTION R

RESISTORS—VOLUME CONTROLS—BALLASTS—
DECADES, BRIDGES—NOISE FILTERS & SUPPRESSORS
—RHEOSTATS, POTENTIOMETERS, ATTENUATORS
(See Section P for additional Resistors)

R-1 to 3	Wirt Company
R-4 to 9	Clarostat Mfg. Co., Inc.
R-10 to 20	P. R. Mallory & Co., Inc.
R-21 to 23	Continental Carbon, Inc.
R-24, 25	Centralab Div. Globe-Union, Inc.
R-26 to 35	International Resistance Co.
R-36 to 39	Shallcross Manufacturing Co.
R-40 to 43	Ohmite Manufacturing Co.
R-44, 45	Ward Leonard Electric Co.
R-46, 47	Lectrohm, Inc.
R-48	Amperite Company, Inc.

SECTION S

WIRE AND CABLE, ALL TYPES—
ANTENNAS FOR TELEVISION, FM, AM, AUTO—
ANTENNA SYSTEMS—ANTENNA ACCESSORIES

Section & Page	*Name of Manufacturer*
S-1 to 12B	Alpha Wire Corporation
S-12C	Master Mobile Mounts, Inc.
S-13 to 19	Belden Manufacturing Co.

SECTION S *(Con.)*

S-20, 21	Cornish Wire Co., Inc.
S-22 to 39	Birnbach Radio Co., Inc.
S-40, 41	Wm. Brand & Co.
S-42	Beam Instruments Corp.
S-43	Federal Telephone & Radio Corp.
S-44	Copperweld Steel Co.
S-45	Pierceway Div. Clifton Conduit Co.
S-46 to 51	Walter L. Schott Co.
S-52 to 57	Ward Products Corporation
S-58 to 62	Technical Appliance Corp.
S-63 to 65	Premax Products
S-66	Workshop Associates, Inc.
S-67 to 69	Radiart Corporation
S-70	Alliance Manufacturing Co.
S-71	Radio Corporation of America
S-72	Baker Manufacturing Co.
S-73 to 75	LaPointe Plascomold Corp.
S-76 to 81	J. F. D. Mfg. Co., Inc.
S-82, 83	Radelco Mfg. Co.
S-84, 85	Spirling Products Co., Inc.
S-86 to 88	Telrex, Inc.
S-89 to 91	Cornell-Dubilier Electric Corp.
S-92, 93	Insuline Corporation of America

SECTION T

CABLE CONNECTORS, RECEPTACLES, FITTINGS—
MICROPHONE CONNECTORS, PLUGS—
SOCKETS AND PLUGS—TERMINAL STRIPS

T-2 to 12	American Phenolic Corporation
T-14, 15	Eby Sales Company
T-16 to 21	Cannon Electric Co.
T-22 to 31	Howard B. Jones Div. Cinch Mfg.
T-32 to 37	Cinch-Jones Sales Div. Cinch Mfg.

SECTION U

TOOLS: SOLDERING IRONS, PLIERS, WRENCHES,
SCREWDRIVERS, NUTDRIVERS, PUNCHES, CUTTING
TOOLS, NEUTRALIZING & ALIGNMENT TOOLS—
CHEMICALS, OILS, PAINTS, ETC.—
HARDWARE, SERVICE AIDS OF EVERY DESCRIPTION

U-1	American Electrical Heater Co.
U-2, 3	Drake Electric Works, Inc.
U-4, 5	General Electric Company
U-6, 7	Hexacon Electric Company
U-8	Electric Soldering Iron Co., Inc.
U-9	Kwikheat Mfg. Co.
U-10	Ungar Electric Tool Co., Inc.
U-11	Weller Electric Co.
U-12	Kester Solder Co.
U-13	Multicore Sales Corp.
U-14	Alpha Metals, Inc.
U-15	Vaco Products Company
U-16 to 19	Park Metalware Co., Inc.
U-20 to 23	Kraeuter & Company, Inc.
U-24, 25	Utica Drop Forge and Tool Corp.
U-26, 27	Greenlee Tool Co.
U-28	U. S. Engineering Co.
U-29	Harry Davies Molding Co.
U-30	Rogan Brothers
U-31	Elmenco Products Co.
U-32 to 41	Jay Specialty Parts Co.
U-42 to 45	Telegraph Apparatus Co.
U-46	United Technical Laboratories
U-47 to 57	Herman H. Smith, Inc.
U-58 to 79	Walter L. Schott Co.
U-80 to 83	J.F.D. Mfg. Co., Inc.
U-84 to 109	General Cement Mfg. Co.
U-110, 111	Chas. O. Larson Co.
U-112 to 131	Insuline Corporation of America

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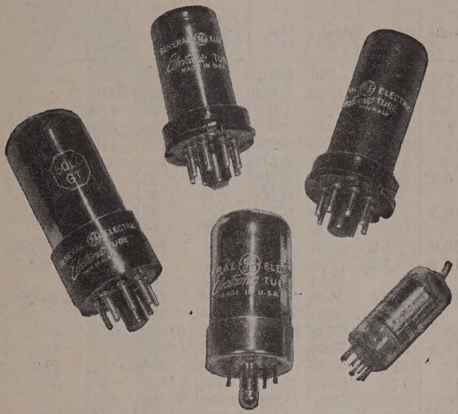
Electronic TUBES

RECEIVING TYPES

metal
glass
miniature
television picture



A receiving tube for every radio equipment need! General Electric's complete line offers you a wide selection of metal, miniature and glass types. The G-E monogram means tops in quality and performance. A few receiving types are listed below—Ask for complete prices and ratings!

Type	Price
1B3-GT	$2.65
1R5	2.00
1T4	2.00
1U4	2.00
1U5	1.80
1X2-A	2.65
3S4	2.00
3V4	2.00
5U4-G	1.50
5Y3-GT	1.25
6AB4	1.80
6AL5	1.80
6AQ5	2.00
6AU6	2.00
6AV5-GT	2.65
6AV6	1.50
6BC5	2.00
6BA6	1.80
6BE6	1.80
6BF5	2.20
6BG6-G	4.80
6BN6	2.90
6BQ6-GT	3.20
6C4	1.65
6CB6	2.00
6CD6-G	6.00
6J6	2.65
6K6-GT	1.65
6S4	1.80

Type numbers of metal tubes are shown in bold-face type.

G-E Germanium Diodes

1N48	$1.40
1N51	.85
1N52	2.85
1N63	6.35
1N64	1.20
1N65	1.40

Television Picture Tubes

5TP4	$ 60.00
7JP4	25.00
8AP4	24.20
8AP4A	24.20
10BP4	34.00
10BP4A	34.00
10FP4	39.30
10FP4A	39.30
12KP4	41.70
12KP4A	41.70
12LP4	34.85
12LP4A	34.85
14CP4	35.30
16AP4	58.65
16AP4A	58.65
16GP4	49.50
16KP4	49.50
16KP4A	55.50
17BP4A	44.00
17BP4B	50.00
19AP4	65.50
19AP4A	65.50
20CP4	69.75
24AP4	111.00

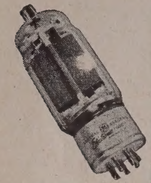
Type	Price
6SA7	$1.65
6SN7-GTA	2.20
6SK7	1.65
6SQ7	1.50
6T8	2.90
6V6-GT	2.00
6W4-GT	1.80
6W6-GT	2.00
6X4	1.50
6X5-GT	1.50
12AT7	2.90
12AU7	2.40
12AV6	1.50
12AX7	2.40
12BA6	1.80
12BE6	1.80
12SA7	1.65
12SK7	1.65
12SQ7	1.50
19T8	2.90
25AV5-GT	2.65
25BQ6-GT	3.20
25L6-GT	1.65
25W4-GT	2.00
35C5	2.00
35W4	1.25
35Z5-GT	1.35
50C5	2.00
50L6-GT	1.80

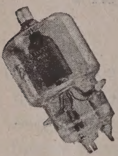
Type numbers of miniature tubes are shown in italics

Prices and other data subject to change without notice.

GENERAL ELECTRIC

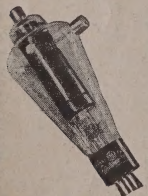
TRANSMITTING AND INDUSTRIAL ELECTRONIC TUBES


GL-813 Pliotron


GL-592 Pliotron

GL-7D21 Pliotron

GL-502A Midget Thyratron


FG-95 Thyratron

PLIOTRONS—GRID-CONTROLLED HIGH-VACUUM TUBES FOR USE AS MODULATORS, AMPLIFIERS, OSCILLATORS

Type No.	Price	No. of Electrodes	CATHODE		PLATE				MAX. FREQ. MC.	
			Volts	Amp.	Max. Volts	Max. Amp.	Max. Input, Watts	Max. Dissipation, Watts	@ Max. Plate Input	@ 50% Max. Plate Input
GL-2C39	$41.50	3	6.3	1.1	350	0.045	15.8	4.8	500	....
GL-2C43	29.00	3	6.3	0.9	500	0.040	16.7	6.7	3370	....
⊙GL-7D21	285.00	4	6.3	30.0	4000	1.0	3000	1200	110	....
◈GL-9C24	550.00	3	6.3	240.	6500	2.0	12000	5000	220	....
GL-592	33.00	3	10	5.0	3500	0.250	600	200	110	....
GL-805	13.50	3	10	3.25	1500	0.210	315	125	30	80
GL-807	2.50	5	6.3*	0.90	600	0.100	60	25	60	125 @ 55%
					750	**0.100**	**75**	**30**		
GL-812-A	4.05	3	6.3	4.00	1250	0.175	175	45	60	100 @ 55%
					1500	**0.175**	**260**	**65**		
GL-813	16.00	5	10.0	5.00	2000	0.180	360	100	30	60 @ 75%
GL-814	14.25	5	10.0	3.25	1250	0.150	180	50	30	100
					1500	**0.150**	**225**	**65**		
⊙GL-833-A	49.50	3	10.0	10.0	4000	0.500	1800	400	30	75 @ 72%
					4000	**0.500**	**2000**	**450**		
◈GL-862-A**	1322.00	3	33	207.0	20000	10.00	200000	100000	1.6	....
◈GL-880	483.00	3	12.6	320.0	15000	4.5	67500	20000	25	100
◈GL-889-A	210.50	3	11	120	8500	2.00	16000	5000	50	150
⊙GL-889-R-A ★	285.00	3	11	120	8500	2.00	16000	5000	40	100
◈GL-893-A★	630.00	3	10§	61.0§	20000	4.00	70000	20000	5	40
⊙GL-893A-R★	1150.00	3	10§	61.0§	20000	4.00	70000	20000	5	25
GL-8000	14.50	3	10	4.5	2500	0.300	750	175	30	100
◈GL-8002	150.00	3	16	38	3500	1.00	3000	1200	150	300
⊙GL-8002-R	173.00	3	16	38	3500	1.00	3000	1200	120	200

Figures in bold type are ICAS ratings.
*Heater-type cathode.
★Lower prices apply when new tube is purchased and radiator in good condition is returned prepaid, to Schenectady.
**Credit for return, prepaid, to Schenectady—carton $5.00; tube $10.00.

§Single-, three-, or six-phase filament. Voltage is per strand, current is per terminal.

⊙Forced-air cooled type.

◈Water-cooled type.

THYRATRONS— GRID-CONTROLLED GASEOUS-DISCHARGE-RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		ANODE			Starting Grid Voltage
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp	
GL-3C23	$12.50	3	2.5	7.0	1250	6.0	1.5	Neg
FG-27-A	23.00	3	5.0	4.5	1000	10.0	2.5	Neg
FG-105	48.00	4	5.0	10.0	2500	40.0	6.4	Var
			‡5.5	11.0	750	77.0	2.5	Var
			‡5.5	10.0	10000	16.0	4.0	Var
FG-172	65.00	4	5.0	10.0	2000	40.0	6.4	Var
			‡5.5	11.0	750	77.0	2.5	Var
GL-502-A	1.85	4	6.3	0.6	1300	0.100	0.100	Neg
GL-5557/FG-17	7.75	3	2.5	5.0	5000	2.0	0.5	Neg
GL-5560/FG-95	25.00	4	5.0	4.5	1000	15.0	2.5	Var
			†5.5	4.5	1000	30.0	0.5	Var

†These ratings apply only when the tube is used for ignitor firing.

‡These ratings apply only when the tube is used in thyratron welding-control service.

Prices and other data subject to change without notice.

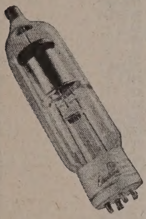
There's a G-E Electronic Tube for Every Purpose:

- Pliotrons
- Ignitrons
- Phasitron
- Glow Tubes
- Thyratrons
- Phototubes
- Ballast Tubes
- Vacuum Capacitors
- Phanotrons
- Lighthouse Tubes
- Cathode-Ray Tubes
- Vacuum Switches
- Kenotrons

Ask for—ETX-10
For complete Prices, Descriptions and Ratings.

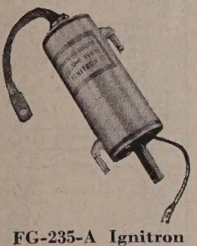
TRANSMITTING AND INDUSTRIAL ELECTRONIC TUBES

FG-32 Phanotron

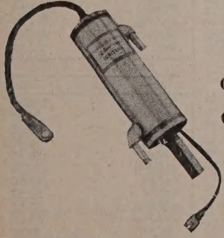


GL-872A/872 Phanotron

GL-8020 Kenotron



FG-235-A Ignitron



FG-271 Ignitron

PHANOTRONS— GASEOUS OR MERCURY-VAPOR RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		ANODE		
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp
FG-280	$ 56.00	2	5.0	10	2000	40	6.4
GL-866-A	1.95	2	2.5	5	10000	1	0.25
GL-869-B	132.00	2	5	19	20000	15	2.5
GL-870-A	1300.00	2	5	65	16000	....	75.0
GL-872-A/872	8.20	2	5	7.5	10000	5	1.25
GL-5558/FG-32	14.00	2	5.0	4.5	5000	15	2.5
GL-5561/FG-104	38.00	2	5.0	10	3000	40*	6.4

*Quadrature operation

KENOTRONS—HIGH-VACUUM RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		PLATE		
			Volts	Amp	Max. Inv. Volts	Max. Amp.	Average Amp.
GL-411	$225.00	2	10	14.5	100000	0.300	....
GL-836	9.00	2	2.5*	5.0	5000	1.0	0.25
GL-1641	2.75	3	5.0	3.0	2120	0.250	....
GL-5625/KC4	225.00	2	20	24.5	150000	1.0	....
GL-8013-A	10.30	2	2.5	5.0	40000	0.150	0.020
GL-8020	22.00	2	5.0	6.0	40000	0.750	0.100
			5.8△	....	12500△	2.△	....

*Heater-type cathode.
△Surge-limiting diode operation.

IGNITRONS—HIGH-PEAK CURRENT, POOL-CATHODE TUBES

Type No.	Price	Supply Volts	MAXIMUM RATINGS			
			Kva Demand	Corresponding Average Anode Current, Amps.	Maximum Average Anode Current, Amps.	Corresponding Kva Demand
GL-5550/GL-415*	$ 50.00	250–600 rms	300	12.1	22.4	100
GL-5551/FG-271*	80.50	250–600 rms	600	30.2	56.0	200
GL-5552/FG-235-A*	121.00	250–600 rms	1200	75.6	140	400
GL-5553/FG-258-A*	265.00	250–600 rms	2400	192	355	800

Type No.	Price	Supply Volts	MAXIMUM CURRENT		
			Peak Amp.	Average Amp.	Average Amp. 1 Minute
GL-5554/FG-259-B†	190.00	300	900	150	200
		600	600	112.5	150
GL-5555/FG-238-B†	370.00	300	1800	300	400
		600	1200	225	300

*Ratings are for voltages of 600 volts rms and below. Ignitor requirements for all welding-control types are 200 volts and 30 amperes.

†Typical ignitor requirements for power-rectifier ignitrons are 75-125 volts, 15-20 amperes. Maximum requirements are 150 volts, 40 amperes.

Prices and other data subject to change without notice.

OLDEST MANUFACTURER
SPECIALIZING IN RADIO RECEIVING TUBES

HYTRON

HYTRON RADIO TUBES

35Z5 GT
HYTRON

SYMBOL OF QUALITY SINCE 1921

ORIGINATOR OF THE FAMOUS BANTAM GT

MAIN OFFICE: SALEM, MASSACHUSETTS

HYTRON RECEIVING TUBE PRICE LIST

EFFECTIVE JANUARY 15, 1951

TYPE	LIST PRICE
OZ4	$1.65
OZ4G	1.65
1A4P	3.90
1A5GT	1.80
1A6	3.55
1A7GT	2.20
1B3GT	2.65
1B4P	3.90
1B5/25S	3.20
1C5GT	2.20
1C6	3.20
1C7G	3.20
1D5GP	3.90
1D7G	3.20
1D8GT	3.90
1F4	2.65
1F5G	2.65
1F6	3.90
1F7G	3.90
1G4GT	2.65
1G6GT	2.65
1H4G	2.20
1H5GT	1.80
1H6GT	3.20
1J6GT	3.20
1L4	2.00
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.00
1P5GT	2.65
1Q5GT	2.65
1R4	2.65
1R5	2.00
1S4	2.40
1S5	2.00
1T4	2.00
1T5GT	2.65
1U4	2.00
1U5	1.80
1V	2.20
1V2	1.50
1X2A	2.65
2A3	3.20
2A4G	4.80
2A5	2.20
2A6	2.65
2A7	2.65
3A8GT	4.80
3LF4	2.65
3Q4	2.20
3Q5GT	2.40
3S4	2.00
3V4	2.00
5AZ4	1.35
5U4G	1.65
5V4G	2.40
5W4	1.65
5W4GT	1.65
5X4G	1.80
5Y3G	1.35
5Y3GT	1.25
5Y4G	1.50
5Z3	1.80
5Z4	2.65
6A3	3.20
6A6	2.65
6A7	2.20
6A8	2.20
6A8G	2.20
6A8GT	2.20
6AB4	2.00
6AB7	3.20

TYPE	LIST PRICE
6AC5GT	$2.90
6AC7	2.90
6AD7G	3.20
6AG5	2.65
6AG7	3.20
6AH6	3.90
6AK5	3.90
6AK6	2.40
6AL5	2.00
6AL7GT	2.65
6AQ5	2.00
6AQ6	1.80
6AQ7GT	2.40
6AR5	1.65
6AS5	2.00
6AT6	1.50
6AU5GT	2.65
6AU6	2.00
6AV5GT	2.65
6AV6	1.50
6AW6	2.65
6AX5GT	1.65
6B4G	3.20
6B5	3.20
6B6G	2.20
6B7	3.20
6B8G	3.20
6BA6	1.80
6BA7	2.40
6BC5	2.00
6BD6	2.00
6BE6	1.80
6BF5	2.20
6BG6G	4.80
6BH6	2.00
6BJ6	2.00
6BN6	2.90
6BQ6GT	3.20
6C4	1.65
6C5	1.65
6C5GT	1.65
6C6	2.20
6C8G	3.20
6CB6	2.00
6CD6G	8.00
6D6	2.20
6D8G	3.20
6E5	2.20
6F5	1.65
6F5GT	1.65
6F6	2.00
6F6G	1.80
6F6GT	1.80
6F8G	3.20
6G6G	2.65
6H6	1.65
6H6GT	1.80
6J5	1.50
6J5GT	1.50
6J6	2.90
6J7	2.00
6J7G	2.20
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.65
6K7	1.80
6K7G	2.20
6K7GT	2.20
6K8	2.65
6K8GT	2.40
6L5G	2.65
6L6	3.55
6L6G	3.55
6L7	2.40
6L7G	3.20
6N6G	3.90
6N7	2.40
6N7GT	2.40

TYPE	LIST PRICE
6P5GT	$2.40
6Q7	2.00
6Q7G	1.80
6Q7GT	1.80
6R7	2.65
6R7GT	2.65
6S4	1.80
6S7G	3.20
6S8GT	2.65
6SA7	1.65
6SA7GT	2.00
6SB7Y	2.40
6SC7	2.00
6SD7GT	2.90
6SF5	1.65
6SF5GT	1.80
6SF7	2.00
6SG7	2.00
6SH7	2.20
6SJ7	1.65
6SJ7GT	1.65
6SK7	1.65
6SK7GT	2.00
6SL7GT	2.40
6SN7GT	2.20
6SQ7	1.50
6SQ7GT	1.65
6SR7	1.80
6SR7GT	1.80
6SS7	2.00
6SV7	2.90
6T7G	3.20
6T8	3.20
6U4GT	2.40
6U5	2.00
6U7G	2.20
6V6	3.20
6V6GT	2.00
6W4GT	1.80
6W6GT	2.00
6X4	1.50
6X5GT	1.50
6Y6G	2.40
6ZY5G	2.20
7A4(XXL)	2.00
7A5	2.20
7A6	1.80
7A7	1.80
7A8	1.80
7AD7	3.20
7AF7	1.80
7AG7	2.20
7AH7	2.20
7B4	1.80
7B5	1.80
7B6	1.80
7B7	1.80
7B8	1.80
7C5	1.80
7C6	1.80
7C7	1.80
7E5/1201	2.65
7E6	2.20
7E7	2.65
7F7	2.20
7F8	2.65
7G7/1232	2.65
7H7	2.00
7J7	2.65
7K7	2.65
7L7	2.65
7N7	2.20
7Q7	2.00
7R7	2.20
7S7	2.65
7V7	2.65
7W7	2.65
7X7(XXFM)	2.65
7Y4	1.80
7Z4	1.80

TYPE	LIST PRICE
12A7	$3.20
12A8GT	2.20
12AH7GT	2.65
12AL5	2.00
12AT6	1.50
12AT7	2.90
12AU6	2.00
12AU7	2.40
12AV6	1.50
12AV7	2.90
12AW6	2.65
12AX7	2.40
12BA6	1.80
12BA7	2.40
12BE6	1.80
12BH7	2.40
12F5GT	1.80
12J5GT	1.50
12J7GT	2.20
12K7GT	2.20
12K8	2.65
12K8GT	2.40
12Q7GT	1.80
12SA7	1.65
12SA7GT	2.00
12SF5GT	2.00
12SF7	2.00
12SF7GT	2.00
12SG7	2.00
12SH7	2.20
12SJ7	1.65
12SJ7GT	1.65
12SK7	1.65
12SK7GT	2.00
12SL7GT	2.40
12SN7GT	2.20
12SQ7	1.50
12SQ7GT	1.65
12Z3	2.65
14A4	2.65
14A7/12B7	2.20
14AF7(XXD)	2.40
14B6	2.20
14B8	2.20
14C5	2.65
14C7	2.40
14E6	2.20
14E7	2.65
14F7	2.20
14F8	2.65
14H7	2.40
14J7	2.65
14N7	2.65
14Q7	2.20
14R7	2.65
14S7	2.65
14W7	2.65
14Y4	2.40
19	3.20
19BG6G	6.00
19J6	3.20
19T8	2.90
24A	2.20
25AC5GT	3.90
25AV5GT	2.65
25BQ6GT	3.20
25L6GT	1.80
25W4GT	2.00
25Y5	2.90
25Z5	1.65
25Z6GT	1.65
26	2.00
27	1.80
30	2.20
32	3.55
32L7GT	3.20
33	3.20
34	3.55
35/51	2.20

TYPE	LIST PRICE
35A5	$1.80
35B5	2.00
35C5	2.00
35L6GT	1.80
35W4	1.25
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.50
36	2.65
37	1.80
38	2.20
39/44	2.65
41	2.00
42	2.00
43	2.00
45	2.00
45Z3	1.80
45Z5GT	1.80
46	2.90
47	2.90
50A5	2.20
50B5	2.00
50C5	2.00
50L6GT	1.80
50X6	2.20
50Y6GT	1.80
50Y7GT	2.00
53	2.65
56	1.80
57	2.00
58	2.00
70L7GT	3.90
71A	2.40
75	2.00
76	1.65
77	2.00
78	2.20
80	1.35
81	4.80
82	2.65
83	2.65
83V	3.20
84/6Z4	1.80
85	2.20
117L/M7GT	3.90
117N7GT	3.90
117P7GT	3.90
117Z3	1.50
117Z4GT	2.90
117Z6GT	2.40
1273	2.65
1280	2.65

SPECIAL PURPOSE TYPES

Type	List Price
OA2	$3.20
OA3	2.65
OB2	3.55
OB3	2.65
OC3	2.65
OD3	2.65
3A5	† 1.95
5R4GY	† 1.50
6AS7G	† 6.75
9001	† 3.10
9002	† 2.50

TV PICTURE TYPES

Type	Suggested Retail
7JP4	$25.00
10BP4A	34.00
12LP4A	35.00
14BP4	35.00
16AP4	58.50
16GP4	51.00
16RP4	52.50
16TP4	52.50
17BP4A	52.50
19AP4A	83.50
20CP4	89.00

† Dealer net price, not subject to discount.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

RCA ELECTRON TUBES REPLACEMENT DIRECTORY

for INDUSTRY and COMMUNICATIONS

Direct Replacement Types

RCA types shown below are direct replacements under all circumstances for corresponding types to be replaced. Tube types covered include: Vacuum Power Tubes, Rectifier Tubes, Thyratrons, Ignitrons, Voltage Regulators, Phototubes, Cathode-Ray Tubes, and Special Types.

Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type
OA3/VR75	OA3	FG-104	5561	FG-259B	5554	893	893-A
OC3/VR105	OC3	VR105-30	OC3	WT-261	6H6	902	902-A
OD3/VR150	OD3	HF120	211	WE-261A	835	UE-905	805
CE-1(A-D)	868, 918	VR150-30	OD3	WT-262	866-A	905	905-A
1P32	927	WT-210-0001	2D21	WT-263	6Z4	906-P1	3AP1-A
2AP1	2AP1-A	WT-210-0003	884	WT-269	OC3	908	908-A
2B4	885	WT-210-0004	2050	WT-270	80	914	914-A
2X2/879	2X2-A	WT-210-0006	6H6	WT-270X	5Z3	931	931-A
3AP1	3AP1-A	WT-210-0008	866-A	FG-271	5551	UE-938	838
3BP1	3BP1-A	WT-210-0009	84/6Z4	WT-272	5557	UE-949	849
4D21	4-125A/4D21	WT-210-0011	OC3	WE-274B	5R4-GY	UE-966A	866-A
4-250A	4-250A/5D22	WT-210-0012	80	WE-289A	4B26/2000	UE-967	5557
5BP1	5BP1-A‡	WT-210-0013	5Z3	WT-294	0D3	UE-972A	872-A
5CP1	5CP1-A	WT-210-0015	5557	WE-295A	203-A	UE-975A	575-A
5CP7	5CP7-A	WT-210-0018	OD3	WT-301	83	1642	2C21/1642
5D22	4-250A/5D22	WT-210-0019	83	UE-303A	203-A	1802-P1	5BP1-A
5FP7	5FP7-A	WT-210-0021	6X5	WE-304B	834	1803-P4	12AF4
5HP1-A	5BP1-A	WT-210-0025	117Z6-GT	F-307A	207	1804-P4	9AP4
7BP7	7BP7-A	WT-210-0027	872-A	WT-308	6X5-GT	1811-P1	7CP1
PJ-8	5556	WT-210-0028	3Q5-GT	CE-309	5557	1849	1850-A
G9	868	WT-210-0029	6C5	CE-311	3C23	1850	1850-A
BW-11	834	WT-210-0031	902-A	UE-311	211	2000	4B26/2000
CE-11V(A-D)	917	WT-210-0037	117L7/M7-GT	UE-311C	835	2051	2050
RK-11	1623	WT-210-0038	172	UE-317C	217-C	2525A5	5BP1-A
12DP7	12DP7-A	WT-210-0040	6X4	WE-322A	803	5728	1904
FG-17	5557	WT-210-0042	5Y3-GT	WE-350A	807	8001	4E27/8001
CE-20	927	WT-210-0044	575-A	375-A	575-A	8016	1B3-GT
RK-20A	804	WT-210-0045	892	WT-377	117Z6-GT	198049	4B26/2000
CE-21(A-D)	920	WT-210-0048	5U4-G	WT-389	3Q5-GT	289416D	4B26/2000
CE-23(A-D)	923	WT-210-0052	2AP1-A	WT-390	6C5	WTT-100	6X4
PJ-23	868	WT-210-0053	3AP1-A	WE-397A	2K56	WTT-102	5Y3-GT
CE-25(A-D)	927	WT-210-0056	5559	FJ-401	1F29	WTT-103	6H6
RK-25	802	WT-210-0057	5560	WE-403A	6AK5	WTT-104	575-A
RK-25B	802	WT-210-0058	676	GL-415	5550	WTT-105	892
CE-28(A-D)	928	WT-210-0060	OZ4	GL-451	8020	WTT-111	5559
RK-28	803	WT-210-0061	117N7-GT	WT-606	2D21	WTT-112	5560
RK-28A	803	WT-210-0062	5557	WL-630	2050	WTT-113	676
CE-29(A-D)	929, 1P39	WT-210-0069	5557	WL-631	5559	WTT-114	0Z4
CE-30(A-D)	930, 1P40	WT-210-0070	5550	KU-634	677	WTT-115	117N7-GT
CE-30V	925	WT-210-0071	5551	WL-651/656	5552	WTT-117	5557
RK-30	800	WT-210-0072	5552	WL-652/657	5551	WTT-118	105
FG-32	5558	WT-210-0073	5553	WL-653B	5555	WTT-119	172
RK-33	2C21/1642	WT-210-0074	105	WL-655/658	5553	WTT-122	6SJ7
CE-34	934	WT-210-0078	172	672	672-A	WTT-123	6V6
RK-39	807	WT-210-0079	105	WL-679	5554	WTT-124	7K7
CE-41	921	WT-210-0081	6SJ7	WL-681/686	5550	WTT-125	6N7-GT
CE-42	922	WT-210-0082	6V6	NL-715	5557	WTT-126	50B5
RK-44	837	WT-210-0083	7K7	WL-735	868	WTT-127	833-A
RK-47	814	WT-210-0084	6N7-GT	801	801-A	WTT-128	6K8-GT
UH-50	834	WT-210-0085	50B5	812	812-A	WTT-129	6J5-GT
R51A	927	WT-210-0086	833-A	829	829-B	WTT-130	6G6-G
CE-55	924	WT-210-0087	6K8-GT	829-A	829-B	WTT-131	6C6
FG-57	5559	WT-210-0088	6J5-GT	832	832-A	WTT-132	OA4-G
RK-57	805	WT-210-0089	6G6-G	833	833-A	WTT-135	5U4-G
RK-58	838	WT-210-0090	6C6	C-833	833-A	WTT-136	2AP1-A
CE-59	5581	WT-210-0091	OA4-G	857	857-B	WTT-137	3AP1-A
R59A	868, 918	211-D	211	862	862-A	WTT-149	172
R60A	920	CE-226	4B26/2000	866	866-A		
HY-61/807	807	FG-235A	5552	866-A/866	866-A		
R61A	930	FG-238B	5555	869-A	869-B		
CE-64	5583	242A	211	872	872-A		
FG-67	1904	242B	211	872-A/872	872-A		
VR75-30	OA3	WT-245	884	F-872B	872-A		
FG-95	5560	WT-246	2050	879	2X2-A		
CE-98	5582	FG-258A	5553	889	889-A		

See the reverse side of this page for a complete listing and suggested user's prices of more than 300 RCA Non-Receiving Tube Types.

‡ Except in high-altitude service.

NOTE: For additional replacement data on RCA Tubes for Industry and Communications, refer to the 20-page RCA Interchangeability Directory (Form ID-1020) which lists 1600 tube type numbers used by 24 manufacturers.

For complete technical information on RCA Tubes, see your RCA Distributor or write: Commercial Engineering, RCA Tube Department, Harrison, New Jersey.

RCA ELECTRON TUBES

for INDUSTRY and COMMUNICATIONS

Type	Sugg'd User Price†
1C21	$ 2.25
1P21	50.00
1P22	14.75
1P28	15.50
1P29	2.95
1P37	2.85
1P39	1.75
1P40	1.85
1P41	2.80
1P42	5.70
2AP1-A	10.55
2BP1	9.60
2BP11	11.00
2C21/1642(t)	1.90
2C22(t)	1.60
2C40(t)	29.00
2C43	29.00
2D21	2.00
2E24	4.65
2E26	3.85
2F21	105.00
2K26	107.15
2K56	185.00
3A4	1.20
3A5	1.95
3AP1-A	14.25
3B25	5.80
3BP1-A	16.50
3C23	12.50
3C33	21.25
3D22	15.00
3E22	8.30
3E29	20.25
3FP7A	23.00
3JP1	16.50
3JP7	21.00
3KP1	14.50
3KP11	16.50
3MP1	14.75
3RP1	14.50
4B26/2000	11.30
4C33	182.75
4-65A	20.00
4-125A/4D21	30.25
4-250A/5D22	41.25
4E27/8001	24.50
4E27A/5-125B	35.75
4X150A	48.00
4X500A	121.00
5BP1-A	22.50
5CP1-A	23.25
5CP7-A	27.25
5CP11-A	27.50
5CP12	27.00
5FP4-A	41.75
5FP7-A	30.25
5R4-GY(t)	1.50
5UP1	17.75
5UP7	20.25
5UP11	22.00
5WP11	70.00
5WP15	70.00
5ZP16	71.25
6AG7-Y(t)	1.75
6AS6(t)	3.65
6C24	60.00
6F4(t)	6.40
6J4(t)	8.05
6L4(t)	6.60
6SJ7-Y(t)	.85

Type	Sugg'd User Price†
6SN7GTY(t)	$ 1.40
7BP7-A	48.50
7C24	159.50
7CP1	30.75
7CP4	33.00
7MP7	39.50
7NP4	600.00
7QP4	39.50
7JP1	23.50
8D21	1300.00
9C21	866.00
9C22*	1225.00
9C25*	1058.00
10KP7	61.75
12DP7A	72.50
12K8-Y(t)	1.30
12L8GT(t)	2.25
12SW7(t)	1.10
12SX7GT(t)	1.40
12SY7(t)	1.30
26A6(t)	2.20
26A7-GT(t)	5.95
26C6(t)	1.85
26D6(t)	2.00
89-Y(t)	1.10
105	48.00
172	65.00
203-A	13.75
204-A	115.00
207	240.00
211	13.75
217-C	21.50
304TH	55.00
502-A	1.85
559	5.35
575-A	21.00
579-B	15.00
627	22.00
629	13.00
672-A	35.00
673	21.00
676	55.00
677	55.00
715-C	63.00
800	11.50
801-A	4.30
802	4.75
803	24.25
804	17.50
805	13.50
806	34.25
807	2.50
808	10.75
809	4.00
810	14.50
811-A	4.05
812-A	4.05
813	16.00
814	14.25
815	6.90
816	1.65
826	12.50
827-R	172.50
828	13.75
829-B	16.25
830-B	11.50
832-A	12.90
833-A	49.50
834	14.50
835	19.50

Type	Sugg'd User Price†
836	$ 9.00
837	5.80
838	13.75
841(t)	4.35
842	4.05
843	2.60
845	13.75
846	250.00
849	138.00
851	300.00
857-B	209.00
858	500.00
860	34.50
861	178.25
862-A*	1322.00
864	1.80
865	11.50
866-A	1.95
868	2.50
869-B	132.00
872-A	8.20
874	3.10
876	5.50
878	12.75
880	510.00
884	1.85
885	2.00
886	4.60
889-A	210.50
889R-A*	285.00
891	223.00
891-R*	362.00
892	223.00
892-R*	362.00
893-A	630.00
893A-R*	1150.00
898-A*	1322.00
902-A	12.50
905-A	65.25
908-A	16.50
912	155.00
913	15.50
914-A	93.50
917	3.50
918	3.10
919	3.50
920	4.15
921	2.05
922	1.95
923	2.05
924	3.30
925	2.40
926	2.90
927	2.50
928	2.85
929	1.50
930	1.65
931-A	9.75
934	3.40
935	7.80
954(t)	5.65
955(t)	3.60
956(t)	6.30
957(t)	3.75
958-A(t)	6.25
959(t)	6.25
991	.75
1603	7.00
1608	7.90
1609	8.60

Type	Sugg'd User Price†
1610	$ 2.50
1612	2.70
1613	2.45
1614	2.00
1616	8.65
1619	2.50
1620	6.25
1621	1.95
1622	2.10
1623	4.05
1624	4.00
1625	2.65
1626	1.85
1629	1.40
1631(t)	2.50
1632(t)	3.10
1633(t)	1.95
1634(t)	1.40
1635(t)	2.15
1644(t)	3.10
1654	4.55
1816-P4	47.00
1848	500.00
1850-A	540.00
1851(t)	3.10
1904	23.00
1945	109.25
1946	10.90
1947	8.40
1949	11.30
1950	7.80
2050	1.85
5527	47.50
5550	50.00
5551	80.50
5552	121.00
5553	265.00
5554	190.00
5555	370.00
5556	12.00
5557	7.75
5558	14.00
5559	19.50
5560	25.00
5561	38.00

Type	Sugg'd User Price†
5563	$ 40.00
5581	2.25
5582	2.65
5583	3.05
5584	3.95
5588	110.00
5592*	1155.00
5618	3.60
5651	3.30
5652	6.55
5671*	1225.00
5675(t)	18.50
5691	7.75
5692	7.75
5693	6.40
5696	1.90
5713	176.00
5734	18.00
5762	170.00
5763	1.75
5770	990.00
5771	510.00
5786	60.00
5794	16.75
5819	55.00
5820	1200.00
5823	1.32
5825	13.00
5826	1300.00
5876(t)	20.00
5879	1.75
5890	20.00
5915	1.20
5946	100.00
5963	1.40
5964	1.50
8000	14.50
8003	14.00
8005	7.40
8008	8.20
8012-A	15.50
8013-A	10.30
8020	32.00
8025-A	10.00
9001(t)	3.10
9002(t)	2.50
9003(t)	3.10
9004(t)	2.30
9005(t)	3.45
9006(t)	1.60

* The following credits currently apply when radiators or crates are returned prepaid, in acceptable condition, to the address shown on our return authorization.

Tube Type	Radiator Credit	Crate Credit
9C22	**65.00**	**35.00**
9C25	**65.00**	**35.00**
889R-A	**20.00**	
891-R	**20.00**	**10.00**
892-R	**20.00**	**10.00**
893A-R	**110.00**	**40.00**
5592	**45.00**	**25.00**
5671	**65.00**	**35.00**

$25.00 credit allowed for prepaid return of shipping container and $10.00 salvage credit allowed for prepaid return of 862-A and 898-A at time of new tube purchase, both to be in good condition.

Types marked with (t) are subject to Federal Excise Tax which is included, where applicable, in the prices shown above.

†Suggested Prices Are Subject to Government Ceiling Price Regulations

Prices in effect 4/16/51

RCA ELECTRON TUBES

RECEIVING • TELEVISION • SPECIAL

SUGGESTED LIST PRICES • JUNE 1, 1951

Type	Sugg'd List Price	Type	Sugg'd List Price	Type	Sugg'd List Price	Type	Sugg'd List Price	Type	Sugg'd List Price	Type	Sugg'd List Price	Type	Sugg'd List Price
OY4	$4.80	3A8GT	$4.80	6C5	$1.65	6SL7GT	$2.40	12AU6	$2.00	25Z6	$2.20	50C6G	$2.90
OZ4	1.65	3LF4	2.65	6C5GT	1.65	6SN7GT	2.20	12AU7	2.40	25Z6GT	1.50	50L6GT	1.65
OZ4G	1.65	3Q4	2.20	6C6	2.20	6SQ7	1.50	12AV6	1.50	26	2.00	50X6	2.20
1A3	2.20	3Q5GT	2.40	6C8G	3.20	6SQ7GT	1.50	12AW6	2.40	27	1.80	50Y6GT	1.80
1A4P	3.90	3S4	2.00	6CB6	2.00	6SR7	1.80	12AX7	2.40	30	2.20	50Y7GT	2.00
1A5GT	1.80	3V4	2.00	6CD6G	6.00	6SS7	2.00	12BA6	1.80	31	2.65	53	2.65
1A6	3.20	5AZ4	1.35	6D6	2.20	6ST7	2.65	12BA7	2.40	32	3.55	55	2.20
1A7GT	2.20	5T4	4.80	6D8G	3.20	6SZ7	2.20	12BD6	2.00	32L7GT	3.20	56	1.80
1AC5	2.20	5U4G	1.50	6E5	2.20	6T7G	3.20	12BE6	1.80	33	3.20	57	2.00
1AD5	2.20	5V4G	2.40	6F5	1.65	6T8	2.90	12C8	3.20	34	3.55	58	2.00
1B3GT	2.65	5W4	1.65	6F5GT	1.65	6U5	2.00	12F5GT	1.80	35	2.20	59	3.55
1B4P	3.90	5X4G	1.80	6F6	2.00	6U7G	2.20	12H6	1.80	35A5	1.80	70L7GT	3.90
1B5/25S	3.20	5Y3G	1.35	6F6G	1.65	6V6	3.20	12J5GT	1.50	35B5	2.00	71A	2.40
1C5GT	2.20	5Y3GT	1.05	6F6GT	1.65	6V6GT	2.00	12J7GT	2.20	35C5	2.00	75	1.65
1C6	3.20	5Y4G	1.50	6F7	3.20	6W4GT	1.80	12K7GT	2.20	35L6GT	1.65	76	1.65
1C7G	3.20	5Z3	1.65	6F8G	3.20	6W7G	2.65	12K8	2.65	35W4	1.25	77	2.00
1D5GP	3.90	5Z4	2.65	6G6G	2.65	6X4	1.50	12Q7GT	1.80	35Y4	1.80	78	2.00
1D7G	3.20	6A3	3.20	6H6	1.65	6X5	2.65	12S8GT	2.65	35Z3	1.80	79	2.65
1D8GT	3.90	6A6	2.65	6H6GT	1.80	6X5GT	1.50	12SA7	1.65	35Z4GT	1.50	80	1.35
1E5GP	3.90	6A7	2.20	6J5	1.50	6Y6G	2.40	12SA7GT	1.80	35Z5GT	1.25	81	4.80
1E7GT	3.90	6A8	2.20	6J5GT	1.50	6Z7G	3.90	12SC7	2.20	36	2.65	82	2.65
1E8	2.20	6A8G	2.20	6J6	2.65	6ZY5G	2.20	12SF5	1.80	37	1.80	83	2.65
1F4	2.65	6A8GT	2.20	6J7	2.00	7A4	2.00	12SF7	2.00	38	2.20	83V	3.20
1F5G	2.65	6AB4	2.00	6J7G	2.20	7A5	2.20	12SG7	2.00	39/44	2.65	84/6Z4	1.80
1F6	3.90	6AB5/6N5	2.65	6J7GT	2.20	7A6	1.80	12SH7	2.20	41	2.00	85	2.20
1F7G	3.90	6AB7	3.20	6J8G	3.20	7A7	1.80	12SJ7	1.65	42	2.00	89	2.20
1G4GT	2.40	6AC5GT	2.90	6K5GT	2.40	7A8	1.80	12SJ7GT	1.65	43	2.00	117L7/M7GT	3.90
1G5G	2.90	6AC7	2.90	6K6GT	1.50	7AD7	3.20	12SK7	1.65	45	2.00		
1G6GT	2.65	6AD7G	3.20	6K7	1.80	7AF7	1.80	12SK7GT	1.80	45Z3	1.80	117N7GT	3.90
1H4G	2.20	6AF6G	2.65	6K7G	2.20	7AG7	2.20	12SL7GT	2.40	45Z5GT	1.80	117P7GT	3.90
1H5GT	1.65	6AG5	2.40	6K7GT	2.20	7AH7	2.20	12SN7GT	2.20	46	2.90	117Z3	1.50
1H6G	3.20	6AG7	3.20	6K8	2.65	7B4	1.80	12SQ7	1.50	47	2.90	117Z4GT	2.90
1J6GT	3.20	6AH6	3.90	6K8G	3.20	7B5	1.80	12SQ7GT	1.50	49	2.65	117Z6GT	2.40
1L4	2.00	6AK5	3.90	6L5G	2.65	7B6	1.80	12SR7	2.00	50	6.00		
1LA4	2.65	6AK6	2.20	6L6	3.55	7B7	1.80	12Z3	2.40	50A5	2.20	XXD use 14AF7	
1LA6	2.65	6AL5	1.80	6L6G	3.20	7B8	1.80	14A4	2.65	50B5	2.00	XXFM use 7X7	
1LB4	2.65	6AL7GT	2.65	6L7	2.40	7C5	1.80	14A5	3.90	50C5	2.00	XXL use 7A4	
1LC5	2.65	6AQ5	2.00	6L7G	2.90	7C6	1.80	14A7/12B7	2.20				
1LC6	2.65	6AQ6	1.80	6N6G	3.90	7C7	1.80	14AF7	2.40				
1LD5	2.65	6AQ7GT	2.40	6N7	2.40	7E6	2.20	14B6	2.20				
1LE3	2.65	6AR5	1.65	6N7GT	2.40	7E7	2.65	14B8	2.20				
1LG5	2.65	6AS5	2.00	6P5GT	2.40	7F7	2.20	14C5	2.65				
1LH4	2.65	6AT6	1.50	6Q7	2.00	7F8	2.65	14C7	2.40				
1LN5	2.65	6AU5GT	2.65	6Q7G	1.80	7G7/1232	2.65	14E6	2.20				
1N5GT	2.00	6AU6	2.00	6Q7GT	1.80	7H7	2.00	14E7	2.65				
1P5GT	2.65	6AV6	1.50	6R7	2.65	7J7	2.65	14F7	2.20				
1Q5GT	2.65	6AX5GT	1.65	6R7GT	2.65	7K7	2.65	14F8	2.65				
1R5	2.00	6B4G	3.20	6S4	1.80	7L7	2.65	14H7	2.40				
1S4	2.20	6B5	3.20	6S7	2.65	7N7	2.20	14J7	2.65				
1S5	1.80	6B6G	2.00	6S7G	3.20	7Q7	1.80	14N7	2.65				
1T4	2.00	6B7	3.20	6S8GT	2.65	7R7	2.20	14Q7	2.20				
1T5GT	2.40	6B8	3.20	6SA7	1.65	7S7	2.65	14R7	2.65				
1T6	2.20	6B8G	3.20	6SA7GT	1.80	7V7	2.65	19	3.20				
1U4	2.00	6BA6	1.80	6SB7-Y	2.40	7W7	2.65	19BG6G	6.00				
1U5	1.80	6BA7	2.40	6SC7	2.00	7X7	2.65	19J6	2.65				
1V	2.20	6BC5	2.00	6SF5	1.65	7Y4	1.80	19T8	2.90				
1V2	1.50	6BD6	2.00	6SF5GT	1.80	7Z4	1.80	22	3.20				
1X2A	2.65	6BE6	1.80	6SF7	2.00	10Y	3.90	24A	2.20				
2A3	3.20	6BF6	1.65	6SG7	2.00	12A7	3.20	25A6	3.20				
2A5	2.20	6BG6G	4.80	6SH7	2.20	12A8GT	2.20	25AC5GT	2.90				
2A6	2.65	6BH6	2.00	6SJ7	1.65	12AH7GT	2.65	25L6	3.20				
2A7	2.65	6BJ6	2.00	6SJ7GT	1.65	12AL5	1.80	25L6GT	1.65				
2B7	3.20	6BQ6GT	3.20	6SK7	1.65	12AT6	1.50	25W4GT	2.00				
2E5	2.65	6C4	1.65	6SK7GT	1.80	12AT7	2.90	25Z5	1.65				

KINESCOPES	Suggested List Price
3KP4	20.00
5TP4	60.00
7DP4	31.50
7JP4	25.00
10BP4-A	34.00
10FP4-A	39.30
12KP4-A	41.70
12LP4-A	35.00
14CP4	35.00
14EP4	35.00
16AP4-A	58.50
16GP4-B	51.00
16RP4	49.75
16TP4	50.00
17BP4-A	44.00
17CP4	42.35
17GP4	42.35
19AP4-B	65.00
20CP4	70.00
21AP4	71.50

OTHERS	
OA2 (n)	$2.90
OA3 (n)	2.65
OA4G (n)	2.90
OB2 (n)	3.20
OC3 (n)	2.65
OD3 (n)	2.65
2A4G (n)	3.20
2V3G	5.25
2X2A (n)	4.35
6AS7G	6.75
12A6	2.90

Suggested list prices include Federal Excise Tax where applicable, and are subject to government price regulations.

All prices subject to change without notice.

SYLVANIA RADIO RECEIVING TUBES

RADIO TUBE DIVISION, EMPORIUM, PA.

TYPE	RETAIL PRICE	TYPE	RETAIL PRICE	TYPE	RETAIL PRICE	TYPE	RETAIL PRICE
0Y4	$4.80	1U5	$1.80	6AQ7GT	$2.40	6J8G	$3.20
0Z4	1.65	1V	2.20	6AR5	1.65	6K5GT	2.40
0Z4G	1.65	1V2	1.50	6AS5	2.00	6K6GT	1.65
1A3	2.20	1V5	2.65	6AT6	1.50	6K7	2.00
1A4P	3.90	1W4	2.65	6AU5GT	2.65	6K7G	2.20
1A5GT	1.80	1W5	2.65	6AU6	2.00	6K7GT	2.20
1A6	3.20	1X2	2.65	6AV5GT	2.65	6K8	2.65
1A7GT	2.20	2A3	3.20	6AV6	1.50	6K8GT	2.40
1AB5	3.20	2A5	2.20	6AX5GT	1.65	6L5G	2.65
1AC5	2.65	2A6	2.65	6B4G	3.20	6L6	3.55
1AD5	2.65	2A7	2.65	6B5	3.20	6L6G	3.55
1B3GT	2.65	2B7	3.20	6B6G	2.20	6L6GA	3.55
1B4P	3.90	2E5	2.65	6B7	3.20	6L7	2.40
1B5	3.20	3A8GT	4.80	6B8	3.20	6L7G	3.20
1B7GT	3.20	3B7	2.65	6B8G	3.20	6N6G	3.90
1C3	2.65	3C6/XXB	3.20	6BA6	1.80	6N7	2.40
1C5GT	2.20	3D6	2.65	6BA7	2.40	6N7GT	2.40
1C6	3.20	3E6	2.65	6BC5	2.00	6P5GT	2.40
1C7G	3.20	3LF4	2.65	6BC7	2.20	6Q7	2.00
1C8	2.65	3Q4	2.20	6BD5GT	3.20	6Q7G	1.80
1D5GP	3.90	3Q5GT	2.40	6BD6	2.00	6Q7GT	1.80
1D7G	3.20	3S4	2.00	6BE6	1.80	6R7	2.65
1D8GT	3.90	3V4	2.00	6BF5	2.20	6R7GT	2.65
1E5GP	3.90	5AX4GT	1.25	6BF6	1.65	6S4	1.80
1E7GT	3.90	5AZ4	1.35	6BG6G	4.80	6S7	2.65
1E8	2.65	5T4	4.80	6BH6	2.00	6S7G	3.20
1F4	2.65	5U4G	1.50	6BJ6	2.00	6S8GT	2.65
1F5G	2.65	5V4G	2.40	6BK6	1.50	6SA7	1.65
1G4GT	2.40	5W4	1.65	6BL7GT	2.90	6SA7GT	2.00
1G5G	2.90	5W4GT	1.65	6BN6	3.20	6SB7Y	2.40
1G6GT	2.65	5X4G	1.80	6BQ6GT	3.20	6SC7	2.00
1H4G	2.20	5Y3G	1.35	6BT6	1.50	6SD7GT	2.90
1H5GT	1.80	5Y3GT	1.25	6BU6	1.65	6SF5	1.65
1H6GT	3.20	5Y4G	1.50	6BY5G	2.65	6SF5GT	1.80
1J6GT	3.20	5Z3	1.80	6C4	1.65	6SF7	2.00
1L4	2.00	5Z4	2.65	6C5	1.65	6SG7	2.00
1L6	2.65	6A3	3.20	6C5GT	1.65	6SH7	2.20
1LA4	2.65	6A4	3.20	6C6	2.20	6SH7GT	2.20
1LA6	2.65	6A5G	3.90	6C8G	3.20	6SJ7	1.65
1LB4	2.65	6A6	2.65	6CB6	2.00	6SJ7GT	1.65
1LC5	2.65	6A7	2.20	6CD6G	6.00	6SK7	1.65
1LC6	2.65	6A8	2.20	6D6	2.20	6SK7GT	1.80
1LD5	2.65	6A8G	2.20	6D8G	3.20	6SL7GT	2.40
1LE3	2.65	6A8GT	2.20	6E5	2.20	6SN7GT	2.20
1LG5	2.65	6AB4	2.00	6F5	1.65	6SQ7	1.50
1LH4	2.65	6AB5	2.65	6F5GT	1.65	6SQ7GT	1.65
1LN5	2.65	6AB7	3.20	6F6	2.00	6SR7	1.80
1N5GT	2.00	6AC5GT	2.90	6F6G	1.80	6SR7GT	1.80
1P5GT	2.65	6AC7	2.90	6F6GT	1.80	6SS7	2.00
1Q5GT	2.65	6AD7G	3.20	6F7	3.20	6ST7	2.65
1Q6	2.65	6AF6G	2.65	6F8G	3.20	6SV7	2.90
1R4	2.65	6AG5	2.65	6G6G	2.65	6T7G	3.20
1R5	2.00	6AG7	3.20	6H6	1.65	6T8	3.20
1S4	2.40	6AH6	3.90	6H6GT	1.80	6U4GT	2.40
1S5	2.00	6AK5	3.90	6J5	1.50	6U5	2.00
1S6	2.65	6AK6	2.20	6J5GT	1.50	6U6GT	2.20
1T4	2.00	6AL5	2.00	6J6	2.90	6U7G	2.20
1T5GT	2.40	6AL7GT	2.65	6J7	2.00	6V6	3.20
1T6	2.65	6AQ5	2.00	6J7G	2.20	6V6GT	2.00
1U4	2.00	6AQ6	1.80	6J7GT	2.20	6W4GT	1.80

CONTINUED ON NEXT PAGE

(CONTINUED FROM PREVIOUS PAGE) •

SYLVANIA RADIO RECEIVING TUBES

TYPE	RETAIL PRICE
6W6GT	$2.20
6W7G	2.65
6X4	1.50
6X5GT	1.50
6Y6G	2.40
6Z7G	3.90
6ZY5G	2.20
7A4/XXL	2.00
7A5	2.20
7A6	1.80
7A7	1.80
7A8	1.80
7AD7	3.20
7AF7	1.80
7AG7	2.20
7AH7	2.20
7AJ7	2.20
7B4	1.80
7B5	1.80
7B6	1.80
7B7	1.80
7B8	1.80
7C4	3.20
7C5	1.80
7C6	1.80
7C7	1.80
7E5	2.65
7E6	2.20
7E7	2.65
7F7	2.20
7F8	3.20
7G7	2.65
7H7	2.00
7J7	2.65
7K7	2.65
7L7	2.65
7N7	2.20
7Q7	2.00
7R7	2.20
7S7	2.65
7V7	2.65
7W7	2.65
7X6	2.20
7X7	2.65
7Y4	1.80
7Z4	1.80
10	3.90
12A6	2.90
12A6GT	2.90
12A7	3.20
12A8G	2.20
12A8GT	2.20
12AH7GT	2.65
12AL5	2.00
12AT6	1.50
12AT7	2.90
12AU6	2.00
12AU7	2.40
12AV6	1.50
12AV7	2.90
12AW6	$2.40
12AX7	2.40
12AY7	6.00
12BA6	1.80
12BA7	2.40
12BD6	2.00
12BE6	1.80
12BF6	1.65
12BK6	1.50
12BT6	1.50
12BU6	1.50
12C8	3.20
12F5GT	1.80
12H6	1.80
12J5GT	1.50
12J7GT	2.20
12K7G	2.20
12K7GT	2.20
12K8	2.65
12K8GT	2.65
12Q7GT	1.80
12S8GT	2.65
12SA7	1.65
12SA7GT	2.00
12SC7	2.20
12SF5	1.80
12SF5GT	2.00
12SF7	2.00
12SG7	2.00
12SH7	2.20
12SJ7	1.65
12SJ7GT	1.65
12SK7	1.65
12SK7GT	1.80
12SL7GT	2.40
12SN7GT	2.20
12SQ7	1.50
12SQ7GT	1.65
12SR7	2.20
12SR7GT	2.20
12Z3	2.40
14A4	2.65
14A5	3.90
14A7	2.20
14AF7	2.40
14B6	2.20
14B8	2.20
14C5	2.65
14C7	2.40
14E6	2.20
14E7	2.65
14F7	2.20
14F8	3.20
14H7	2.40
14J7	2.65
14N7	2.65
14Q7	2.20
14R7	2.65
14S7	2.65
14W7	2.65
14X7	$2.65
14Y4	2.40
19	3.20
19BG6G	6.00
19C8	3.20
19J6	3.20
19T8	2.90
22	3.20
24A	2.20
25A6G	2.65
25AC5GT	2.90
25AV5GT	2.65
25BQ6GT	3.20
25C6G	2.90
25L6	3.20
25L6GT	1.80
25W4GT	2.00
25Y5	2.90
25Z5	1.65
25Z6	2.20
25Z6GT	1.65
26	2.00
26BK6	1.65
27	1.80
30	2.20
31	2.65
32	3.55
32L7GT	3.20
33	3.20
34	3.55
35/51	2.20
35A5	1.80
35B5	2.00
35C5	2.00
35L6GT	1.80
35W4	1.25
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.35
36	2.65
37	1.80
38	2.20
39/44	2.65
41	2.00
42	2.00
43	2.00
45	2.00
45Z5GT	1.80
46	2.90
47	2.90
49	2.65
50	6.00
50A5	2.20
50B5	2.00
50C5	2.00
50C6G	2.90
50L6GT	1.80
50X6	2.20
50Y6GT	1.80
50Y7GT	$2.00
53	2.65
55	2.20
56	1.80
57	2.00
58	2.00
59	3.55
70L7GT	3.90
71A	2.40
75	1.65
76	1.65
77	2.00
78	2.00
79	2.65
80	1.35
81	4.80
82	2.65
83	2.65
83V	3.20
84/6Z4	1.80
85	2.20
89	2.20
V99	3.20
100-70	2.00
100-77	2.00
117L7GT	3.90
117N7GT	3.90
117P7GT	3.90
117Z3	1.50
117Z4GT	2.90
117Z6GT	2.40
FM-1000	3.20
1273	2.65
1280	2.65
5642	2.20
XXB (3C6/XXB)	...
XXD (14AF7)	...
XXFM (7X7)	...
XXL (7A4/XXL)	...

Sylvania products are guaranteed against defects in workmanship and materials.

RADIO TUBE DIVISION, EMPORIUM, PA.

SYLVANIA NON-RECEIVING TUBES

RADIO TUBE DIVISION, EMPORIUM, PA.

TELEVISION PICTURE TUBES

TYPE	SUGGESTED RESALE PRICE	TYPE	SUGGESTED RESALE PRICE
7JP4	$18.75	16GP4	$38.20
8BP4	23.00	16JP4, A	38.20
10BP4, A	25.50	16KP4	39.35
10FP4	29.50	16LP4, A	38.20
10HP4	53.50	16TP4	39.35
10MP4	25.50	16WP4A	38.20
12KP4, A	31.30	16ZP4	38.20
12LP4, A	26.25	17BP4A	35.55
12VP4, A	26.25	19AP4, A	62.50
14CP4	26.25	20CP4	53.00
16AP4, A	44.00	20DP4, A	53.00

GENERAL PURPOSE CATHODE RAY TUBES

3AP1A	13.25	5GP1	23.50
3BP1	16.50	5HP1	23.50
3KP1	13.25	5NP1	24.00
5BP1	20.00	7JP1	24.00

TRANSMITTING TUBES

2E22	6.00	812A	4.05
2E24	5.10	813	16.00
2E26	3.85	815	6.90
2E30	2.45	816	1.65
3D24	7.50	829B	16.25
801A	4.30	832A	12.90
804	17.50	837	5.80
805	13.50	841	4.35
807	2.50	866A	1.95
807W	12.85	872A	8.20
808	10.75	1616	8.65
809	4.00	1625	2.65
810	14.50	1626	1.85
811A	4.05	8005	7.40

SPECIAL PURPOSE TUBES

OA2	1.65	7F8W	6.40
OA3	1.35	7G8	1.85
OA4G	1.35	25A7GT	4.00
OB2	1.80	26C6	1.85
OB3	1.65	26D6	2.00
OC3	1.35	28D7	1.80
OD3	1.65	28D7W	9.75
2A4G	1.80	884	1.85
2C4	2.85	1229	6.40
2D21	2.00	1236	6.75
2V3G	3.15	885	2.00
2X2A	2.05	1247	6.00
3A4	1.20	1265	3.00
3A5	1.95	1266	3.50
5R4GY	1.50	1267	3.00
5U4WG	6.50	1274	6.00
6AJ5	3.50	2050	1.85
6AN6	3.50	2051	1.90
6AS7G	4.53	5679	1.35
6D4	2.85	5691	7.75
6J4	8.05	5692	7.75
6L6GA/Y	3.10	5693	6.40
6L6WGA	8 60	5722	6.40
6SL7WGT	3.00	9001	3.10
6SN7WGT	2.85	9002	2.50
6X5WGT	2.75	9003	3.10
7AK7	6.50	X6030	3.50

SUBMINIATURE TUBES

6AD4	2.20	5641	5.25
6BA5	3.30	5643	8.00
6BF7	2.60	5644	6.50
6BG7	2.60	5645	6.40
6K4	4.75	5646	6.40
5633	10.25	5647	5.25
5634	10.25	5718	7.75
5635	9.50	5719	7.75
5637	4.00	5840	10.50
5638	6.00	5899	7.75
5640	7.75	5902	11.85

SYLVANIA
ELECTRONICS DIVISION

ELECTRONIC PRODUCTS
1740 BROADWAY, N. Y. 19, N. Y.

FLASH TUBES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
R-4330	100 watt second Electroflash Tube	$15.00*
R-4340	500 watt second Electroflash Tube	45.00*

GAS PRESSURE MEASURING TUBES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
R1111	Pirani Tube	5.65
R1111M	Matched Pairs R1111	13.15

GERMANIUM CRYSTAL DIODES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
1N34	General Purpose Diode (Ceramic)	.85
1N34A	General Purpose Diode (Glass)	1.05
1N35	Twin Matched Diode IN34's	2.05
1N38	100-V Back Voltage (Ceramic)	1.70
1N38A	100-V Back Voltage (Glass)	2.25
1N39	200-V Back Voltage	6.25
1N40	Varistor—Plug In (V-301)	10.60
1N41	Varistor—Lug Type (V-307)	11.25
1N42	Varistor—Matched 1N38's	18.75
1N54	High Resistance Diode (Ceramic)	.95
1N54A	High Resistance Diode (Glass)	1.25
1N55	150-Volt Diode (Ceramic)	3.15
1N55A	150-Volt Diode (Glass)	4.05
1N56	High Conduction Diode (Ceramic)	.95
1N56A	High Conduction Diode (Glass)	1.25
1N57	80-Volt Diode	.95
1N58	100-Volt Diode (Ceramic)	1.25
1N58A	100-Volt Diode (Glass)	1.55
1N60	High Efficiency Diode	.65
1N71	Varistor—Low Impedance—Plug In	6.25

TR & ATR TUBES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
1B24	9300 mc Tunable TR	$50.00
1B35	9300 mc Broad Band ATR	12.50
1B63A	12% 9000 mc Broad Band TR	93.75

ROCKET TUBES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
6BL6	Velocity Modulation Reflex Oscillator	145.00
6BM6	Velocity Modulation Reflex Oscillator	145.00
5836 (SD1103)	Velocity Modulation Reflex Oscillator	162.50
5837 (SD1104)	Velocity Modulation Reflex Oscillator	162.50

GLOW MODULATOR TUBES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
R1130B	.055" Crater—(1B59)	14.35
R1131C	.093" Crater	14.35

HYDROGEN THYRATRONS

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
4C35	8KV, 90 amp peak	28.75
5C22	15KV, 325 amp peak	53.45

SELENIUM RECTIFIERS

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
NA-5	65 ma Rectifier	.86
NB-5	75 ma Rectifier	.98
NC-5	100 ma Rectifier	1.23
ND-5	150 ma Rectifier	1.45
NE-5	200 ma Rectifier	1.74
NF-5	250 ma Rectifier	1.95
NH-5	400 ma Rectifier	2.90
NJ-5	450 ma Rectifier	3.16

SILICON CRYSTAL DIODES

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
1N21	3000 mc Converter	3.75
1N21A	3000 mc Converter	4.40
1N21B	3000 mc Converter	5.00
1N21C	3000 mc Converter	28.10
1N22	3000-10,000 mc—Instrument Rectifier	3.10
1N23	10,000 mc Converter	$5.00
1N23A	10,000 mc Converter	5.65
1N23B	10,000 mc Converter	6.25
1N25	1000 mc High Burnout Mixer	8.15
1N26	24,000 mc Converter	9.40
1N27	Obsolete—Use 1N32	
1N29	Obsolete—Use 1N21B	
1N30	Obsolete—Use 1N31	
1N31	10,000 mc Video Detector	8.10
1N32	3000 mc Video Detector	25.00

STROBOTRONS

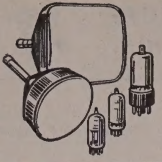
TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
1D21/SN4	240 PPS V Neon Duo Grid	5.30
R-4350	Polychromatic Strobotron	12.50
SA-309	Small Polychromatic Strobotron	2.80

MISCELLANEOUS

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
OA5	Trigger Tube (Cold Cathode)	4.40
X-6090	Ionization Tube	2.00
SS501	1500-volt U-Discharge	14.40
1237	Full Wave Argon Rectifier	4.25
SD759A	Ramberg Accelerometer Tube	84.00

**Includes Federal Excise Tax*

SYLVANIA ELECTRIC



TUNG-SOL
ELECTRON TUBES

REVISED JANUARY 1, 1951

This Price List Is Supplied For Your Convenience By The Tung-Sol Lamp Works Inc.

All prices are subject to change without notice. The listing of price for any tubes does not necessarily indicate availability.

Type	Sugg'd Retail Price
0Y4	$4.80
0Z4 Met	1.65
0Z4G	1.65
01A	1.25
1A3	2.20
1A4P	3.90
1A5GT	2.20
1A6	3.20
1A7GT	2.20
1B3GT	2.65
1B4P (1B4/951)	3.90
1B5/25S	3.20
1B7GT	3.20
1C5GT	2.20
1C6	3.20
1C7G	3.20
1C8	2.65
1D5GP	3.90
1D7G	3.20
1D8GT	3.90
1E5GP	3 90
1E7GT	3.90
1F4	2.65
1F5G	2.65
1F6	3.90
1F7G	3.90
1G4GT	2.40
1G5G	2.90
1G6GT	2.65
1H4G	2.20
1H5GT	1.65
1H6G	3.20
1J5G	2.65
1J6G	3.20
1J6GT	3.20
1L4 Min.	2.00
1LA4 Loc.	2.65
1LA6 Loc.	2.65
1LB4 Loc.	2.65
1LC5 Loc.	2.65
1LC6 Loc.	2.65
1LD5 Loc.	2.65
1LE3 Loc.	2.65
1LG5 Loc.	2.65
1LH4 Loc.	2.65
1LN5 Loc.	2.65
1N5GT	2.00
1N6G	1.80
1P5GT	2.65
1Q5GT	2.65
1Q6	2.65
1R5 Min.	2.00
1S4 Min.	2.40
1S5 Min.	1.80
1T4 Min.	2.00
1T5GT	2.65
1U4 Min.	2.00
1U5 Min.	1.80
1V	2.20
1V2	1.50
1V5 Min.	2.65
1X2	2.65
1W5 Min.	2.65
2A3	3.20
2A4G	3.20

Type	Sugg'd Retail Price
2A5	$2.20
2A6	2.65
2A7	2.65
2B7	3.20
2E5	2.65
3A8GT	4.80
3B7/1291 Loc.	2.65
3C6/XXB Loc.	3.20
3D6/1299 Loc.	2.65
3E6 Loc.	2.65
3LF4 Loc.	2.65
3Q4 Min.	2.20
3Q5GT	2.40
3S4 Min.	2.00
5AX4GT	1.15
3V4 Min.	2.00
5AZ4 Loc.	1.35
5T4	4.80
5U4G	1.50
5V4G	2.40
5W4 Met.	1.65
5W4GT	1.65
5X4G	1.80
5Y3G	1.35
5Y3GT	1.15
5Y4G	1.50
5Z3	1.80
5Z4 Met	2.65
6A3	3.20
6A4 (LA)	3.20
6A5G	3.90
6A6	2.65
6A7	2.20
6A8 Met.	2.20
6A8G	2.20
6A8GT	2.20
6AB4	2.00
6AB5/6N5	2.65
6AB7/1853 Met.	3.20
6AC5GT	2.90
6AC7/1852	2.90
6AD7G	3.20
6AF6G	2.65
6AG5 Min.	2.65
6AG7 Met.	3.20
6AH6 Min.	3.90
6AK5 Min.	3.90
6AK6 Min.	2.40
6AL5 Min.	2.00
6AL7GT	2.65
6AQ5 Min.	2.00
6AQ6 Min.	1.80
6AQ7GT	2.40
6AR5	1.65
6AT6 Min.	1.50
6AS5	2.00
6AU5GT	2.65
6AU6 Min.	1.80
6AV5GT	2.65
6AV6 Min.	1.50
6AX5GT	1.65
6B4G	3.20
6B5	3.20
6B6G	3.20
6B7	3.20

Type	Sugg'd Retail Price
6B8 Met.	$3.20
6B8G	3.20
6BA6 Min.	1.80
6BA7 Min.	2.40
6BC5	2.00
6BD5GT	3.20
6BD6 Min.	2.00
6BE6 Min.	1.80
6BF5	2.20
6BF6 Min.	1.65
6BG6G	4.80
6BH6 Min.	2.00
6BJ6 Min.	2.00
6BL7GT	2.90
6BN6	3.20
6BY5G	2.65
6BQ6GT	3.20
6C4 Min.	1.65
6C5 Met.	1.65
6C5GT	1.65
6C6	2.20
6C7	3.20
6C8G	3.20
6CB6	2.00
6CD6G	6.00
6D6	2.20
6D8G	3.20
6E5	2.20
6F5 Met.	1.65
6F5GT	1.65
6F6 Met.	2.00
6F6G	1.65
6F6GT	1.65
6F7	3.20
6F8G	3.20
6G6G	2.65
6H4GT	2.65
6H6 Met.	1.65
6H6GT	1.80
6J5 Met.	1.50
6J5GT	1.50
6J6 Min.	2.90
6J7 Met.	2.00
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.65
6K7 Met.	1.80
6K7G	2.20
6K7GT	2.20
6K8G	2.90
6K8GT	2.40
6L5G	2.65
6L6 Met.	3.55
6L6G	3.55
6L6GA	3.55
6L7 Met.	2.40
6L7G	3.20
6N6G	3.90
6N7 Met.	2.40
6N7GT	2.40.
6P5GT	2.40
6Q7 Met.	2.00
6Q7GT	1.80
6R7 Met.	2.65

Type	Sugg'd Retail Price
6R7GT	$2.65
6R8	3.20
6S4	1.80
6S7 Met.	2.65
6S7G	3.20
6S8GT	2.65
6SA7 Met.	1.65
6SA7GT	1.80
6SB7Y	2.40
6SC7 Met.	2.00
6SC7GT	2.00
6SD7GT	2.90
6SF5 Met.	1.65
6SF5GT	1.80
6SF7 Met.	2.00
6SF7GT	1.80
6SG7 Met.	2.00
6SG7GT	2.20
6SH7 Met.	2.20
6SH7GT	2.20
6SJ7 Met.	1.65
6SJ7GT	1.65
6SK7 Met.	1.65
6SK7GT	1.80
6SL7GT	2.40
6SN7GT	2.20
6SQ7 Met.	1.50
6SQ7GT	1.65
6SR7 Met.	1.50
6SR7GT	1.80
6SS7 Met.	2.20
6ST7 Met.	2.65
6SV7 Met.	2.90
6SZ7 Met.	2.20
6T7G (6Q6G)	3.20
6T8 Min.	2.90
6U4GT	2.65
6U5/6G5	2.00
6U6GT	2.00
6U7G	2.20
6V6 Met.	3.20
6V6GT	2.00
6V7 Met.	3.20
6V7G	1.80
6W4GT	1.80
6W6GT	2.20
6W7G	2.65
6X4 Min.	1.50
6X5 Met.	2.65
6X5GT	1.50
6Y6G	2.40
6Z7G	3.90
6ZY5G	2.20
7A4/XXL Loc.	2.00
7A5 Loc.	2.20
7A6 Loc.	1.80
7A7 Loc.	1.80
7A8 Loc.	1.80
7AD7 Loc.	3.20
7AF7 Loc.	1.80
7AG7 Loc.	2.20
7AH7 Loc.	2.20
7B4 Loc.	1.80
7B5 Loc.	1.80
7B6 Loc.	1.80

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

(Continued next page)

TUNG-SOL ELECTRON TUBES (con.)

Type	Sugg'd Retail Price
7B7 Loc.	$1.80
7B8 Loc.	1.80
7C4/1203 Loc.	2.65
7C5 Loc.	1.80
7C6 Loc.	1.80
7C7 Loc.	1.80
7E5/1201 Loc.	2.65
7E6 Loc.	2.20
7E7 Loc.	2.65
7F7 Loc.	2.20
7F8 Loc.	3.20
7G7/1232 Loc.	2.65
7H7 Loc.	2.00
7J7 Loc.	2.65
7K7 Loc.	2.65
7L7 Loc.	2.65
7N7 Loc.	2.20
7Q7 Loc.	2.00
7R7 Loc.	2.20
7S7 Loc.	2.65
7V7 Loc.	2.65
7W7 Loc.	2.65
7X6	2.20
7X7 Loc. (XXFM)	2.65
7Y4 Loc.	1.80
7Z4 Loc.	1.80
10	3.90
12A6 Met.	2.90
12A6GT	2.90
12A7	3.20
12A8GT	2.20
12AH6GT	2.20
12AH7GT	2.65
12AL5 Min.	2.00
12AT6 Min.	1.50
12AT7 Min.	2.90
12AU6 Min.	2.00
12AU7 Min.	2.40
12AV6 Min.	1.50
12AX7 Min.	2.40
12AW6 Min.	2.65
12AY7 Min.	6.00
12BA6 Min.	1.80
12BA7 Min.	2.40
12BD6 Min.	2.00
12BE6 Min.	1.80
12BF6 Min.	1.65
12BH7 Min.	2.40
12C8 Met.	3.20
12E5GT	2.20
12F5GT	1.80
12H6 Met.	1.80
12J5GT	1.50
12J7GT	2.20
12K7GT	2.20
12K8 Met.	2.65
12K8GT	2.65
12Q7GT	1.80
12S8GT	2.65
12SA7 Met.	1.65

Type	Sugg'd Retail Price
12SA7GT	$1.80
12SC7 Met.	2.20
12SF5 Met.	1.80
12SF5GT	2.00
12SF7	2.00
12SF7GT	2.00
12SG7 Met.	2.00
12SH7 Met.	2.20
12SJ7 Met.	1.65
12SJ7GT	1.65
12SK7 Met.	1.65
12SK7GT	1.80
12SL7GT	2.40
12SN7GT	2.20
12SQ7 Met.	1.50
12SQ7GT	1.65
12SR7 Met.	2.20
12SR7GT	2.20
12Z3	2.65
14A4 Loc.	2.65
14A5 Loc.	3.90
14A7/12B7 Loc.	2.20
12AF7 Loc. (XXD)	2.40
12B6 Loc.	2.20
12B8 Loc.	2.20
14C5 Loc.	2.65
14C7 Loc.	2.40
14E6 Loc.	2.20
14E7 Loc.	2.65
14F7 Loc.	2.20
14F8 Loc.	3.20
14H7 Loc.	2.20
14J7 Loc.	2.65
14N7 Loc.	2.65
14Q7 Loc.	2.20
14R7 Loc.	2.65
14S7 Loc.	2.65
14W7 Loc.	2.65
14X7 Loc.	2.65
14Y4 Loc.	2.40
15	3.20
19	3.20
19C8	3.20
19BG6G	6.00
19J6	3.20
19T8 Min.	2.90
22	3.20
24A	2.20
25A6 Met.	3.20
25A6G	2.65
25AC5GT	2.90
25BQ6GT	3.20
25C6G	2.90
25L6 Met.	3.20
25L6GT	1.80
25W4GT	2.00
25Y5	2.90
25Z5	1.65
25Z6 Met.	2.20
25Z6GT	1.50

Type	Sugg'd Retail Price
26	$2.00
27	1.80
30	2.20
31	2.65
32	3.55
32L7GT	3.20
33	3.20
34	3.55
35/51	2.20
35A5 Loc.	1.80
35B5 Loc.	2.00
35C5 Loc.	2.00
35L6GT	1.80
35W4 Min.	1.25
35Y4 Loc.	1.80
35Z3 Loc.	1.80
35Z4GT	1.50
35Z5GT	1.35
35Z6G	1.80
36	2.65
37	1.80
38	2.20
39/44	2.65
41	2.00
42	2.00
43	2.00
45	2.00
45Z3 Min.	1.80
45Z5GT (40Z5GT)	1.80
46	2.90
47	2.90
48	3.90
49	2.65
50	6.00
50A5 Loc.	2.20
50B5 Min.	2.00
50C5 Min.	2.00
50C6G	2.90
50L6GT	1.65
50X6 Loc.	2.20
50Y6GT	1.80
50Y7GT	2.00
53	2.65
55	2.20
56	1.80
57	2.00
58	2.00
59	3.55
70L7GT	3.90
71A	2.40
75	1.65
76	1.65
77	2.00
78	2.00
79	2.65
80	1.35
81	4.80
82	2.65
83	2.65
83V	3.20

Type	Sugg'd Retail Price
84/6Z4	$1.80
85	2.20
89	2.20
117L7/M7GT	3.00
117N7GT	3.90
117P7GT	3.90
117Z3 Min.	1.50
117Z4GT	2.90
117Z6GT	2.40
485	2.65
FM1000	3.20
XXD/14AF7	2.20
XXFM/7X7	2.65
XXL/7A4	1.80

CATHODE RAY PICTURE TUBES

7JP4	$25.00
8BP4	27.75
10BP4	34.00
10BP4A	34.00
12LP4	35.00
12LP4A	35.00
14BP4	35.00
16AP4	58.50
16RP4	54.00
16TP4	54.00
17BP4A	54.00

SPECIAL PURPOSE TUBES

OA2	$3.20
OB2	3.55
OB3	2.75
OC3	2.65
OD3	2.65
2X2A	4.35
3A4	1.20
3A5	1.95
5A6	5.50
5R4GY	2.25
5X3	3.50
6AJ5	3.50
6AR6	5.75
6AS7G	6.75
6SU7GTY	4.25
954	5.65
956	6.30
1603	7.40
1629	1.40
25A7GT	4.00
5687	6.00
5881	3.50
9002	2.50
9003	3.10
9006	1.60

Bold Face Type — represent 86.5% of Demand

TUNG-SOL RADIO DIAL LAMPS

Tung-Sol Lamp No.	Bulb Type	Base	Bead Color	Volts	Amperes	List Price
40	T-3¼	Miniature Screw	Brown	6-8	.15	$0.11
41	T-3¼	Miniature Screw	White	2.5	.50	.11
42	T-3¼	Miniature Screw	Green	3.2	.50	.12
43	T-3¼	Miniature Bayonet	White	2.5	.50	.11
44	T-3¼	Miniature Bayonet	Blue	6-8	.25	.11
45	T-3¼	Miniature Bayonet	Green	3.2	.50	.12
46	T-3¼	Miniature Screw	Blue	6-8	.25	.11
47	T-3¼	Miniature Bayonet	Brown	6-8	.15	.11
48	T-3¼	Miniature Screw	Pink	2.0	.06	.16
49	T-3¼	Miniature Bayonet	Pink	2.0	.06	.16
50	G-3½	Miniature Screw	White	6-8	.20	.11
*51	G-3½	Miniature Bayonet	White	6-8	.20	.09
*55	G-4½	Miniature Bayonet	White	6-8	.40	.09
291	T-3¼	Miniature Bayonet	White	2.9	.17	.15
292	T-3¼	Miniature Screw	White	2.9	.17	.15
416	G-4½	Miniature Bayonet	Black	3.3	.60	.47
1490	T-3¼	Miniature Bayonet	White	3.2	.16	.13

*Taxable at 1.6% of list. All other taxable at 6.3% of list.

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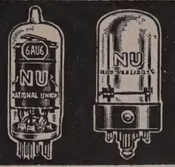

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PRICE LIST EFFECTIVE JUNE 1, 1951

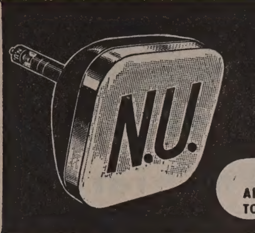
ALL LIST PRICES INCLUDE TAX. PRICES & TYPES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

RADIO & TV RECEIVING TUBES

Type	User's Price	Type	User's Price	Type	User's Price	Type	User's Price	Type	User's Price	Type	User's Price	Type	User's Price
00A	3.20	1W4	2.65	6BA6	1.80	6S4	1.80	7F7	2.20	12SQ7	1.50	37	1.80
01A	1.50	1W5	2.20	6BA7	2.40	6S7	2.65	7F8	2.65	12SQ7GT	1.65	38	2.20
0A2	3.20	1X2	2.65	6BC5	2.00	6S7G	3.20	7G7	2.65	12SR7	2.20	39/44	2.65
0A3/VR75	2.65	1X2A	2.65	6BC7	2.65	6S8GT	2.65	7H7	2.00	12SR7GT	2.20	40	2.20
0A4G	2.65	2A3	3.20	6BD5	3.20	6SA7	2.00	7J7	2.65	12Z3	2.65	41	2.00
0B2	3.55	2A4G	3.20	6BD6	2.00	6SA7GT	2.00	7K7	2.65	14A4	2.65	42	2.00
0B3/VR90	2.65	2A5	2.20	6BE6	1.80	6SB7Y	2.40	7L7	2.65	14A5	3.90	43	2.00
0C3/VR105	2.65	2A6	2.65	6BF5	2.20	6SC7	2.00	7N7	2.20	14A7/12B7	2.20	44	See 39
0D3/VR150	2.65	2A7	2.65	6BF6	1.65	6SD7GT	2.90	7Q7	1.80	14AF7/ XXD	2.40	45	2.00
0Y4	4.80	2B7	3.20	6BG6G	4.80	6SF5	1.65	7R7	2.20	14B6	2.20	45Z3	1.80
0Z4	1.65	2E5	2.65	6BH6	2.00	6SF5GT	1.80	7S7	2.65	14B8	2.20	45Z5GT	1.80
0Z4G	1.65	2X2A	4.35	6BJ6	2.00	6SF7	2.00	7V7	2.65	14C5	2.65	46	2.90
1A3	2.20	2Z2/G84	3.90	6BK6	1.50	6SG7	2.00	7W7	2.65	14C7	2.40	47	2.90
1A4P	3.90	3A8GT	4.80	6BL7GT	2.90	6SH7	2.20	7X6	2.20	14E6	2.20	48	4.80
1A5GT	1.80	3B7	2.65	6BN6	3.20	6SH7GT	2.20	7X7/XXFM	2.65	14E7	2.65	49	2.65
1A6	3.20	3C6/XXB	3.20	6BQ6GT	3.20	6SJ7	1.80	7Y4	1.80	14F7	2.20	50	6.00
1A7GT	2.20	3D6	2.65	6BT6	1.50	6SJ7GT	1.80	7Z4	1.80	14F8	2.65	50A5	2.20
1AB5	3.20	3E6	2.65	6BU6	1.65	6SK7	2.00	10	3.90	14H7	2.40	50B5	2.00
1AC5	2.20	3LF4	2.65	6BY5G	2.65	6SK7GT	1.80	10Y	3.90	14J7	2.65	50C5	2.00
1AD5	2.20	3Q4	2.20	6C4	1.65	6SL7GT	2.40	12A	1.35	14N7	2.65	50C6G	2.90
1B3GT	2.65	3Q5GT	2.40	6C5	1.65	6SN7GT	2.20	12A5	3.20	14Q7	2.20	50L6GT	1.80
1B4P	3.90	3S4	2.00	6C5GT	1.65	6SQ7	1.65	12A6	2.40	14R7	2.65	50X6	2.20
1B5/25S	3.20	3V4	2.00	6C6	2.20	6SQ7GT	1.65	12A6GT	2.90	14S7	2.65	50Y6GT	1.80
1B7GT	3.20	5AZ4	1.35	6C8G	3.20	6SR7	1.80	12A7	3.20	14W7	2.65	50Y7GT	2.00
1C5GT	2.20	5T4	4.80	6CB6	2.00	6SR7GT	1.80	12A8G	2.00	14X7	2.65	50Z7G	1.80
1C6	3.20	5U4G	1.50	6CD6G	6.00	6SS7	2.00	12A8GT	2.20	14Y4	2.40	51	See 35
1C7G	3.20	5V4G	2.40	6D6	2.20	6SS7GT	1.80	12AH7GT	2.65	15	3.20	52	3.90
1C8	2.20	5W4	1.65	6D8G	3.20	6ST7	2.65	12AL5	2.00	18	2.65	53	2.65
1D5GP	3.90	5W4G	1.65	6E5	2.20	6SV7	2.90	12AT6	1.50	19	3.20	55	2.20
1D7G	3.20	5W4GT	1.65	6E6	2.65	6SZ7	2.20	12AT7	2.90	19BG6G	6.00	56	1.80
1D8GT	3.90	5X4G	1.80	6E7	3.90	6T7G	3.20	12AU6	2.00	19C8	3.20	57	2.00
1E5GP	3.90	5Y3G	1.35	6F5	1.65	6T8	2.90	12AU7	2.40	19J6	3.20	58	2.00
1E5GT	3.90	5Y3GT	1.25	6F5GT	1.65	6U4GT	2.40	12AV6	1.50	19T8	2.90	59	3.55
1E7GT	3.90	5Y4G	1.50	6F6	2.00	6U5/6G5	2.00	12AV7	2.90	20	3.90	70A7GT	3.90
1E8	2.20	5Y4GT	1.50	6F6G	1.65	6U6GT	2.00	12AW6	2.65	22	3.20	70L7GT	3.90
1F4	2.65	5Z3	1.80	6F6GT	1.65	6U7G	2.20	12AX7	2.40	24A	2.20	71A	2.40
1F5G	2.65	5Z4	2.65	6F7	3.20	6V5G	3.90	12AY7	6.00	25A6	3.20	75	2.00
1F6	3.90	6A3	3.20	6F8G	3.20	6V5GT	3.90	12B7	See 14A7	25A6G	2.65	76	1.65
1F7G	3.90	6A4	3.20	6G5	See 6U5	6V6	3.20	12B8GT	3.90	25A6GT	3.20	77	2.00
1G4GT	2.65	6A5G	3.90	6G6G	2.65	6V6GT	2.00	12BA6	1.80	25A7GT	7.40	78	2.00
1G5G	2.90	6A6	2.65	6H4GT	2.65	6V7G	1.80	12BA7	2.40	25AC5G	3.90	79	2.65
1G6GT	2.65	6A7	2.20	6H6	1.65	6W4GT	1.80	12BD6	2.00	25AC5GT	2.90	80	1.35
1H4G	2.20	6A8	2.20	6H6GT	1.80	6W5G	2.65	12BE6	1.80	25B5	3.90	81	4.80
1H5GT	1.80	6A8G	2.20	6J5	1.50	6W6GT	2.00	12BF6	1.65	25B6G	2.65	82	2.65
1H6G	3.20	6A8GT	2.20	6J5GT	1.50	6W7G	2.65	12BH7	2.40	25BQ6GT	3.20	83	265
1H6GT	3.20	6AB4	2.00	6J6	2.90	6X4	1.50	12BJ6	1.50	25C6G	3.20	83V	3.20
1J5G	2.65	6AB5/6N5	2.65	6J7	2.00	6X5	2.65	12BK6	1.50	25D8	3.90	84/6Z4	1.80
1J6G	3.20	6AB7/1853	3.20	6J7G	2.20	6X5GT	1.50	12BN6	2.90	25L6	3.20	G84	See 2Z2
1J6GT	3.20	6AC5GT	2.90	6J7GT	2.20	6Y3G	3.90	12BT6	1.50	25L6GT	1.80	85	2.20
1L4	2.00	6AC7/1852	2.90	6J8G	3.20	6Y6G	2.40	12BU6	1.50	25N6G	3.90	89	2.20
1L6	2.65	6AD7G	3.20	6K5GT	2.40	6Y7G	3.20	12C8	3.20	25S	3.20	99	3.20
1LA4	2.65	6AE6G	1.80	6K6GT	1.65	6Z4	See 84	12F5GT	1.80	25W4GT	2.00	99V	3.20
1LA6	2.65	6AF6G	2.65	6K7	2.00	6Z7G	3.90	12H6	1.80	25Y5	2.90	99X	3.20
1LB4	2.65	6AG5	2.65	6K7G	2.20	6ZY5G	2.20	12J5GT	1.50	25Z5	1.65	117L7GT/ 117M7GT	3.90
1LC5	2.65	6AG7	3.20	6K7GT	2.20	7A4/XXL	2.00	12J7G	2.00	25Z6	2.20	117N7GT	3.90
1LC6	2.65	6AH6	3.90	6K8	2.65	7A5	2.20	12J7GT	2.20	25Z6GT	1.50	117P7GT	3.90
1LD5	2.65	6AK5	3.90	6K8G	3.20	7A6	1.80	12K7G	2.00	26	2.00	117Z3	1.50
1LE3	2.65	6AK6	2.40	6K8GT	2.40	7A7	1.80	12K7GT	2.20	26BK6	1.65	117Z4GT	2.90
1LG5	2.65	6AL5	2.00	6L5G	2.65	7A8	1.80	12K8	2.40	27	1.80	117Z6GT	2.40
1LH4	2.65	6AL7GT	2.65	6L6	3.55	7AD7	3.20	12K8GT	2.65	30	2.20	485	2.65
1LN5	2.65	6AQ5	2.00	6L6G	3.55	7AF7	1.80	12Q7GT	1.80	31	2.65	950	2.65
1N5GT	2.00	6AQ6	1.80	6L6GA	3.55	7AG7	2.20	12S8GT	2.65	32	3.55	1201	See 7E5
1P5GT	2.65	6AQ7GT	2.40	6L7	2.40	7AH7	2.20	12SA7	2.00	32L7GT	3.20	1203A	See 7C4
1Q5GT	2.65	6AR5	1.65	6L7G	3.20	7AJ7	1.80	12SA7GT	2.00	33	3.20	1232	2.65
1Q6	2.20	6AS5	2.00	6N5	See 6AB5	7AU7	2.20	12SC7	2.20	34	3.55	1273	2.40
1R4	2.65	6AT6	1.50	6N6G	3.90	7B4	1.80	12SF5	1.80	35/51	2.20	1280	2.40
1R5	2.00	6AU5GT	2.65	6N7	2.40	7B5	1.80	12SF5GT	2.00	35A5	1.80	1852	See 6AC7
1S4	2.40	6AU6	2.00	6N7G	2.40	7B6	1.80	12SF7	2.00	35B5	2.00	1853	See 6AB7
1S5	1.80	6AV5GT	2.65	6N7GT	2.40	7B7	1.80	12SF7GT	2.00	35C5	2.00	FM1000	3.20
1S6	2.20	6AV6	1.50	6P5GT	2.40	7B8	1.80	12SG7	2.00	35L6GT	1.80	VR75	See 0A3
1T4	2.00	6AW6	2.65	6P7G	3.20	7C4	3.20	12SH7	2.20	35W4	1.25	VR90	See 0B3
1T5GT	2.65	6AX5GT	1.65	6Q6G	3.20	7C5	1.80	12SH7GT	2.20	35Y4	1.80	VR105	See 0C3
1T6	2.20	6B4G	3.20	6Q7	2.00	7C6	1.80	12SJ7	1.65	35Z3	1.80	VR150	See 003
1U4	2.00	6B5	3.20	6Q7G	1.80	7C7	1.80	12SJ7GT	1.65	35Z4GT	1.50	XXB	See 3C6
1U5	1.80	6B6G	2.20	6Q7GT	1.80	7C8	2.65	12SK7	1.65	35Z5GT	1.50	XXD	See 14AF7
1V	2.20	6B7	3.20	6R7	2.65	7E5/1201	2.65	12SK7GT	1.80	35Z6G	2.65	XXFM	See 7X7
1V2	1.50	6B8	3.20	6R7GT	2.65	7E6	2.20	12SL7GT	2.40	36	2.65	XXL	See 7A4
1V5	2.20	6B8G	3.20	6R8	3.20	7E7	2.65	12SN7GT	2.20				

NATIONAL UNION RADIO CORP.

Main Office: Orange, N. J. Research Division: Orange, N. J. • Plants: Newark, N. J.—Hatboro, Pa.



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PICTURE TUBES

ELECTRON TUBES

PRICE LIST EFFECTIVE JUNE 1, 1951

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VIDEOTRON TELEVISION PICTURE TUBES

Type		Description	Users Price
NU-TP400A	4"	Projection	63.00
NU-7JP4	7"	Electrostatic deflection	25.00
NU-8BP4	8½"	Electrostatic deflection	30.50
NU-10BP4	10"	White face	34.00
NU-10BP4A	10"	Gray face	34.00
NU-12LP4	12½"	White face	35.00
NU-12LP4A	12½"	Gray face	35.00
NU-14CP4/14BP4	14"	Rectangular gray face	35.00
NU-14GP4	14"	Electrostatic focus	35.00
NU-16DP4	16"	White face	51.00
NU-16DP4A	16"	Gray face	51.00
NU-16JP4	16"	White face	51.00
NU-16JP4A	16"	Gray face	51.00
NU-16KP4/16RP4	16"	Rectangular gray face	44.00
NU-16TP4	16"	Rectangular gray face	44.00
NU-17BP4A	17"	Rectangular gray face	44.00
NU-17FP4	17"	Electrostatic focus	44.00
NU-19FP4	19"	Gray face	91.00
NU-20CP4	20"	Rectangular gray face	70.25
NU-20FP4	20"	Electrostatic focus	70.25

TRANSMITTING AND POWER TUBES

Type	Description	Users Price
2C22	V-h-f. triode amplifier	1.60
2C26A	V-h-f. triode amplifier	7.75
2C34/NU34	Twin triode power amplifier	3.50
2C50	Twin triode power amplifier	7.50
2C53	High mu triode amplifier	12.00
2E24	Beam power amplifier	5.10
2E26	Beam power amplifier	3.85
2E30	Beam power amplifier	2.45
3B24	H-w. vacuum rectifier	7.50
3B25	H-w. gas rectifier	5.80
3D22	Tetrode thyratron	15.00
3E29	Pulse beam power amplifier	20.25
4B26/200	H-w. gas rectifier	11.30
15R	H-w. vacuum rectifier	29.50
31Z	Twin triode amplifier	5.50
51A	Power amplifier triode	4.50
51Z	High-mu power amplifier triode	4.50
69	Beam power amplifier	5.50
100TH	High-mu power amplifier triode	16.65
114B	V-h-f. triode	2.25
200	Power amplifier triode	25.00
203A	Power amplifier triode	13.75
211	Power amplifier triode	13.75
217C	H-w. vacuum rectifier	21.50
300	Power amplifier triode	29.50
307A	Pentode amplifier	7.67
311CH	Power amplifier triode	19.00
350A	Tetrode amplifier	8.75
350B	Tetrode amplifier	8.75
371B	H-w vacuum rectifier	14.50
575A	H-w. mercury vapor rectifier	21.00
721B	Gas switch	25.80
801A	Power amplifier triode	4.30
802	Power amplifier pentode	4.75
803	Power amplifier pentode	24.25
804	Power amplifier pentode	17.50
805	Power amplifier triode	13.50
806	Power amplifier triode	34.25
807	Beam power amplifier	2.50
808	Power amplifier triode	10.75
809	Power amplifier triode	4.00
810	Power amplifier triode	14.50
811	High-mu power amplifier triode	3.30
811A	High-mu power amplifier triode	4.05
812	Power amplifier triode	3.30
812A	Power amplifier triode	4.05
812H	Power amplifier triode	7.50
813	Beam power amplifier	16.00
814	Beam power amplifier	14.25
815	V-h-f. beam power amplifier	6.90
816	H-w. mercury vapor rectifier	1.65
826	V-h-f. power amplifier triode	12.50
828	Beam power amplifier	13.75
829B	V-h-f. beam power amplifier	16.25
830	Power amplifier triode	11.50
832	V-h-f. beam power amplifier	13.00
832A	V-h-f. beam power amplifier	12.90
834	V-h-f. power amplifier triode	14.50
836	H-w. vacuum rectifier	9.00
837	Power amplifier pentode	5.80
838	Power amplifier triode	13.75
843	Power amplifier triode	2.60
845	Power amplifier triode	13.75
852	Power amplifier triode	32.00
865	Tetrode power amplifier	11.50
866A	H-w. mercury-vapor rectifier	1.95
866JR	H-w. mercury-vapor rectifier	1.30
872A	H-w. mercury-vapor rectifier	8.20
873/973	Grid-controlled mercury-vapor rectifier	17.25
878	H-w. vacuum rectifier	12.75
900 (VT90)	U-h-f. power amplifier triode	35.00
967	Triode thyratron	6.50
975A	H-w. gas rectifier	25.00
1614	Tetrode amplifier	2.00
1616	H-w. vacuum rectifier	8.65
1624	Beam power amplifier	4.00
1625	Beam power amplifier	2.65
1626	Power amplifier triode	1.85
5516	Beam power amplifier	5.95
7193	U-h-f. triode amplifier	1.60
8005	Power amplifier triode	7.40
8020	H-w. vacuum rectifier	32.00
E1148	V-h-f. power amplifier triode	2.25
FG17	Triode thyratron	6.50
HV18	Power amplifier triode	25.00
KU23	Power amplifier triode	30.00
T55	Power amplifier triode	7.50
V70D	Power amplifier triode	7.50
VT52	Power amplifier triode	2.00
UE100	Power amplifier triode	15.00
Z225/866A	H-w. mercury vapor rectifier	1.95

SPECIAL PURPOSE TUBES

Type	Description	Users Price
OZ4A/1003	F-w. gas rectifier	1.20
2D21	Tetrode thyratron	2.00
2V3G	H-w. vacuum rectifier	3.15
3A4	Power amplifier pentode	1.20
3A5	Twin triode	1.95
5R4GY	F-w. vacuum rectifier	1.50
5X3	F-w. vacuum rectifier	3.50
6AJ5	Pentode amplifier	3.50
6AS7G	Power amplifier triode	6.75
6D4	Triode thyratron	2.85
6J4	Triode, grounded grid	8.05
6K4A	Triode, sub-miniature	4.25
12L8GT	Pentode power amplifier	2.25
28D7	Beam power amplifier	1.80
884	Triode thyratron	1.85
885	Triode thyratron	2.00
955	U-h-f. triode, acorn	3.60
1267	Cold cathode thyratron	1.85
1612	Pentagrid amplifier	2.70
1620	Pentode amplifier	6.25
1621	Power amplifier pentode	1.95
1622	Beam power amplifier	2.10
1629	Electron ray tuning indicator	1.40
1633	Triode amplifier	1.95
1654	H-w. vacuum rectifier	4.55
2050	Tetrode thyratron	1.85
2051	Tetrode thyratron	1.90
5851	Beam power amplifier, sub-miniature	17.65
5857	Secondary omission amplifier	65.00
9001	V-h-f. triode amplifier	3.10
9002	V-h-f. triode amplifier	2.50
9003	V-h-f. pentode amplifier	3.10
9006	V-h-f. diode	1.60
R1038	Ionization gauge	29.50

PANEL LAMPS

Type No.	Rated Volts	Amps.	Min. Base	Bead Color	Bulb Style	User's Price
N-13	3.8	.30	Screw	Green	G3½	.11
N-14	2.5	.30	Screw	Blue	G3½	.11
N-40	6-8	.15	Screw	Brown	T3¼	.11
N-40A§	6-8	.15	Bayonet	Brown	T3¼	.11
N-41	2.5	.50	Screw	White	T3¼	.11
N-42	3.2	.35	Screw	Green	T3¼	.12
N-43	2.5	.50	Bayonet	White	T3¼	.11
N-44	6-8	.25	Bayonet	Blue	T3¼	.11
N-45	3.2	.35	Bayonet	Green	T3¼	.12
N-46	6-8	.25	Screw	Blue	T3¼	.11
N-47	6-8	.15	Bayonet	Brown	T3¼	.11
N-48	2.0	.06	Screw	Pink	T3¼	.16
N-49	2.0	.06	Bayonet	Pink	T3¼	.16
N-50*	6-8	.20	Screw	White	G3½	.11
N-51*	6-8	.20	Bayonet	White	G3½	.09
N-55*	6-8	.40	Bayonet	White	G4½	.09
N-291/ N-292A	2.9	.17	Bayonet	White	T3¼	.15
N-292	2.9	.17	Screw	White	T3¼	.15
N-1455	18.0	.25	Screw	Brown	G5	.12
N-1455A‡	18.0	.25	Bayonet	Brown	G5	.12
N-1456	18.0	.25	Bayonet	Brown	G5	.12
N-1490	3.2	.16	Bayonet	White	T3¼	.11

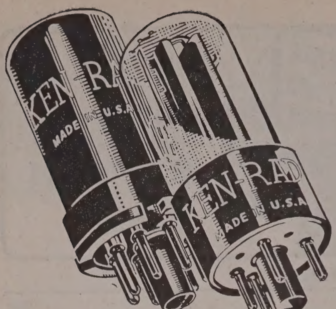
* Used also in Coin Operated Machines

‡ Replace with N-1456

§ Replace with N-47

NATIONAL UNION RADIO CORP.

Main Office: Orange, N. J. Research Division: Orange, N. J. • Plants: Newark, N. J.—Hatboro, Pa.



KEN-RAD

RADIO TUBES

metal - glass - miniature television picture

ALL TYPES AND RATINGS

Ken-Rad's complete line of tubes is widely known and highly regarded by service men and owners of radio sets. Top quality means outstanding performance and long life. With Ken-Rad tubes your radio plays better! . . . Some of the many popular types in the Ken-Rad line are listed below: Ask for complete prices and ratings!

Type	Price	Type	Price	Type	Price
1B3-GT	$2.65	*6BF5*	$2.20	*12AT7*	$2.90
1R5	2.00	6BG6-G	4.80	*12AU7*	2.40
1T4	2.00	*6BN6*	2.90	*12AV6*	1.50
1U4	2.00	6BQ6-GT	3.20	*12AX7*	2.40
1U5	1.80	*6C4*	1.65	*12BA6*	1.80
1X2-A	2.65	*6CB6*	2.00	*12BE6*	1.80
3S4	2.00	6CD6-G	6.00	**12SA7**	1.65
3V4	2.00	*6J6*	2.65	**12SK7**	1.65
5U4-G	1.50	6K6-GT	1.65	**12SQ7**	1.50
5Y3-GT	1.25	*6S4*	1.80	*19T8*	2.90
6AB4	1.80	**6SA7**	1.65	25AV5-GT	2.65
6AL5	1.80	6SN7-GTA	2.20	25BQ6-GT	3.20
6AQ5	2.00	**6SK7**	1.65	25L6-GT	1.65
6AU6	2.00	**6SQ7**	1.50	25W4-GT	2.00
6AV5-GT	2.65	*6T8*	2.90	*35C5*	2.00
6AV6	1.50	6V6-GT	2.00	*36W4*	1.25
6BC5	2.00	6W4-GT	1.80	35Z5-GT	1.35
6BA6	1.80	6W6-GT	2.00	*50C5*	2.00
6BE6	1.80	*6X4*	1.50	50L6-GT	1.80
		6X5-GT	1.50		

Type numbers of metal tubes are shown in bold-face type.

Type numbers of miniature tubes are shown in italics.

Prices and other data subject to change without notice.

G-E Germanium Diodes

1N48	$1.40	1N63	$6.35
1N51	.85	1N64	1.20
IN52	2.85	1N65	1.40

The Serviceman's Tube

KEN-RAD
DEPENDABLE
RADIO TUBE
K
KEN-RAD
A product of
GENERAL ELECTRIC
MADE IN U.S.A.
KEN-RAD

G-E Television Picture Tubes

5TP4	$ 60.00	14CP4	$ 35.30
7JP4	25.00	16AP4	58.65
8AP4	24.20	16AP4A	58.65
8AP4A	24.20	16GP4	49.50
10BP4	34.00	16KP4	49.50
10BP4A	34.00	16KP4A	55.50
10FP4	39.30	17BP4A	44.00
10FP4A	39.30	17BP4B	50.00
12KP4	41.70	19AP4	65.50
12KP4A	41.70	19AP4A	65.50
12LP4	34.85	20CP4	69.75
12LP4A	34.85	24AP4	111.00

KEN-RAD TUBES ARE A PRODUCT OF GENERAL ELECTRIC COMPANY

RAYTHEON®

RADIO AND TELEVISION RECEIVING TUBES

SUGGESTED LIST PRICES *Effective Dec. 30, 1950*

Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price
00A	$3.20	2A5	$2.20	6B7	$3.20	6P5GT	$2.40	7AF7	$1.80	12K8GT	$2.65	25C6G	$2.90	77	$2.00
01A	1.50	2A6	2.65	6B8	3.20	6P7G	3.20	7AG7	2.20	12Q7GT	1.80	25D8	3.90	78	2.00
0Y4	4.80	2A7	2.65	6B8G	3.20	6Q7	2.00	7AH7	2.20	12S8GT	2.65	25L6	3.20	79	2.65
0Z4	1.65	2B7	3.20	6BA6	1.80	6Q7G	1.80	7B4	1.80	12SA7	2.00	25L6GT	1.80	80	1.35
0Z4G	1.65	2E5	2.65	6BA7	2.40	6Q7GT	1.80	7B5	1.80	12SA7GT	2.00	25N6G	3.90	81	4.80
1A3	2.20	2Z2/G84	3.20	6BC5	2.00	6R7	2.65	7B6	1.80	12SC7	2.20	25W4GT	2.00	82	2.65
1A4P	3.90	3A8GT	4.80	6BC7	2.20	6R7G	2.65	7B7	1.80	12SF5	1.80	25Y5	2.90	83	2.65
1A5GT	1.80	3B7/1291	2.65	6BD5GT	3.20	6R7GT	2.65	7B8	1.80	12SF5GT	2.00	25Z5	1.65	83V	3.20
1A6	3.20	3C6/XXB	3.20	6BD6	2.00	6R8	3.20	7C4	3.20	12SF7	2.00	25Z6	2.20	84/6Z4	1.80
1A7GT	2.20	3D6/1299	2.65	6BE6	1.80	6S4	1.80	7C5	1.80	12SG7	2.00	25Z6GT	1.65	85	2.20
1B3GT/ 8016	2.65	3E6	2.65	6BF5	2.20	6S7	2.65	7C6	1.80	12SH7	2.20	26	2.00	89-89Y	2.20
1B4P	3.90	3LF4	2.65	6BF6	1.65	6S7G	3.20	7C7	1.80	12SH7GT	2.20	27	1.80	V99	3.90
1B5/25S	3.20	3Q4	2.20	6BG6G	4.80	6S8GT	2.65	7E5	2.65	12SJ7	1.80	30	2.20	X99	3.90
1B7GT	3.20	3Q5GT	2.40	6BH6	2.00	6SA7	2.00	7E6	2.20	12SJ7GT	1.80	31	2.65	117L/ M7GT	3.90
		3S4	2.00	6BJ6	2.00	6SA7GT	2.00	7E7	2.65	12SK7	1.80	32	3.55		
1C5GT	2.20	3V4	2.00	6BN6	3.20	6SB7Y	2.40	7F7	2.20	12SK7GT	1.80	32L7GT	3.20	117N7GT	3.90
1C6	3.20	5AZ4	1.35	6BQ6GT	3.20	6SC7	2.00	7F8	3.20	12SL7GT	2.40	33	3.20	117P7GT	3.90
1C7G	3.20	5T4	4.80	6C4	1.65	6SD7GT	2.90	7G7/1232	2.65	12SN7GT	2.20	34	3.55	117Z3	1.50
1D5GP	3.90	5U4G	1.65	6C5	1.65	6SF5	1.65	7H7	2.00	12SQ7	1.50	35/51	2.20	117Z4GT	2.90
1D7G	3.20	5V4G	2.40	6C5GT	1.65	6SF5GT	1.80	7J7	2.65	12SQ7GT	1.65	35A5	1.80	117Z6GT	2.40
1D8GT	3.90	5W4	1.65	6C6	2.20	6SF7	2.00	7K7	2.65	12SR7	2.20	35B5	2.00	485	2.65
1E5GP	3.90	5W4GT	1.65	6C8G	3.20	6SG7	2.00	7L7	2.65	12SR7GT	2.20	35C5	2.00	950	2.65
1E7G- 1E7GT	3.90	5X4G	1.80	6CB6	2.00	6SH7	2.20	7N7	2.20	12Z3	2.65	35L6GT	1.80	FM1000	3.20
1F4	2.65	5Y3G	1.25	6CD6G	6.00	6SH7GT	2.20	7Q7	2.00	14A4	2.65	35W4	1.25	XXB. (See 3C6)	
		5Y3GT	1.25	6D6	2.20	6SJ7	1.80	7R7	2.20	14A5	3.90	35Y4	1.80		
1F5G	2.65	5Y4G	1.50	6D8G	3.20	6SJ7GT	1.80	7S7	2.65	14A7/12B7	2.20	35Z3	1.80	XXD (See 14AF7)	
1F6	3.90	5Y4GT	1.50	6E5	2.20	6SK7	1.80	7V7	2.65	14AF7/ XXD	2.40	35Z4GT	1.50	XXFM (See 7X7)	
1F7G	3.90	5Z3	1.80	6E6	2.65	6SK7GT	1.80	7W7	2.65	14B6	2.20	35Z5GT	1.50	XXL (See 7A4)	
1G4GT	2.65	5Z4	2.65	6E7	3.90	6SL7GT	2.40	7X6	2.20	14B8	2.20	35Z6G	2.65		
1G5G	2.90	6A3	3.20	6F5	1.65	6SN7GT	2.20	7X7/XXFM	2.65			36	2.65		
1G6GT	2.65	6A4/LA	3.20	6F5GT	1.65	6SQ7	1.50	7Y4	1.80	14C5	2.65	37	1.80	**PICTURE TUBES**	
1H4G	2.20	6A5G	3.90	6F6	2.00	6SQ7GT	1.65	7Z4	1.80	14C7	2.40	38	2.20	Revised June 6, 1951	
1H5GT	1.80	6A6	2.65	6F6G	1.80	6SR7	1.80	10-10Y	3.90	14E6	2.20	39/44	2.65	3KP4	$20.00
1H6G	3.20	6A7	2.20	6F6GT	1.80	6SR7GT	1.80	12A	1.35	14E7	2.65	41	2.00	7JP4	25.00
1J5G	2.65	6A8	2.20	6F7	3.20	6SS7	2.00	12A5	3.20	14F7	2.20	42	2.00	8BP4	30.50
1J6G	3.20	6A8G	2.20	6F8G	3.20	6ST7	2.65	12A6	2.90	14F8	3.20	43	2.00	10BP4A	34.00
1J6GT	3.20	6A8GT	2.20	6G6G	2.65	6SV7	2.90	12A6GT	2.90	14H7	2.40	45	2.00	10FP4A	39.30
1L4	2.00	6AB4	2.00	6H4GT	2.65	6SZ7	2.20	12A7	3.20	14J7	2.65	45Z3	1.80	10HP4	66.00
1L6	2.65	6AB5/6N5	2.65	6H6	1.65	6T7G/ 6Q6G	3.20	12A8GT	2.20	14N7	2.65	45Z5GT	1.80	12AP4	91.00
1LA4	2.65	6AB7/1853	3.20	6H6GT	1.80			12AH7GT	2.65	14Q7	2.20	46	2.90	12KP4A	41.70
1LA6	2.65	6AC5GT	2.90	6J5	1.50	6T8	3.20	12AL5	2.00	14R7	2.65	47	2.90	12LP4	35.00
1LB4	2.65	6AC7/1852	2.90	6J5GT	1.50	6U4GT	2.65	12AT6	1.50	14S7	2.65	48	4.80	12LP4A	35.00
1LC5	2.65	6AD7G	3.20	6J6	2.90	6U5/6G5	2.00	12AT7	2.90	14W7	2.65	49	2.65	14BP4	35.50
1LC6	2.65	6AE6G	1.80	6J7	2.00	6U6GT	2.20	12AU6	2.00	14X7	2.65	50	6.00	14CP4	35.50
1LD5	2.65	6AF6G	2.65	6J7G	2.20	6U7G	2.20	12AU7	2.40	14Y4	2.40	50A5	2.20	16AP4A	58.50
1LE3	2.65	6AG5	2.65	6J7GT	2.20	6V6	3.20	12AV6	1.50	15	3.20	50B5	2.00	16DP4A	51.00
1LG5	2.65	6AG7	3.20	6J8G	3.20	6V6GT	2.00	12AV7	3.20	18	2.65	50C5	2.00	16EP4A	58.50
1LH4	2.65	6AH6	3.90	6K5GT	2.40	6V7G	1.80	12AW6	2.65	19	3.20	50C6G	2.90	16GP4	51.00
1LN5	2.65	6AK5	3.90	6K6GT	1.65	6W4GT	1.80	12AX7	2.40	19BG6G	6.00	50L6GT	1.80	16RP4	50.00
1N5GT	2.00	6AK6	2.40	6K7	2.00	6W5G	2.65	12AY7	6.00	19C8	3.20	50X6	2.20	16TP4	50.00
1P5GT	2.65	6AL5	2.00	6K7G	2.20	6W6GT	2.20	12B8GT	3.90	19J6	3.20	50Y6GT	1.80	16ZP4	51.00
1Q5GT	2.65	6AL7GT	2.65	6K7GT	2.20	6W7G	2.65	12BA6	1.80	19T8	2.90	50Y7GT	2.00	17BP4A	44.00
1R4/1294	2.65	6AQ5	2.00	6K8	2.65	6X4	1.50	12BA7	2.40	20	3.90	50Z7G	1.80	17CP4	42.35
1R5	2.00	6AQ6	1.80	6K8G	3.20	6X5	2.65	12BD6	2.00	22	3.20	52	3.90	19AP4A	65.00
1S4	2.40	6AQ7GT	2.40	6K8GT	2.40	6X5GT	1.50	12BE6	1.80	24A	2.20	53	2.65	19AP4B	65.00
1S5	2.00	6AR5	1.65	6L5G	2.65	6Y6G	2.40	12BF6	1.65	25A6	3.20	55	2.20	20CP4	70.75
1T4	2.00	6AS5	2.00	6L6	3.55	6Y7G	3.20	12BH7	2.40	25A6G	2.65	56	1.80	20DP4A	70.75
1T5GT	2.65	6AT6	1.50	6L6G	3.55	6Z7G	3.90	12C8	3.20	25A6GT	2.65	57	2.00		
1U4	2.00	6AU5GT	2.65	6L6GA	3.55	6ZY5G	2.20	12F5GT	1.80	25A7GT	6.00	58	2.00		
1U5	1.80	6AU6	2.00	6L7	2.40	7A4/XXL	2.00	12H6	1.80	25AC5G	3.90	59	3.55		
1V	2.20	6AV6	1.50	6L7G	3.20	7A5	2.20	12J5GT	1.50	25AC5GT	2.90	70A7GT	3.90		
1V2	1.50	6AX5GT	1.65	6N6G	3.90	7A6	1.80	12J7GT	2.20	25B5	3.90	70L7GT	3.90		
1X2-1X2A	2.65	6B4G	3.20	6N7	2.40	7A7	1.80	12K7G	2.00	25B6G	2.65	71A	2.40		
2A3	3.20	6B5	3.20	6N7G	2.40	7A8	1.80	12K7GT	2.20	25B8GT	3.90	75	2.00		
2A4G	3.20	6B6G	2.20	6N7GT	2.40	7AD7	3.20	12K8	2.65	25BQ6GT	3.20	76	1.65		

Tube prices listed above are for your convenience and do not necessarily indicate type availability.

RAYTHEON ®

ELECTRONIC TUBES

SUBMINIATURE TUBES

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	TYPICAL APPLICATION	HTR or FILAMENT Volts	HTR or FILAMENT Ma.	HTR or FILAMENT Type	MAX. DIMENSIONS Inches Length	MAX. DIMENSIONS Inches Width	MAX. DIMENSIONS Inches Thickness	PLATE VOLTS	GRID 1 VOLTS	GRID 2 VOLTS	GRID 3 VOLTS	PLATE CURR. ma.	GRID 2 CURR. ma.	AMP. FACT.	PLATE RESIST. meg.	MUT. COND. µmhos	OUTPUT milli-watts	LOAD RESIST meg.
1AD4	$5.35†	Pentode	R-F Amplifier	1.25	100	Fil	1.5	.385	.285	45	Rg = 2 meg.	45		2.8	0.8		0.5	2000		
1AG5	5.35†	Diode-Pent.	Det.-Amplifier	1.25	30	Fil	1.5	.385	.285	45	Rg = 5 meg.	45		0.8	0.25		0.26	350		
2E31 2E32	2.65† 2.65†	Pentode	R-F Amplifier	1.25	50	Fil	1 9/16	.400	.300	22.5	0	22.5		0.4	0.3		0.35	500		
2E35 2E36	4.30† 4.30†	Pentode	Power Amp.	1.25	30	Fil	1 9/16	.390	.290	45	−1.25	45		0.45	0.11		0.25		6	0.1
2E41 2E42	2.65† 2.65†	Diode Pentode	Det.-Amplifier	1.25	30	Fil	1 9/16	.390	.290	22.5	0	22.5		0.35	0.12		0.25	375		
2G21 2G22	2.65† 2.65†	Triode-Hept.	Converter	1.25	50	Fil	1 9/16	.400	.300	22.5	Rg = 50,000	22.5	0	0.2	0.3		0.5	60[1]	Eb Triode = 22.5 Ib Triode = 1 ma.	
CK502AX	4.30	Pentode	Power Amp.	1.25	30	Fil	1.5	.385	.285	45	−1.25	45		0.6	0.15		0.2	550	6	0.1
CK503AX	2.05	Pentode	Power Amp.	1.25	30	Fil	1.5	.385	.285	45	−2	45		0.8	0.25		0.35	550	9.5	0.05
CK505AX	3.20	Pentode	Voltage Amp.	0.625	30	Fil	1.25	.385	.285	22.5	−0.625	22.5		0.125	0.040		1.1	180	38[2]	
CK506AX	3.20	Pentode	Power Amp.	1.25	50	Fil	1.5	.385	.285	45	−4.5	45		1.25	0.4		0.12	500	25	0.03
CK510AX	5.35	Dble-Tetr.	Voltage Amp.	0.625	50	Fil	1.25	.400	.285	45	0			0.06			0.5	65	150	
CK512AX	3.20	Pentode	Voltage Amp.	0.625	20	Fil	1.25	.385	.285	22.5	−0.625	22.5		0.125	0.040		1.25	160	37[2]	
CK518AX	2.30	Pentode	Power Amp.	1.25	30	Fil	1.515	.380	.290	45	−2	45		0.8	0.25		0.35	550	9.5	0.05
CK522AX	3.20	Pentode	Power Amp.	1.25	20	Fil	1.5	.385	.285	22.5	0	22.5		0.3	0.08		0.6	450	1.2	0.2
CK525AX	3.20	Pentode	Power Amp.	1.25	20	Fil	1.5	.385	.285	22.5	−1.2	22.5		0.25	0.06		0.33	325	2.2	0.06
CK526AX	4.05	Pentode	Power Amp.	1.25	20	Fil	1.5	.385	.285	22.5	−1.5	22.5		0.45	0.12		0.22	400	3.75	0.05
CK527AX	5.35	Pentode	Power Amp.	1.25	15	Fil	1.5	.385	.285	22.5	0	22.5		0.1	0.025		1.8	225	0.75	0.3
CK528AX	3.20	Pentode	Power Amp.	1.25	20	Fil	1.515	.390	.290	22.5	0	22.5		0.3	0.08		0.6	450	1.2	0.2
CK529AX	4.10	Pentode	Power Amp.	1.25	20	Fil	1.515	.390	.290	15	−1.25	15		0.32	0.075		0.3	350	1.6	0.05
CK531DX	5.35	Pentode	Power Amp.	1.25	20	Fil	1.25	.285	.220	15	−1.5	15		0.30	0.090		0.25	275	1.6	0.06
CK532DX	5.35	Pentode	Power Amp.	1.25	15	Fil	1.25	.285	.220	22.5	0	22.5		0.40	0.125		0.18	450	1.8	0.1
CK533AX	3.20	Pentode	Power Amp.	1.25	15	Fil	1.5	.385	.285	22.5	0	22.5		0.36	0.09		0.5	400	1.8	0.075
CK534AX	3.20	Pentode	Voltage Amp.	0.625	15	Fil	1.25	.385	.285	15	−0.625	15		0.0047	0.0014		12	20	30[2]	2.2
CK535AX	4.45	Pentode	Power Amp.	1.25	20	Fil	1.5	.385	.285	15	−1.25	15		0.32	0.075		0.3	350	1.6	0.05
CK536AX	3.20	Pentode	Power Amp.	1.25	15	Fil	1.5	.385	.285	22.5	0	22.5		0.36	0.09		0.5	400	1.8	0.075
CK537AX	5.45	Pentode	Power Amp.	1.25	20	Fil	1.515	.390	.290	22.5	−1.5	22.5		0.45	0.12		0.22	400	3.75	0.05
CK538DX	4.35	Pentode	Voltage Amp.	0.625	15	Fil	1.0	.285	.220	15	−0.625	15		0.0046	0.002		10.0	18	28[2]	2.2
CK539DX	5.35	Pentode	Power Amp.	1.25	15	Fil	1.25	.285	.220	22.5	−1.4	22.5		0.25	0.075		0.25	300	2.2	0.1
CK541DX	5.35	Pentode	Power Amp.	1.25	15	Fil	1.25	.285	.220	30	0	30		0.25	0.075		0.5	425	1.4	0.2
CK542DX	5.35	Pentode	Power Amp.	1.25	15	Fil	1.25	.285	.220	22.5	−2.0	22.5		0.425	0.130		0.15	325	3.75	0.05
CK543DX	5.35	Pentode	Voltage Amp.	0.625	15	Fil	1.0	.285	.220	15	−0.625	15		0.005	0.0022		5.0	15	20[2]	
CK544DX	5.35	Pentode	Power Amp.	1.25	10	Fil	1.25	.285	.220	30	0	30		0.135	0.035		1.2	325	525	0.2
CK546DX	5.35	Pentode	Power Amp.	1.25	10	Fil	1.25	.285	.220	22.5	0	22.5		0.375	0.085		0.2	425	1.75	0.1
CK547DX	5.35	Pentode	Power Amp.	1.25	10	Fil	1.25	.285	.220	30	0	30		0.240	0.060		0.5	425	1.35	0.2
CK548DX	5.35	Pentode	Power Amp.	1.25	10	Fil	1.25	.285	.220	22.5	−1.4	22.5		0.240	0.060		0.25	300	2.1	0.1
CK549DX	4.35	Pentode	Voltage Amp.	0.625	10	Fil	1.0	.285	.220	15	−0.625	15		0.0046	0.002		12.0	17	27[2]	
CK551AXA	5.35†	Diode-Pent.	Det.-Amplifier	1.25	30	Fil	1 9/16	.400	.300	22.5	0	22.5		0.17	0.043		0.7	235		
CK553AXA	3.15†	Pentode	R-F Amplifier	1.25	50	Fil	1 9/16	.400	.300	22.5	0	22.5		0.42	0.13		0.37	550		
CK574AX	3.20	Pentode	R-F Amplifier	0.625	20	Fil	1.25	.390	.290	22.5	−0.625	22.5		0.125	0.040		1.25	160		
CK623CX	9.00	Pentode	Voltage Amp.	6.3	200	Htr	1.5	.410	.400	Special Low Microphonic type. See CK5702 for characteristics.										
CK5672	3.20†	Pentode	Power Amp.	1.25	50	Fil	1.5	.385	.285	67.5	−6.5	67.5		3.25	1.1			650	65	0.020
CK5676	3.65	Triode	UHF Osc.	1.25	120	Fil	1.5	.400	.300	135	−5			4		15		1600		
CK5677	3.65	Triode	UHF Osc.	1.25	60	Fil	1.5	.400	.300	135	−6			1.9		13.5		650		
CK5678	2.50†	Pentode	R-F Amplifier	1.25	50	Fil	1.515	.400	.300	67.5	0	67.5		1.8	0.48		1.0	1100		
CK5697	6.75	Triode	Electrometer	0.625	20	Fil	1.25	.400	.285	12	−3			0.22		2.1		135	Max. Ic^{1} = $5x10^{-13}$ amp.	
CK5702	7.50	Pentode	R-F Amplifier	6.3	200	Htr	1.5	.410	.400	120	Rk = 200	120		7.5	2.5		0.34	5000		
CK5703	2.40	Triode	UHF Osc.	6.3	200	Htr	1.5	Dia. = .400		120	Rk = 220			9		25		5000		
CK5704	6.00	Diode	Detector	6.3	150	Htr	1.5	Dia. = .315		Max. RMS Plate Voltage = 150v; Max. Io = 9 madc										
CK5744	6.80	Triode	Amp.-HF Osc.	6.3	200	Htr	1.5	Dia. = .400		250	Rk = 500			4		70		4000		
CK5783	7.50	Gas Diode	Volt. Ref.			Cold	1 5/8	Dia. = .400		See Voltage Reference Tube Section for Characteristics										
CK5784	7.50	Pentode	Mixer-Gated Amp.	6.3	200	Htr	1.5	.410	.400	120	−2	120	0	5.2	3.5			3200		
CK5785	2.35	Diode	HW Rectifier	1.25	15	Fil	1.5	.400	.300	Max. Inverse Peak Voltage = 3500; Max. Io = 100 µadc										
CK5787	7.50	Gas Diode	Volt.Regulator			Cold	2 1/16	Dia. = .400		See Voltage Regulator Tube Section for Characteristics										
CK5829	4.60	Dble. Diode	Detector	6.3	150	Htr	1.5	.410	.385	Max. Inverse Peak Voltage = 330v; Max. Io = 5 ma. per plate										
CK5851	6.95	Beam Pent.	R-F Pwr. Amp.	1.25 2.5	110 55	Fil	1.6	Dia. = .400		125	−7.5	125		5.5	0.9		0.175	1600		
CK5854	2.05	Pentode	Power Amp.	1.25	30	Fil	1.5	.385	.285	45	−2.0	45		0.8	0.25		0.35	550	9.5	0.05
CK5873	7.50	Dble. Triode	Voltage Amp.	6.3	300	Htr	1.5	Dia. = .400		150	−3.0			9.0		22		2900	(Each Unit)	
CK5875	2.10	Pentode	Radiosonde	1.25	100	Fil	1.5	.385	.285	90	0	90		3.5	1.0			2500		
CK5884	15.15	Dble. Tetr.	Electrometer	1.25	10	Fil	1.625	.400	.285	4.5	−3.0			0.02		0.75		15	Nom. Ic^{1} = $1x10^{-14}$	
CK5885	15.15	Dble. Tetr.	Electrometer	1.25	20	Fil	1.625	Diam. = .389		13.5	−3.0			0.185		2.4		160	Nom. Ic^{1} = $1x10^{-12}$	
CK5886	7.50	Pentode	Electrometer	1.25	10	Fil	1.5	.400	.285	10.5	3	Triode Conn.		0.2		2		160	Max. Ic^{1} = $2x10^{-13}$ amp.	
CK5889	11.30	Pentode	Electrometer	1.25	7.5	Fil	1.6	.385	.285	12	2.0	4.5		0.005	0.005		18	14	Max. Ic^{1} = $3x10^{-15}$ amp.	
CK5975	3.85	Triode	Amp-Osc.	6.3	175	Htr	1.5	Dia. = .400		200	RK = 680			12.5		16		4000		
CK5995	7.50	Diode	HW Rectifier	6.3	300	Htr	1.75	Dia. = .400		See Rectifier Tube Section for Characteristics										
CK6029	4.50	Triode	UHF Osc.	1.25	200	Fil	1.5	.385	.285	90	−4			11		8.5		2000		
CK6050	3.65	Triode	UHF Osc.	1.25	120	Fil	1.5	.385	.285	135	−5			4.0		16		1600		

† Types subject to 10% Federal Excise Tax, which has been included. [1] Conversion conductance. [2] Voltage gain (times).

RAYTHEON ®

ELECTRONIC TUBES

RECTIFIER TUBES

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	FILAMENT			MAX. PEAK INVERSE VOLTAGE	MAX. PEAK CURRENT	MAX. DC CURRENT	AVERAGE TUBE DROP	MAX. HEIGHT Inches	BASE
			Volts	Amps.	Type						
BH	$4.50†	Full Wave—Gas			Cold Cathode	1,000	400 Ma.	125 Ma.	90	4 3/8	4-pin
0Z4A/ CK1003	1.20	Full Wave—Gas			Cold Cathode	880	330 Ma.	110 Ma.	24	2⅝	Octal
2X2A	4.35	Half Wave—High Vacuum	2.5	1.75	Cathode	12,500	60 Ma.	7.5 Ma.		4 17/32	4-pin
RK3B24W	11.75	Half Wave—High Vacuum	2.5 5.0	3.0 3.0	Thoriated	20,000 20,000	150 Ma. 300 Ma.	30 Ma. 60 Ma.		4 13/16	4-pin
RK3B26	18.00	Clipper Diode—High Vacuum	2.5	4.75	Cathode	15,000	8 Amp.	20 Ma.	130	4 3/8	Octal
RK3B29	16.50	Half Wave—High Vacuum	2.5	4.75	Cathode	16,000	250 Ma.	65 Ma.	130	5¼	4-pin
RK4B31	50.35	Clipper Diode—High Vacuum	5.0	5.25	Cathode	16,000	16 Amp.	60 Ma.	150	7	Jumbo 4-pin
RK72	11.75	Half Wave—High Vacuum	2.5	3.0	Thoriated	20,000	150 Ma.	30 Ma.	200	4 13/16	4-pin
RX120	17.75	Half Wave—Mercury, Argon	2.5	30.0	Cathode	150	120 Amp.	20 Amp.	5	8 13/16	Mogul
RX120A	20.00	Half Wave—Mercury	2.5	30.0	Cathode	300 750	120 Amp. 120 Amp.	20 Amp. 10 Amp.	6 6	8 13/16	Mogul
RX212	27.15	Half Wave—Mercury	2.5	30.0	Cathode	1,000	120 Amp.	20 Amp.	10	12	Mogul
RX215	24.30	Full Wave—Mercury	2.5	30.0	Cathode	500	90 Amp.	15 Amp.	10	8	S.Jumbo 4-pin
RK866A/ 866	1.95	Half Wave—Mercury	2.5	5.0	Coated	10,000	1 Amp.	250 Ma.	15	6 5/16	4-pin
RK872A/ 872	8.20	Half Wave—Mercury	5.0	7.5	Coated	10,000	5 Amp.	1.25 Amp.	10	8½	Jumbo 4-pin
CK1005	3.80	Full Wave—Gas	6.3	0.1	Oxide	450	210 Ma.	70 Ma.	20	2⅝	Octal
CK1006	3.85†	Full Wave—Gas	1.75	2.0	Oxide*	1,600	600 Ma.	200 Ma.	20	4 11/16	4-pin
CK1007	1.20†	Full Wave—Gas	1.0	1.2	Oxide*	980	330 Ma.	110 Ma.	24	2⅝	Octal
CK1012	3.05	Full Wave—Gas	1.75	2.0	Oxide Cold Cathode	1,200 1,200	900 Ma. 900 Ma.	300 Ma. 300 Ma.	25 25	4 11/16	4-pin Med.
CK1024	3.65	Full Wave—Gas			Cold Cathode	1,000	480 Ma.	175 Ma.	24	2⅝	Octal
CK1027	3.40	Half Wave—Gas			Cold Cathode	2,800	30 Ma.	3 Ma.	100	2¼	Miniature
1641/RK60	3.00	Full Wave—High Vacuum	5.0	3.0	Oxide	4,500 2,500	150 Ma. 330 Ma.	50 Ma. 250 Ma.	60	5¾	4-pin
CK5517	3.40	Half Wave—Gas			Cold Cathode	2,800	100 Ma.	12 Ma.	100	2¼	Miniature
CK5785	2.35	Half Wave—High Vacuum	1.25	0.015	Oxide	3,500		100 μa.	17	1½	Flex. Leads
CK5995	7.50	Half Wave—Gas	6.3	0.3	Oxide	850	275 Ma.	45 Ma.	25	1¾	Flex Leads

*May be used as ionic heated cathode rectifier under some conditions.

TRANSMITTING TUBES

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	TYPICAL APPLICATION	FILAMENT			MAXIMUM VOLTAGES				MAX. CURRENT MA.			POWER WATTS			CAPACITANCES			BASE
				Volts	Amps	Type	Plate	Grid	Screen	Sup-pressor	Plate	Grid	Screen	Dissi-pation	Drive	Out-put	G-P	Input	Output	
2C34/ RK34	$3.50	Dual Triode	H-F Oscillator Amp.	6.3	0.8	Heater	300	-36			80*	20*		10*	1.8*	16*	2.4	3.4	0.5	7-Pin
2E24	5.10	Beam Pentode	VHF Oscil.-Amp.	6.0	0.65	Oxide	600	-175	200		85	3.5	12.5	13.5	2.0	16.5	0.11	8.5	6.5	Octal
2E26	3.85	Beam Pentode	VHF Oscil.-Amp.	6.0	0.8	Cathode	600	-175	200		75	3.5	12.5	13.4	0.17	27	0.20	13	7	Octal
3A4	1.20†	Pentode	R-F, A-F Amplifier	2.8 1.4	0.1 0.2	Oxide	150	-30	135		20	0.25		2.0		1.2	0.35	4.8	4.2	Min. Button
3A5	1.95	Dble. Triode	R-F Oscillator-Amp.	2.8 1.4	0.11 0.22	Oxide	135	-30	(Each Unit)		15	2.5		0.9	0.2	2.0	3.2	0.9	1.0	Min. Button
3B4	3.60	Beam Pentode	R-F Oscillator Amp.	2.5 1.25	0.165 0.330	Oxide	135	-70	120		22	1.5		2.7	0.07	1.25	0.16	4.6	7.6	Min. Button
RK4D22	19.95	Beam Tetrode	R-F Oscillator-Amp.	25.2 12.6	0.8 1.6	Cathode	750	-200	350		300	15	35	50	1.5	135	0.27	28.0	13.0	Spec. 7-Pin
RK4D32	19.95	Beam Tetrode	R-F Oscillator-Amp.	6.3	3.75	Cathode	750	-200	350		300	15	35	50	1.5	135	0.27	28.0	13.0	Spec. 7-Pin
5D23/ RK65	37.50	R-F Tetrode	R-F Amplifier	5.0	14.0	Thoriated	3000	-250	500		250	40	80	215	15.0	565	0.42	10.0	5.0	Jmb. 4-Pin
RK6D21	320.00	Tetrode	Pulse Amp.	8.2	20	Thoriated	40Kv		2500					400						Giant 5-Pin
RK6D22	55.00	Tetrode	R-F, A-F Amp.	5.0	28.5	Thoriated	3500	-250	500		500	100	165	450	22.0	1000	0.5	22.0	10.0	Jmb. 4-Pin
RK25	3.95	R-F Pentode	Suppressor Mod.	6.3	0.9	Heater	500	-90	200	+45	55	8	38	10	0.5	22	0.2	10.0	10.0	7-Pin
RK38	13.50	Triode	R-F, A-F Amp.	5.0	8.0	Thoriated	3000	-200			165	40		100	10.0	225	4.3	4.6	0.9	Med. 5-Pin
RK59	4.50	Dual Triode	Quick Heat'g	6.3	1.0	Oxide	500	-60			90*	14*		15*	1.3*	32*	9.0	5.0	1.0	4-Pin
RK75	12.35	Pentode	R-F Oscil.-Amp.	5.5	1.0	Oxide	500	-100	250		60	7	25	15		15	0.55	15	12	Med 5-Pin
RK715C	78.55	Tetrode	Pulse Modulator	27.0	2.15	Cathode	18000	-1000	1350		15 amp.			60			1.1	38	7	Spec. 4-Pin
RK807	2.50	Beam Tetrode	R-F Oscil.-Amp.	6.3	0.9	Heater	600	-200	300		100	5	12	30	0.2	50	0.2	11.0	7.0	Med 5-Pin
RK813	16.00	Beam Tetrode	R-F Oscil.-Amp.	10.0	5	Thoriated	2250	-300	400		225	30	55	500	4.0	375	0.25	16.3	14	Giant 7-Pin
814/ RK47	14.25	Beam Tetrode	R-F Oscil.-Amp.	10.0	3.25	Thoriated	1250	-300	300		150	15	34	50	1.5	130	0.12	13.0	10.0	Med. 5-Pin
RK829B	16.25	Dual Beam Tet.	R-F Oscil.-Amp.	12.6	1.125	Cathode	750	-175	225		240*	15*	30*	40*	0.8*	87*	0.12	14.5	7.0	Med. 7-Pin
RK832A	12.90	Dual Beam Tet.	R-F Oscil.-Amp.	6.3	0.8	Cathode	750	-100	250		90	6	20	15	0.19	26	0.05	7.5	3.8	Spec. 7-Pin
RK837	5.80	R-F Pentode	R-F Oscil.-Amp.	12.6	0.7	Heater	500	-200	200	+40	80	8	40	12	0.4	22	0.2	16.0	10.0	Med. 7-Pin
RK1625	2.65	Beam Tetrode	R-F Oscil.-Amp.	12.6	0.45	Cathode	600	-200	300		100	5	12	25	0.2	40	0.2	11	7	Med. 7-Pin

*Indicates value for both sections combined.

† Types subject to 10% Federal Excise Tax, which has been included.

RAYTHEON ®

ELECTRONIC TUBES

GERMANIUM CRYSTAL DIODES

TYPE	SUGGESTED USER PRICES	TYPICAL APPLICATION	DIMENSIONS Inches			MAX. DC INVERSE VOLTAGE	MAX. PEAK ANODE CURR. ma.	MAX. AVERAGE DC ANODE CURR. ma.	MIN. FORWARD CURRENT AT +1 VOLT ma.	MAX. INVERSE CURRENT AT -5 VOLTS ma.	MAX. INVERSE CURRENT AT -10 Volts ma.	MAX. INVERSE CURRENT AT -50 Volts ma.	MAX. INVERSE CURRENT AT 100 Volts ma.	MIN. INVERSE VOLTAGE FOR ZERO DYNAMIC RESIST	AVE. INVERSE CURRENT AT -50 Volts 70°C. ma.	SHUNT CAP. mmf.	AMBIENT TEMP. RANGE °Cent.
			Max. Length	Max. Diam.	Min. Lead Length												
1N66	.95	Gen Purpose Diode	0 400	0 175	1	60	150	50	5.0		0.05	0.8		70	0.43	1.0	-50 to +100
1N67	3.95	50V DC Restorer	0.400	0.175	1	80	100	35	4.0	0.005		0.05		100	0.1	1.0	-50 to +100
1N68	2.35	100V DC Restorer	0 400	0 175	1	100	100	35	3 0					120	0.15	1.0	-50 to +100
CK705	.85	Gen. Purpose Diode	0 400	0 175	1	60	150	50	5 0		0.05	0 8		70	0.43	1.0	-50 to +100
CK706	.59	Video Detector	0 400	0 175	1	RF efficiency at 60 MC is approx. 50%					0.20			50			-50 to +100
CK707	2.00	50V DC Restorer	0.400	0 175	1	80	100	35	3.5	0.008		0.10		100	0.1	1.0	-50 to +100
CK708	2.00	100V DC Restorer	0 400	0 175	1	100	100	35	3.0				0.625	120	0.15	1.0	-50 to +100
CK709	4.50	4 Matched Diodes	2⅝	1 5/16	Octal Base	60	150	50		Matched within 2.5% at +1 Volt.							-50 to +100
CK710	1.50	UHF Converter				Data will be available later in 1951.											
CK711	16.50	4 Matched Diodes	1.75	1 1/16	Octal Base	80	100	35	Special matched sections. Refer to Data Sheet.								-50 to +100
CK712	15.05	200 Volt Diode	0.400	0.175	1	200	70	22.5	1.0				0.8 at -200v	225		1 0	-50 to +100
CK713	.95	Computer Diode	0.400	0.175	1	75	150	50	21 at +2v			0.25 at -40v	(DC characteristics at 50°C.)			1.0	-50 to +100

The 1N66, 1N67, and 1N68 are sealed to withstand severe humidity conditions. Data available on request.

VOLTAGE REGULATOR - VOLTAGE REFERENCE TUBES

TYPE	SUGGESTED USER PRICES	TYPICAL APPLICATION	MAX. DIMENSIONS Inches		MIN. STARTING VOLTAGE SUPPLY	OPERATING VOLTAGE Approx.	MIN. OPERATING CURRENT ma.	MAX OPERATING CURRENT ma.	MAX. REGULATION Volts
			Height	Diam.					
0A2	$3.20	Voltage Regulator	2⅝	¾	185	150	5	30	6
0A3, VR75	2.65	Voltage Regulator	4¼	1 9/16	105	75	5	40	5
0B2	3.55	Voltage Regulator	2⅝	¾	133	108	5	30	4
OB3 VR90	1.20	Voltage Regulator	4¼	1 9/16	125	90	10	30	8
0C3 VR105	2.65	Voltage Regulator	4¼	1 9/16	133	105	5	40	4
0D3 VR150	2.65	Voltage Regulator	4¼	1 9/16	185	150	5	40	5.5
CK1017	11.25	Voltage Regulator	2 11/16	¾	800	700	0 005	0.055	20
CK1022	15.00	Voltage Regulator	2 11/16	¾	1100	1000	0 005	0 055	20
CK5651	*3.30	Voltage Reference	2¼	¾	115	82-92	1 5	3.5	3
CK5783	7.50	Voltage Reference	1⅝	0 4	115	82-92	1.5	3.5	3
CK5787	7.50	Voltage Regulator	2 1/16	0.4	145	100	5	25	3
CK5962	11.25	Voltage Regulator	2 11/16	¾	730	700	0 002	0.055	15

Not less than indicated supply voltage should be provided to insure starting throughout tube life.

RADIATION COUNTER (GEIGER-MUELLER) TUBES

(All glass, thin-wall, self-quenching)

TYPE	SUGGESTED USER PRICES	MAX. DIMENSIONS Inches		OPERATING VOLTAGE RANGE Volts dc	PLATEAU Length Volts dc	RELATIVE PLATEAU SLOPE Per 100v	GEIGER THRESHOLD Volts dc max.	BACKGROUND Unshielded counts min.	AMBIENT TEMP. RANGE ° cent.	WALL WEIGHT Nominal mg. sq. cm.	EFFICIENCY %	LIFE counts
		Length	Diam.									
CK1B90	$15.00	8¼	13/16	Thres. +50	>150	3%	1100	60	-40 to +50	35	90	10^9
CK1018	15.00	8¼	11/16	850-950	>150	3%	850	60	-40 to +55	35	90	10^9
CK1019	15.00	8¼	13/16	875-975	>150	3%	880	60	-40 to +55	35	90	10^9
CK1020	11.50	6	¾	850-950	>150	3%	850	60	-40 to +55	35	90	10^9
CK1021	11.00	5¼	31/32	850-950	>150	3%	850	60	-40 to +55	35	90	10^9
CK1023	11.00	5	¾	850-950	>150	3%	850	60	-40 to +55	35	90	10^9
CK1026	3.00	3	¾	850-950	>150	30%	760	30	-70 to +50	175	—	10^9
CK1029	15.00	5¼	31/32	850-950	>150	3%	850	60	-40 to +55	35	90	10^9
CK1032	3.15	3	¾	1050-1200	>150	30%	1000	30	-70 to +50	175	—	10^9

This data is compiled as a Raytheon service to the Field, it is not intended to indicate type availability.

RAYTHEON ®

ELECTRONIC TUBES

SPECIAL PURPOSE TUBES

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	TYPICAL APPLICATION	HTR or FILAMENT			MAX. DIMENSIONS Inches		PLATE VOLTS	GRID 1 VOLTS	GRID 2 VOLTS	GRID 3 VOLTS	PLATE CURR. ma.	GRID 2 CURR. ma.	AMP. FACT.	PLATE RESIST. meg.	MUT. COND. µmhos
				Volts	Amps	Type	Height	Diam.									
0A4G	$2.65	Gas Triode	Control Thyratron			Cold	4 1/8	1 9/16		Max. Peak Cathode Curr. = 100 ma; Max. DC Cathode Curr. = 25 ma.							
1AE4	1.40†	Pentode	R-F Amplifier	1.25	0.1	Fil	2 1/8	3/4	90	0	90		3.5	1.2		0.5	1550
2C33/ RX233A	5.00	Gas Triode	Control Thyratron	2.5	2.5	Fil	4 3/16	1 17/64		Max. Peak Inverse = 1500v; Max. Ave. Anode Curr. = 25 ma.							
2C50	7.50	Dble. Triode	Power Amplifier	12.6	0.3	Htr	3 3/16	1 5/16	300	-24			12.5		9.5		1750
2C52	7.50	Dble. Triode	Voltage Amp.	12.6	0.3	Htr	3 3/16	1 5/16	250	-2			1.3		90		1900
6AJ5	3.50†	Pentode	RF-AF Amplifier	6.3	0.175	Htr	1 3/4	3/4	28	Rk200	28		3	1.2		0.090	2750
6AN5	6.00†	Pentode	RF-AF Pwr. Amp.	6.3	0.45	Htr	2 1/8	3/4	120	Rk120	120		35	12		0.0125	8000
6AS6	3.00†	Pentode	Mixer-Gated Amp.	6.3	0.175	Htr	1 3/4	3/4	120	-2	120	0	5.2	3.5			3200
6AS7G	4.90	Dble. Triode	DC Amplifier	6.3	2.5	Htr	5 3/16	2 1/16	135	Rk250			125		2.1		7500
6J4	8.00 †	Triode	UHF Amplifier	6.3	0.4	Htr	2 1/8	3/4	100	Rk100			10		55		11000
6N4	3.85	Triode	HF Oscillator	6.3	0.2	Htr	1 3/4	3/4	180	-3.5			12		32		6000
7AK7	5.25	Pentode	Mixer-Gated Amp.	6.3	0.8	Htr	3 3/32	1 3/16	150	0	90	0	40	21		0.0115	6500
RK61	3.50	Gas Triode	Control Thyratron	1.4	0.050	Fil	1 13/16	0.55	45				1.5		Special Circuit		
CK108	3.00	Pentode	R-F Amplifier	6.3	0.3	Htr	4 17/32	1 9/16	250	-3	100		2.3	0.5		1.5	1250
884	1.85	Gas Triode	Control Thyratron	6.3	0.6	Htr	4 1/8	1 9/16	Max. Peak Anode Voltage = 300v; Max. Peak Cathode Curr. = 300 ma.								
885	2.00	Gas Triode	Control Thyratron	2.5	1.5	Htr	4 3/16	1 9/16	Max. Peak Anode Voltage = 300v; Max. Peak Cathode Curr. = 300 ma.								
954	5.65†	Pentode	UHF Amplifier	6.3	0.15	Htr	1 7/8	1 5/32	250	-3	100		2	0.7		>1	1400
955	3.60†	Triode	UHF Oscillator	6.3	0.15	Htr	1 3/8	1 5/32	250	-7			6.3		25		2200
956	6.30†	Pentode	UHF Amplifier	6.3	0.15	Htr	1 7/8	1 5/32	250	-3	100		6.7	2.7		0.7	1800
957	3.75†	Triode	UHF Oscillator	1.25	0.05	Fil	1 3/8	1 5/32	135	-5			2		13.5		650
CK1089	5.30	Gas Tetrode	Control Thyratron			Cold	2	3/4	Min. Peak Anode Breakdown = 225v; Max. Ave. Cathode Curr. = 15 ma.								
2050	1.85	Gas Tetrode	Control Thyratron	6.3	0.6	Htr	4 1/8	1 9/16	Max. Peak Inverse = 1300v; Max. Ave. Cathode Curr. = 100 ma.								
2051	1.90	Gas Tetrode	Control Thyratron	6.3	0.6	Htr	4 1/8	1 9/16	Max. Peak Inverse = 700v; Max. Ave. Cathode Curr. = 75 ma.								
CK5608A	6.50	Dble. Triode	Spec. Control Equip.	2.5	2	Htr	4 11/16	1 13/16	Same characteristics as CK5608. Heaters are connected in series internally								
CK5656	36.45	Dble. Tetrode	R-F Power Amp.	6.3	0.4	Htr	2 3/16	7/8	150	-2	120		15	2.7		0.06	5800
CK5670	7.50†	Dble. Triode	Voltage Amplifier	6.3	0.35	Htr	1 3/4	7/8	150	Rk240			8.2		35		5500
CK5694	3.85	Dble. Triode	Power Amplifier	6.3	0.8	Htr	4 5/8	1 13/16	294	-6			7		35		3200
CK5910	.84	Pentode	Radiosonde	1.4	0.05	Fil	2 1/8	3/4	90	0	90		1.6	0.45		1.5	900
9001	3.10†	Pentode	UHF Amplifier	6.3	0.15	Htr	1 13/16	3/4	250	-3	100		2	0.7		>1	1400
9002	2.50†	Triode	UHF Oscillator	6.3	0.15	Htr	1 13/16	3/4	250	-7			6.3		25		2200
9003	3.10	Pentode	UHF Amplifier	6.3	0.15	Htr	1 13/16	3/4	250	-3	100		6.7	2.7		0.7	1800

RELIABLE AND RUGGED TUBES

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	TYPICAL APPLICATION	HTR or FILAMENT			MAX. DIMENSIONS Inches		PLATE VOLTS	GRID 1 VOLTS	GRID 2 VOLTS	GRID 3 VOLTS	PLATE CURR. ma.	GRID 2 CURR. ma.	AMP. FACT.	PLATE RESIST. meg.	MUT. COND. µmhos
				Volts	Amps	Type	Height	Diam.									
6AK5W	$3.20†	Pentode	R-F Amplifier	6.3	0.175	Htr	1 3/4	3/4	120	-2	120		7.5	2.5		0.34	5000
6AL5W	2.40†	Dble. Diode	Detector	6.3	0.3	Htr	1 3/4	3/4		Max. Peak Inverse = 330v, Max Io = 9 madc per Plate.							
6AS6W	4.50†	Pentode	Mixer-Gated Amp	6.3	0.175	Htr	1 3/4	3/4	120	-2	120	0	5.2	3.5			3200
6C4W	7.50†	Triode	Osc.-Amplifier	6.3	0.15	Htr	1 3/4	3/4	250	-8.5			10.5		17		2200
6J5WGT	4.60†	Triode	Voltage Amplifier	6.3	0.3	Htr	3 5/16	1 5/16	250	-8			9		20		2600
6J6W	7.50†	Dble. Triode	UHF Oscillator	6.3	0.45	Htr	2 1/8	3/4	100	Rk50			8.5		38		5300
6SJ7WGT	7.50†	Pentode	RF-AF Amplifier	6.3	0.3	Htr	3 5/16	1 5/16	250	-3	100	0	3.0	0.8		>1.0	1650
6SN7WGT	2.30†	Dble. Triode	Voltage Amplifier	6.3	0.6	Htr	3 5/16	1 5/16	250	-8			9.0		20		2600
6X4W	3.00†	Dble. Diode	FW Rectifier	6.3	0.6	Htr	2 5/8	3/4	Max. Peak Inverse = 1250v; Max. Io = 70 madc								
12J5WGT	4.60	Triode	Voltage Amplifier	12.6	0.15	Htr	3 5/16	1 5/16	250	-8			9		20		2600
CK5654	6.00†	Pentode	R-F Amplifier	6.3	0.175	Htr	1 3/4	3/4	120	Rk200	120		7.5	2.5		0.34	5000
CK5686	7.00	Pentode	RF-AF Power Amp.	6.3	0.35	Htr	2 3/16	7/8	250	-12.5	250		27	5.0			3300
CK5725	6.00†	Pentode	Mixer-Gated Amp.	6.3	0.175	Htr	1 3/4	3/4	120	-2	120	0	5.2	3.5			3200
CK5726	4.50†	Dble. Diode	Same as 6AL5	6.3	0.3	Htr	1 3/4	3/4	Max. Peak Inverse = 330v, Max. Io = 9 madc per Plate.								
CK5749	4.50†	Pentode	R-F Amplifier	6.3	0.3	Htr	2 1/8	3/4	250	Rk = 68	100	0	11	4.2		1.0	4400
CK5750	4.50†	Heptode	Converter	6.3	0.3	Htr	2 1/8	3/4	250	Rg = 20k	100	-1.5	2.6	7.5		1.0	4753
CK5751	3.65†	Dble. Triode	Voltage Amp.	6.3 12.6	0.35 0.175	Htr	2 3/16	7/8	250	-3			1.1		70	0.058	1200
CK5814	6.00†	Dble. Triode	Voltage Amp.	6.3 12.6	0.35 0.175	Htr	2 3/16	7/8	250	-8.5			10.5		17	0.0077	2200

TRANSISTORS

TYPE	SUGGESTED USER PRICES	CONSTRUCTION	TYPICAL APPLICATION	MAX. DIMENSIONS Inches		COLLECTOR VOLTS	EMITTER VOLTS	COLLECTOR CURR. ma.	EMITTER CURR. ma.	TRANSCONDUCTANCE µmhos	COLLECTOR IMPEDANCE ohms	EMITTER IMPEDANCE ohms	POWER OUTPUT milliwatts
				Height	Diam.								
CK703	$18.00	Crystal Triode	AF-RF Amplifier	0.78	.255	-30	0.2	2	0.75	5000	10000	500	2 6

† Types subject to 10% Federal Excise Tax, which has been included.

CETRON ELECTRONIC TUBES

Engineered and Manufactured by Continental Electric Co.

CETRON PHOTOTUBES

CETRON phototubes are either of the gas-filled or of the vacuum type. With the gas-filled type, greater effective response is obtained, particularly in low impedance circuits, while the vacuum type is recommended where maximum stability is desired.

CETRON phototubes are selected as to their sensitivity and priced accordingly. Phototubes of the Super Class A/B or Q are generally used for experimental purpose where very high sensitivities are required; Class C or R mostly for motion picture equipment; Class D for relay work, etc.

CETRON RED SENSITIVE PHOTOTUBES

CETRON red sensitive phototubes are available in three sensitivity classes, A/B, C and D. The CETRON gas-filled red sensitive tubes comprise the most complete line of phototubes designed for sound reproduction. For complete engineering specifications, write for our PC 8/9.

CETRON BLUE SENSITIVE PHOTOTUBES

CETRON blue sensitive phototubes are available in two sensitivity classes, Q and R. The gas-filled CETRON blue sensitive tubes comprise a most complete line for sound reproduction work from dye recorded film. For complete engineering specifications, write for our PC 8/9.

CETRON LEAD SULFIDE PHOTOCELLS

CETRON lead sulfide photo conductive cells are made in a variety of miniature types. They are also available in a variety of sensitive areas and resistances. CETRON lead sulfied photocells are available in three sensitivity classes, A, C and D. For complete engineering specifications, write for our lead sulfide literature.

Continental Electric also manufactures a complete line of special purpose photocells, such as the CE-5, CE-7, CE-8, CE-10, CE-12, CE-15, CE-18, CE-26, etc. We will be happy to work with you on design and development problems, also on any special phototubes your application may require. Full data, price, etc. on special phototubes will be forthcoming upon request.

LIST PRICES

RED SENSITIVE TYPES, GAS-FILLED. RMA SPECTRAL RESPONSE S1.

Type	Class A/B	Class C	Class D
CE-1/918	$6.20	$4.10	$2.50
CE-2/1P30	8.50	5.50	3.65
CE-3/1P31	8.50	5.50	3.30
CE-4/1P36	8.50	5.50	3.30
CE-21/920		5.60	3.60
CE-22		4.00	2.40
CE-23/923	5.50	2.90	1.75
CE-B25/927	12.00	5.50	2.50
CE-30/930	5.50	2.60	1.50
CE-36	12.00	5.50	2.50

RED SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S1

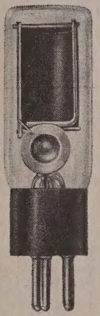
CE-1V	$8.50	$4.20	$2.60
CE-2V	10.00	6.00	3.30
CE-4V	10.00	6.00	3.65
CE-11V/917	12.00	5.00	3.00
CE-25V	12.00	5.50	3.00
CE-30V	8.50	2.80	1.85
CE-31V/919	12.00	5.00	3.00

BLUE SENSITIVE TYPES, GAS-FILLED, RMA SPECTRAL RESPONSE S4

	Q	R
CE-59/5581	$9.00	$4.40
CE-64/5583	10.00	3.60
CE-74	12.00	6.50
CE-83/5612	16.00	10.00
CE-91	10.00	3.30
CE-97/5614	16.00	10.00

BLUE SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S4

CE-29/929	$9.00	$2.00
CE-34	10.00	4.50
CE-61	10.00	6.60
CE-99	16.00	6.50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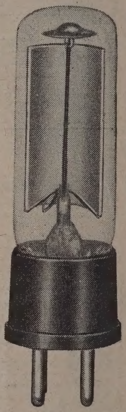
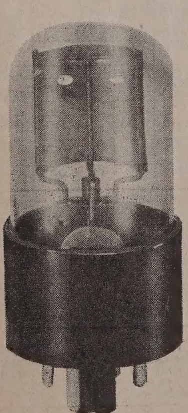

CE-1
CE-91


CE-30

MINIATURE TYPES

LEAD SULFIDE TYPES

CE-701	Side Type	$10.00
CE-702	Side Type	10.00
CE-703	End Type	10.00
CE-704	Double Side Type	15.00
CE-705	End Type	10.00
CE-711	Three-Pin Side Type	10.00

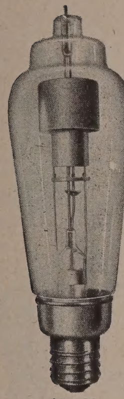
CE-702

CE-701

CETRON ELECTRONIC TUBES

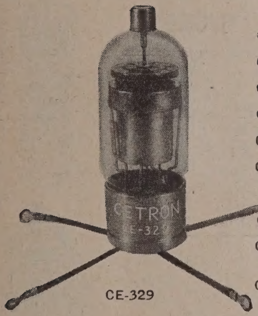
Engineered and Manufactured by Continental Electric Co.

CETRON RECTIFIER and GRID CONTROL TUBES



CE-202

Type New No.	Old No.	Description	List Price	Data Sheet No.
CE-3B28	—	0.5 amp. half wave gas filled 1500 volts DC with medium 4 pin base	$ 8.50	143
CE-200A	CE-200	2 amp. full wave mercury vapor 250 volts DC with standard 4 pin base	7.75	111
CE-201A	CE-201	2 amp. full wave mercury vapor 250 volts DC with special 4 long pin base.	8.00	111
CE-202B	CE-202	15 amp. half wave mercury vapor 250 volts DC Mogul Screw base	35.00	108
CE-203	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	11.60	104
CE-205	2-RA-5	5 amp. half wave mercury vapor 250 volts DC Mogul Screw base	12.60	105
CE-206	2-RA-6	6 amp. half wave mercury vapor 90 volts DC Mogul Screw base	6.00	106
CE-207	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	35.00	108
CE-210A	CE-210	2 amp. full wave mercury vapor and gas 250 volts D.C. with standard 4 pin base	7.75	131
CE-212A	CE-212	2 amp. half wave gas filled 60 volts DC Medium Screw Base	4.00	120
CE-213A	CE-213	2½ amp. half wave mercury vapor 600 volts DC standard 4 pin base	7.50	107
CE-215	2-RA-15	15 amp. half wave mercury vapor 75 volts DC Mogul Screw base	10.40	103
CE-220	CE-72	.020 amp. 20,000 half wave high vacuum, rect. tubes. Stand. 4 pin base	5.85	113
CE-221	4B25	6.4 amp. full wave gas filled 200 volts DC special 4 pin base	19.00	125
CE-222	—	1 amp. full wave gas filled 200 volts DC with medium 4 pin base	8.50	115
CE-225	—	6 amp. half wave gas filled 60 volts DC with Mogul Screw base	5.00	121
CE-226	R-6-A	6 amp. half wave gas filled 90 volts DC Mogul Screw base	5.00	112
CE-230	3B24	.060 amp. 20,000 half wave high vacuum rect. med. 4 pin base	13.20	123
CE-235	R-15-A	15. amp. half wave gas filled 60 volts DC Mogul Screw base	10.00	109
CE-235A	—	15 amp. half wave gas filled 60 volts DC Mogul Screw base and flexible anode lead	10.00	109
CE-249C	—	0.64 amp. half wave mercury vapor 2000 volts DC with medium 4 pin base	9.50	144
CE-303	3C31	1 amp. grid control tube, gas filled standard 4 pin base	13.25	114
CE-304	—	12.5 amp. grid control mercury vapor 125 amp. peak current No. 4310 4 pin ind. base	74.75	119
CE-305	—	2 amp. grid control tube, gas filled, standard 4 pin base	28.00	116
CE-306	—	6 amp. grid control tube, gas filled, 40 amp. peak current, 4 pin base No. 412	33.60	118
CE-309	FG17	.5 amp. grid control tube mercury vapor 5000 peak inverse med. 4 pin base	7.90	126
CE-311	3C23	1,50 amp. grid control tube mercury and gas filled 1000 peak inverse med. 4 pin base	15.75	127
CE-393A	—	1,50 amp. grid control tube mercury and gas filled 1250 peak inverse med. octal base	15.75	127
CE-323B	—	1.5 amp. grid control tube mercury vapor and gas filled 1250 peak inverse. Medium 5 pin base	15.75	133
CE-329	—	3 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	45.00	137
CE-330	—	5 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	50.00	138
CE-331	—	10 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	95.00	139
CE-394A	—	0.64 amp. grid control tube mercury and gas filled with medium 4 pin base	9.50	141
CE-627	—	0.64 amp. grid control tube mercury vapor with medium 4 pin base	15.75	142



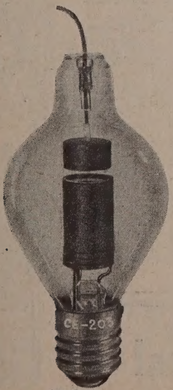
CE-329

Detailed engineering specifications on all tubes are available upon request. The extensive engineering and manufacturing facilities which we have, make possible the development and production of many types of special tubes to your specifications. If you have a problem involving the use of any CETRON tubes you are invited to consult us.

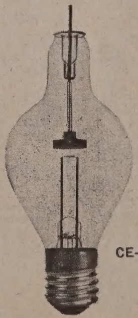
WARRANTY

We guarantee all products manufactured by us to be free from all material and manufacturing defects and to give satisfactory service when operated in accordance with instructions indicated for their use.

Continental Electric Co.



CE-203



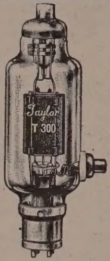
CE-226

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Taylor CUSTOM BUILT Tubes

Taylor Tube
CUSTOM BUILT
813

Taylor Tube
CUSTOM BUILT
803


Taylor
T 300

Taylor Tube
CUSTOM BUILT
TT-17

TETRODES AND PENTODES

Type	Filament		Max. Plate			Max. Grid Drive Watts	Amp. Factor	Base	Size		Max. Mg. For 100% Input	Price
	Volts	Amps	Dissipation Watts	D.C. Volts	D.C. M.A.				L.	D.		
282-A	10.0	3.0	75	1000	100	8.0	100	4 P.MED.	6.75	2.25	50	$22.50
803	10.0	5.0	125	2000	160	4.0		5 P.JUM.	9.37	2.56	20	24.25
813	10.0	5.0	100	2000	180	1.5		7 P.JUM.	7.5	2.56	30	16.00

Taylor Tube
CUSTOM BUILT
873

Taylor Tube

HALF WAVE RECTIFIERS AND *CONTROL TUBES

Type	Filament		Anode			Base	Price
	Volts	Amps	Volts Peak Inverse	Amps. Peak	Amps. Average		
866 JR	2.5	2.5	5000	.5	.125	4 P.Med.	$ 1.65
866A	2.5	5.0	10000	1.0	.250	4 P.MED.	1.95
249B	2.5	7.5	10000	1.5	.375	4 P.MED.	9.00
872A	5.0	6.75	10000	5.0	1.25	4 P.JUM.	8.20
8008	5.0	6.75	10000	5.0	1.25	SPEC.	8.20
875A	5.0	10.0	15000	6.0	1.5	4 P.JUM.	21.00
*TT-17	2.5	5.0	2500	2.0	0.5	4 P.MED.	7.00
*873	5.0	6.75	3000	10.0	2.5	4 P.JUM.	17.25

Taylor Tube
CUSTOM BUILT
872A

TRIODES — CLASS B AUDIO

(Ratings for 2 Tubes)

Type	Max. Plate Volts	Max. Plate Curr.	Zero Sig. Plate Curr.	Max. Sig. Drive Power Watts	Bias Volts	Plate To Plate Load Ohms	Power Output Watts
TZ-20	800	136	20	1.8	0	12,000	70
	1000	280	35	5.5	0	7,350	175
TZ-40	1250	280	32	6.0	—4.5	10,000	225
	1500	250	28	6.0	—9	12,000	250
838	1000	320	70	7.0	0	6,900	200
	1250	320	100	7.5	0	9,000	260
203Z	1000	350	36	6.5	0	6,200	230
	1250	350	30	6.75	—4.5	8,000	300
805	1250	400	102	6.0	0	6,700	300
	1500	400	48	7.0	—16	8,200	370
810	1500	500	52	12.	—30	6,600	510
822	2000	500	50	7.2	—45	9,500	720
	2500	500	50	7.4	—57.5	12,000	900
	3000	450	50	8.0	—67.5	16,000	1000

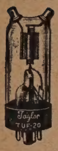
Taylor Tube
CUSTOM BUILT
TR40M

Taylor Tube
CUSTOM BUILT
875A

Ask for the Taylor Tubes Manual

Taylor CUSTOM BUILT Tubes

2312-18 WABANSIA AVENUE, CHICAGO 47, ILLINOIS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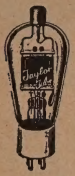
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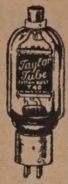
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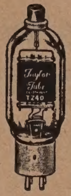
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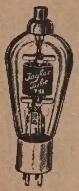
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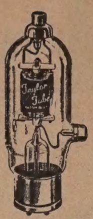
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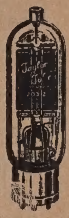
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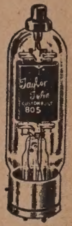
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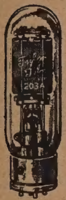
805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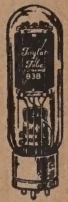
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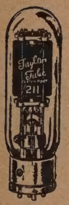
Tube
838

TRIODES

	—Filament—		——Max. Plate——			Max. Grid			—Size—		Max. Mg. For 100%	
Type	Volts	Amps	Dissipation Watts	D.C. Volts	D.C. M.A.	Drive Watts	Amp. Factor	Base	L.	D.	Input	Price
TUF-20	6.3	2.75	20	750	100	6.0	10	OCTAL	3.75	1.5	250	$5.50
T-20	7.5	1.75	20	750	85	3.5	20	4 P.MED.	6.0	2.37	60	4.00
TZ-20	7.5	1.75	20	750	85	3.5	62	4 P.MED	6.0	2.37	60	4.00
T-40	7.5	3.0	40	1500	150	9.0	25	4 P.MED.	6.25	2.5	60	4.50
TZ-40	7.5	3.0	40	1500	150	9.0	62	4 P.MED.	6.25	2.5	60	4.50
T-55	7.5	3.0	55	1500	165	7.0	20	4 P.MED.	7.0	2.62	125	9.50
T-60	10.0	3.0	60	1500	150	9.0	15	4 P.MED.	6.75	2.5	60	11.50
T-100	10.0	3.0	75	1500	150	9.0	23	4 P.MED.	7.62	2.67	60	12.50
T-125	10.0	4.5	125	2500	250	12.5	25	4 P.JUM.	8.25	3.0	60	13.50
T-200	10.0	5.75	200	2500	350	20.0	17	4 P.JUM.	9.5	3.75	30	25.00
203A	10.0	3.25	100	1250	175	10.0	25	4 P.JUM.	7.5	2.32	20	13.75
HD203A	10.0	4.0	150	1750	250	15.0	25	4 P.JUM.	9.5	2.5	20	14.50
HD203C	10.0	4.0	150	1750	250	15.0	25	4 P.JUM.	9.5	2.5	20	14.50
203Z	10.0	3.25	75	1250	175	10.0	85	4 P.JUM.	8.25	2.32	20	9.00
211	10.0	3.25	100	1250	175	10.0	12	4 P.JUM.	7.5	2.32	20	13.75
211C	10.0	3.25	100	1250	175	10.0	12	4 P.JUM.	7.5	2.32	20	12.50
HD211C	10.0	4.0	150	1750	175	15.0	12	4 P.JUM.	9.5	2.5	20	14.50
T-300	10-11	6.0	300	3000	300	18.0	23	4 P.JUM.	12.0	4.87	30	30.00
805	10.0	3.25	125	1750	210	10.0	45	4 P.JUM.	8.5	2.32	30	13.50
810	10.0	4.5	125	2250	275	15.0	36	4 P.JUM.	8.75	3.0	30	14.50
814	10.0	4.0	200	2500	300	17.0	12	4 P.JUM.	9.0	2.62	30	20.00
822	10.0	4.0	200	2500	300	17.0	30	4 P.JUM.	9.0	2.62	30	20.00
822-S	10.0	4.0	200	2500	300	17.0	30	4 P.JUM.	9.0	3.0	30	23.50
838	10.0	3.25	100	1250	175	10.0	45	4 P.JUM.	7.87	2.32	20	13.75
845	10.0	3.25	100	1230	175	10.0	5	4 P.JUM.	7.5	2.32	20	13.75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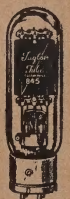
Tube
211

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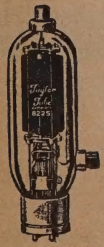
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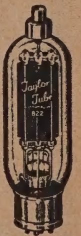
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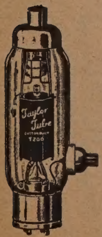
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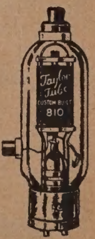
CUSTOM BUILT
T200

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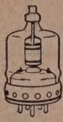
Tube
CUSTOM BUILT
810

"More Watts per Dollar"

Net

4-65A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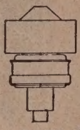
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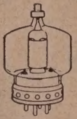
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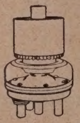
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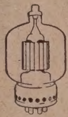
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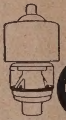
2C39 A

100T

450T

2000T


3X2500A3

3X2500F3

3W10000A3

Long the criteria of good design in any electronic equipment, Eimac tubes are today the undisputed leaders of their field. Complete data on any of the Eimac products listed are available by writing direct.

Eimac
TUBES

TRANSMITTING TYPE TUBES

EIMAC TUBE TYPE	PRICE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS			
		Plate Dissipation Watts	Plate Voltage	Plate Current Milliamperes	Grid Dissipation Watts	Screen Voltage	Screen Dissipation Watts	Filament, Volts	Filament, Amperes	Amplification Factor	Transconductance µmhos
TETRODES											
4-65A	$ 14.50	65	3000	150	5	400	10	6.0	3.5	5	4000
4-125A	27.50	125	3000	225	5	400	20	5.0	6.5	6.2	2450
4-250A	37.50	250	4000	350	5	600	35	5.0	14.5	5.1	4000
4-400A	55.00	400	4000	350	5	600	35	5.0	14.5	5.1	4000
4-1000A	120.00	1000	6000	700	25	1000	75	7.5	21	7.2	10,000
4X100A*	48.00	100	1000	250	2	300	15	6.0	2.8	4.5	12,000
4X150A*	48.00	150	1000	250	2	300	15	6.0	2.8	4.5	12,000
4X150G*	54.00	150	1250	250	2	300	15	2.5	6.25	5.0	12,000
4X500A*	110.00	500	4000	350	10	500	30	5.0	13.5	6.2	5200
4X500F*	85.00	500	4000	350	10	500	30	5.0	12.2	6.2	5200
TRIODES											
2C39*	33.00	100	1000	100‡	3	....	...	6.3	1.1	100	17,000
2C39A*	33.00	100	1000	125‡	2	....	...	6.3	1.0	100	22,000
3C24	8.00	25	2000	75	8	....	...	6.3	3.0	23	2500
3W10000A3**	870.00	10,000	5000	10,000	100	....	...	7.0	15	20	55,000
3X2500A3*	180.00	2500	6000	2000	150	....	...	7.5	48	20	20,000
3X2500F3*	180.00	2500	6000	2000	150	....	...	7.5	48	20	20,000
3X12500A3*	875.00	12,500	6000	8000	600	....	...	7.5	192	20	80,000
25T	8.00	25	2000	75	7	....	...	6.3	3.0	24	2500
35T	9.50	50	2000	150	15	....	...	5.0	4.0	39	2850
35TG	10.00	50	2000	150	15	....	...	5.0	4.0	39	2850
75TH	12.00	75	3000	225	16	....	...	5.0	6.25	20	4150
75TL	12.00	75	3000	225	13	....	...	5.0	6.25	12	3350
100TH	16.50	100	3000	225	20	....	...	5.0	6.3	40	5500
100TL	16.50	100	3000	225	15	....	...	5.0	6.3	14	2300
152TH	26.00	150	3000	450	30	....	...	5 or 10	12.5 or 6.2	20	8300
152TL	26.00	150	3000	450	25	....	...	5 or 10	12.5 or 6.2	12	7150
250TH	30.00	250	4000	350	40	....	...	5.0	10.5	37	6650
250TL	30.00	250	4000	350	35	....	...	5.0	10.5	14	2650
304TH	55.00	300	3000	900	60	....	...	5 or 10	25 or 12.5	20	16,700
304TL	55.00	300	3000	900	50	....	...	5 or 10	25 or 12.5	12	16,700
450TH	70.00	450	6000	600	80	....	...	7.5	12.0	38	6650
450TL	70.00	450	6000	600	65	....	...	7.5	12.0	18	6060
592/3-200A3	27.50	200	3500	250	25	....	...	10.0	5.0	25	3600
750TL	125.00	750	10,000	1000	100	....	...	7.5	21.0	15	3500
1000T	125.00	1000	7500	750	80	....	...	7.5	17.0	35	9050
1500T	200.00	1500	8000	1250	125	....	...	7.5	24.0	24	10,000
2000T	250.00	2000	8000	1750	150	....	...	10.0	25.0	23	11,000
PENTODE											
4E27A/5-125B	32.50	125	4000	200	5	750	20	5.0	7.5	50	2150

*External Anode requiring forced-air cooling
**Water-cooled
‡Cathode Current

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

**COMPLETE DATA AVAILABLE
UPON REQUEST**

SEE
NEXT
PAGE

**EITEL-McCULLOUGH, INC.
San Bruno, California**

Net

Eimac TUBES

Eimac product-reputation is the result of years of efficient, dependable performance in varied fields of service. It is the reason the criteria of good design of any electronic equipment are components trademarked "Eimac."

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

RECTIFIERS

TYPE	PRICE	FILAMENT VOLTAGE	FILAMENT CURRENT AMPS.	PEAK INVERSE VOLTAGE	CURRENT AMPS. PEAK PLATE	AVERAGE PLATE CURRENT MA
HIGH VACUUM TYPES						
2-01C	$ 13.75	6.3	0.4	1,000	0.010	....
2-25A	10.00	6.3	3.0	25,000	....	50
2-50A	12.50	5.0	4.0	30,000	....	75
2-150D	17.50	5.0	13.0	30,000	....	150
2-240A	60.00	7.5	12.0	40,000	....	500
2-2000A	195.00	10.0	25.0	75,000	....	750
250R	20.00	5.0	10.5	60,000	....	250
253	18.50	5.0	10.0	15,000	....	350
100R	13.50	5.0	6.5	40,000	....	100
MERCURY VAPOR TYPES						
*KY21A	12.00	2.5	10.0	11,000	3	750
RX21A	8.00	2.5	10.0	11,000	3	750
866A	1.95	2.5	5.0	10,000	1	250
872A	8.20	5.0	7.5	10,000	5	1250

*Grid Controlled

VACUUM CAPACITORS

VARIABLE

TYPE	PRICE	CAPACITY	RATING RF PEAK
VVC60-20	$ 60.00	10-60 mmfd	20-KV
VVC2-60-20	134.00	Split Stator 5-30 mmfd Parallel 20-120 mmfd	 40-KV 20-KV
VVC4-60-20	258.00	Split Stator 10-60 mmfd Parallel 40-240 mmfd	 40-KV 20-KV

FIXED

TYPE	PRICE	CAPACITY	RATING RF PEAK
VC6-20	$ 13.50	6 mmfd	20-KV
VC6-32	15.50	6 mmfd	32-KV
VC12-20	15.00	12 mmfd	20-KV
VC12-32	18.00	12 mmfd	32-KV
VC25-20	18.00	25 mmfd	20-KV
VC25-32	21.00	25 mmfd	32-KV
VC50-20	22.00	50 mmfd	20-KV
VC50-32	25.00	50 mmfd	32-KV

AIR-SYSTEM SOCKETS

TYPE	4X150A/4000	4-400A/4000	4-1000A/4000
COMPLETE ASSEMBLY PRICE	$19.50	$16.00	$22.50
REPLACEMENT CHIMNEY PRICE	....	6.00	7.50
FOR USE WITH TUBE TYPE	4X150A	4-400A	4-1000A

HEAT DISSIPATING CONNECTORS

TYPE	Price	HOLE DIA.
HR-1	$ .60	.052
HR-2	.60	.0625
HR-3	.60	.070
HR-4	.80	.1015
HR-5	.80	.125
HR-6	.80	.360
HR-7	1.60	.125
HR-8	1.60	.570
HR-9	3.00	.570

VACUUM PUMP

HV-1 DIFFUSION PUMP — **Price $125.00**

An air-cooled, oil diffusion type, vacuum pump. Ultimate vacuum, 4x10^{-7}mm. of mercury. Speed (without baffle) approx. 67 liters/seconds.

100 IG, IONIZATION GAUGE — **$22.50**

An electronic vacuum pressure gauge. Filament voltage 3.5 to 7.5 volts.

DIFFUSION PUMP OIL A — **$5.00 qt.**

VACUUM SWITCH

VS-2 — **Price $12.00**

Single pole double throw switch within a high vacuum adaptable for high voltage switching. Contact spacing .015". Switch will handle R-F potentials as high as 20 Kv. In DC switching will handle approximately 1.5 Amps. at 5 Kv.

2-01C

866A

872A

RX21A

KY21A

100R

2-150D

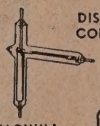
250R

FIXED VACUUM CAPACITOR

VARIABLE VACUUM CAPACITOR

DIFFUSION PUMP

HEAT DISSIPATING CONNECTOR


VACUUM SWITCH

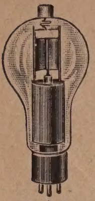
AIR-SYSTEM SOCKET

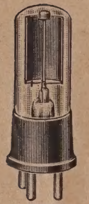
EITEL-McCULLOUGH, INC.
San Bruno, California

Net

WESTINGHOUSE ELECTRONIC TUBES

PHOTOTUBES


WL-767
WL-773
WL-775

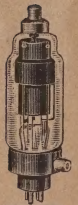

SR-50

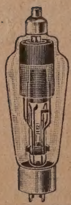
Type Number	Spectral Ranges Au.	Vacuum or Gas	Cathode Surface	Luminous Sensitivity Microamperes per lumen (o cycles)	Anode Volts Max.	List Price
WL-1P29	3300–9000	Gas	S3	40	100	**$ 2.95**
SR-50		REPLACEMENT ONLY				**7.35**
SK-60		REPLACEMENT ONLY				**7.35**
WL-734	4000–12000	Vac.	S1	15	500	**2.75**
WL-767	2000–3150	Vac.	Zirconium	—	500	**82.50**
WL-773	2000–3675	Vac.	Thorium	—	500	**82.50**
WL-775	2000–3000	Vac.	Tantalum	—	500	**82.50**
WL-789	Below 2100	Vac.	Platinum	—	500	**137.50**
WL-868	4000–12000	Gas	S1	90	100	**2.50**
WL-917	4000–12000	Vac.	S1	20	500	**3.50**
WL-918	4000–12000	Gas	S1	150	90	**3.10**
WL-919	4000–12000	Vac.	S1	20	500	**3.50**
WL-920	4000–12000	Gas	S1	100	90	**4.15**
WL-921	4000–12000	Gas	S1	135	90	**2.05**
WL-922	4000–12000	Vac.	S1	20	500	**1.95**
WL-923	4000–12000	Gas	S1	135	90	**2.05**
WL-924	4000–12000	Gas	S1	90	90	**3.30**
WL-925	4000–12000	Vac.	S1	20	250	**2.40**
WL-926	3300–9000	Vac.	S3	6.5	500	**2.90**
WL-927	4000–12000	Gas	S1	125	90	**2.50**
WL-928	4000–12000	Gas	S1	65	90	**2.85**
WL-929	3000–6700	Vac.	S4	45	250	**1.50**
WL-930	4000–12000	Gas	S1	135	90	**1.65**
WL-931A ‡	3000–6700	Vac.	S4	*	1250	**9.75**

*Sensitivity 10 amps. per lumen at 100 volts per stage.
‡ Multiplier.

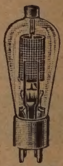
THYRATRONS

GRID CONTROLLED GAS OR MERCURY VAPOR RECTIFIERS


WL-632B


KU-676

Type Number	Filament		Volts Peak Inverse	Amps. Peak	Amps. Ave.	Gas	Number of Electrodes	List Prices
	Volts	Amps.						
WL-2D21	6.3	0.6	1300	0.5	0.1	Inert	4	**$ 2.00**
WL-3C23	2.5	7.0	1250	6.0	1.0	Hg.	3	**12.50**
WL-33				See WL-5720/33				
WL-41				See WL-5830/41				
WL-81A	2.5	5.0	500	2.0	0.5	Inert	3	**16.00**
WL-105	5.0	10.0	2500	40.0	6.4	Hg.	4	**48.00**
WL-172	5.0	10.0	2000	40.0	6.4	Hg.	4	**65.00**
WL-414	5.0	20.0	2000	100.0	12.5	Hg.	4	**120.00**
WL-502A	6.3	0.6	1300	1.0	0.1	Inert	4	**1.85**
KU-610	2.5	6.5	500	0.4	0.1	Inert	3	**22.00**
KU-618			REPLACEMENT ONLY					**15.75**
WL-624	5.0	10.0	2500	80.0	6.4	Hg.	3	**48.00**
KU-627	2.5	5.0	5000	2.5	0.64	Hg.	3	**22.00**
KU-628	5.0	11.5	2500	8.0	2.0	Hg.	3	**34.00**
WL-629	2.5	2.6	350	0.2	0.04	Inert	3	**13.00**
WL-632B	5.0	5.0	1500	30.0	2.5	Hg.	4	**29.00**
KU-636	2.5	7.5	350	0.4	0.1	Inert	3	**25.00**
WL-672A	5.0	5.0	2500	40.0	3.2	Hg.	4	**35.00**
KU-676	5.0	10.0	2500	40.0	6.4	Hg.	3	**55.00**
WL-677	5.0	10.0	10000	15.0	4.0	Hg.	3	**55.00**
WL-678	5.0	7.5	15000	6.0	1.6	Hg.	3	**47.00**
WL-759			REPLACEMENT ONLY					**25.00**
WL-884	6.3	0.6	350	0.3	0.075	Inert	3	**1.85**
WL-885	2.5	1.5	350	0.3	0.075	Inert	3	**2.00**
WL-2050	6.3	0.6	1300	1.0	0.1	Inert	4	**1.85**
WL-5557/17	2.5	5.0	5000	2.0	0.5	Hg.	3	**7.75**
WL-5559/57	5.0	4.5	1000	15.0	2.5	Hg.	3	**19.50**
WL-5664	2.5	6.3	1250	8.0	1.0	Inert	3	**9.80**
WL-5665	2.5	31.0	1250	160.0	16.0	Inert	3	**59.50**
WL-5683	2.5	6.3	1250	8.0	1.0	Inert	3	**10.20**
WL-5684	2.5	9.0	1250	30.0	2.5	Inert	3	**15.60**
WL-5685	2.5	21.0	1250	77.0	6.4	Inert	3	**31.90**
WL-5720/33	5.0	4.5	1000	15.0	2.5	Hg.	3	**21.00**
WL-5796	2.5	8.5	1500	20.0	1.6	Inert	3	**13.75**
WL-5830/41	5.0	20.0	10000	75.0	12.5	Hg.	3	**182.00**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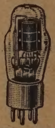

WL-629

Prices subject to change without notice.

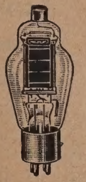
WESTINGHOUSE ELECTRONIC TUBES

PLIOTRONS — Modulators, Amplifiers, Oscillators

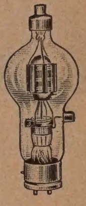
WL-211

WL-803

WL-807


WL-809

WL-5736


WL-806

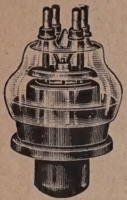
Type Number	Filament Volts	Filament Amps.	Max. Plate D-C** Volts	Max. Plate D-C** Ma.	Max. Plate Diss** Watts	Plate Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	List Prices
WL-4D21/4-125A	5.0	6.5	3000	225	125	375	Tetrode	120	**$ 30.25**
WL-4X150A#	6.0	2.8	1000	250	150	74	Tetrode	500	**48.00**
WL-4X500A#	5.0	13.5	4000	350	500	1320	Tetrode	120	**121.00**
WL-4-1000A	7.5	21.0	6000	700	1000	2200	Tetrode	110	**132.00**
WL-5D22/4-250A	5.0	14.5	4000	350	250	1000	Tetrode	75	**41.25**
WL-203A	10.0	3.25	1250	175	100	120	25	15	**13.75**
WL-204A	11.0	3.85	2500	275	250	450	23	3	**115.00**
WL-207	22.0	50.00	15000	2000	10000	20000	20	1.6	**242.00**
WL-211	10.0	3.25	1250	175	100	130	12	15	**13.75**
WL-450TH	7.5	12.0	6000	600	450	1800	38	40	**77.00**
WL-473#	6.0	60.00	5000	1400	2500	3900	22	60	**165.00**
RH-507	2.0	0.06	9	0.6	.....	.....	0.8	.....	**48.00**
RJ-571			REPLACEMENT ONLY						**15.75**
WL-801A	7.5	1.25	600	70	20	25	8	60	**4.30**
WL-802	6.3	0.90	500	60	10	15	.....	30	**4.75**
WL-803	10.0	5.00	2000	175	125	225	.....	20	**24.25**
WL-805	10.0	3.25	1500	210	125	215	50	30	**13.50**
WL-806	5.0	9.50	3000	200	150	450	12.6	30	**34.25**
WL-807	6.3	0.90	600	100	25	40	.....	60	**2.50**
WL-808	7.5	4.00	1500	150	50	150	47	30	**10.75**
WL-809	6.3	2.50	750	100	25	55	50	60	**4.00**
WL-810	10.0	4.50	2000	250	125	375	36	30	**14.50**
WL-811A	6.3	4.00	1250	125	40	115	160	60	**4.05**
WL-812A	6.3	4.00	1250	125	40	115	29	60	**4.05**
WL-813	10.0	5.00	2000	180	100	260	.....	30	**16.00**
WL-814	10.0	3.25	1250	150	50	130	.....	30	**14.25**
WL-815	6.3	1.60	400	150	20	44	.....	150	**6.90**
WL-826	7.5	4.00	1000	125	60	25	31	250	**12.50**
WL-828	10.0	3.25	1250	160	70	150	.....	30	**13.75**
WL-829B	°6.3	°1.125	750	240	40**	87**	.....	200	**16.25**
WL-832A	°6.3	°0.80	750	90	15	26	.....	200	**12.90**
WL-833A	10.0	10.00	4000	500	400**	1440**	35	20	**49.50**
WL-837	12.6	0.70	500	80	12	20	.....	20	**5.80**
WL-838	10.0	3.25	1250	175	100	130	54	30	**13.75**
WL-845	10.0	3.25	1250	120	100	57	5.3	.....	**13.75**
WL-849	11.0	5.00	2500	350	400	560	19	3	**138.00**
WL-862A	33.0	207.0	20000	10000	100000	100000	45	1.6	**1,322.00**
WL-880	12.6	315.00	10500	6000	20000	45000	20	25	**483.00**
WL-889A	11.0	120.00	8500	2000	5000	10000	21	50	**210.50**
WL-889RA	11.0	120.00	8500	2000	5000	10000	21	40	**285.00**
★WL-891	22.0	60.00	12000	2000	6000	12000	8	1.6	**223.00**
★WL-891R	22.0	60.00	10000	2000	4000	11000	8	1.6	**362.00**
★WL-892	22.0	60.00	15000	2000	10000	20000	50	1.6	**223.00**
★WL-892R	22.0	60.00	12500	2000	4000	14000	50	1.6	**362.00**
‡WL-893A	20.0	183.00	20000	4000	20000	50000	36	5	**630.00**
‡WL-893AR	20.0	183.00	20000	4000	20000	50000	36	5	**1,150.00**
†WL-895	19.0	138.00	17000	9000	40000	100000	37	6	**950.00**
‖WL-895R	19.0	138.00	17000	9000	20000	90000	37	6	**1,300.00**

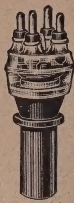
See notes at end of this table on next page.

(PLIOTRONS continued on next page)

Prices subject to change without notice.

WESTINGHOUSE ELECTRONIC TUBES


WL-880

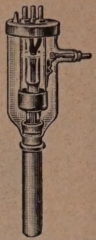

WL-889A

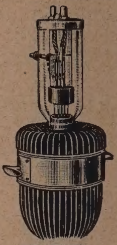
PLIOTRONS—Cont'd

MODULATORS

AMPLIFIERS

OSCILLATORS


WL-891, 892


WL-892R

Type Number	Filament		Max. Plate D-C** Volts	Max. Plate D-C** Ma.	Max. Plate Diss** Watts	Plate Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	List Prices
	Volts	Amps.							
WL-1000T	7.5	17.0	7500	750	1000	4625	35	50	**$ 137.50**
WL-1623	6.3	2.50	750	100	25	55	20	60	**4.05**
WL-5604#	11.0	176.00	12500	3000	10000	22500	19.5	22.5	**540.00**
WL-5619	11.0	176.0	12500	3000	20000	22500	19.5	22.5	**390.00**
WL-5671#	11.0	285.0	15000	8000	25000	75000	39	10	**1,225.00**
WL 5691	6.3	0.60	275	2.3	1	.....	70	.....	**7.75**
WL 5692	6.3	0.60	275	6.5	1.75	.....	20	.....	**7.75**
WL 5693	6.3	0.30	300	3.0	2.0	.....	.....	.....	**6.40**
WL-5736#	6.0	60.0	5000	1400	2500	4100	22	60	**160.00**
‖**WL-5833#**	20.0	143.00	18000	10000	35000	136000	37	6	**1,885.00**
‖**WL-5891#**	11.0	95.00	15000	8000	25000	70000	36	10	**1,350.00**
‖**WL-5936**	20.0	143.00	18000	10000	70000	136000	37	15	**1,100.00**
WL-8000	10.0	4.50	2000	250	[illegible]	375	16.5	30	**14.50**
WL-8003	10.0	3.25	1350	250	100	256	12	30	**14.00**
WL-8005	10.0	3.25	1250	200	75	170	20	60	**7.40**
WL-8025A	6.3	1.92	1000	80	40	35	18	500	**10.00**

** Max. C.C.S. ratings in Class C oscillator service.

★ Two filament strands in series with large post at neutral junction; operate in series at 22 volts or two phase with 11 volts per strand.

★★ This rating applies only with forced air cooling.

° Per unit, heater can be arranged to operate from either a 6.3 or 12.6 volt supply.

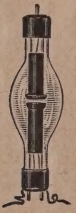
‡ Six filament strands connected from each post to floating neutral. See individual data sheets for connections.

† Three filament terminals Y-connected in 3 phase. Values are per phase.

‖ Three filament terminals Y-connected in 3 phase with neutral center terminal. Values are per phase.

or R Indicates forced air-cooled radiator.

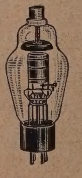
KENOTRONS — Vacuum Rectifiers

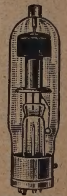

WL-456

Type Number	Filament		Anode		Amp. Average	Type of Cooling	List Price
	Volts	Amperes	Volts Peak Inverse	Amp. Peak			
WL-456	11.0	20	140000	0.50	0.06	Air	**$100.00**
WL-481A	2.5	5	25000	0.015	0.005	Air	**4.50**
WL-579B	2.5	6	20000	0.27	0.025	Air	**15.00**
WL-585	5.0	1.1	1500	0.011	0.003	Air	**19.00**
WL-608	REPLACEMENT ONLY						**168.00**
WL-612	REPLACEMENT ONLY						**299.00**
WL-613	REPLACEMENT ONLY						**210.00**
WL-616	20.0	24.5	150000	0.75	0.25	Air	**225.00**
WL-660	10.0	10	230000	0.10	0.03	Air	**273.00**
WL-836	2.5	5	5000	1.0	0.25	Air	**9.00**
WL-8020	5.0	6	40000	0.75	0.1	Air	**22.00**

PHANOTRONS — Gas and Mercury Vapor Rectifiers

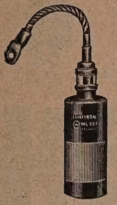
Type Number	Filament		Anode		Amp. Average	Type of Cooling	List Price
	Volts	Amperes	Volts Peak Inverse	Amp. Peak			
WL 3B22/1C	2.5	6.0	725	4.0	1.0	Air	**$ 7.80**
WL 4B24/3C	2.5	11.5	725	10.0	2.5	Air	**8.90**
WL-575A	5.0	10.0	15000	6	1.5	Air	**21.00**
WL-670A	2.5	24	1000	9.5	6.0	Air	**17.30**
WL-816	2.5	2	7500	.5	.125	Air	**1.65**
WL-857B	5.0	30	22000	40	10.0	Forced Air	**209.00**
WL-866A	2.5	5	10000	1	0.25	Air	**1.95**
WL-869B	5.0	18	20000	10	2.5	Forced Air	**132.00**
WL-872A	5.0	7.5	10000	5	1.25	Air	**8.20**
WL-5558/32	5.0	4.5	2000	15	2.5	Air	**14.00**
WL-5561/104	5.0	10.0	3000	40	6.4	Air	**38.00**
WL-8008	Same as WL-872A except for Base						**8.20**

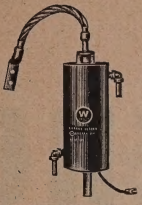

WL-866A


WL-872A

Prices subject to change without notice.

WESTINGHOUSE ELECTRONIC TUBES

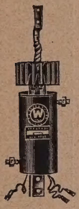

WL-5550/681


WL-5552/651

IGNITRONS

WELDER CONTROL SERVICE

Type Number	Size	RMS Volts Range	Max. KVA Demand and Corresponding Average Current		Max. Aver. Current and Corresponding KVA Demand		Type Cooling	List Price
			KVA	Amps	KVA	Amps		
WL-5550/681	A	200–600	300	12.1	100	22.4	Clamp	**$ 50.00**
WL-5551/652	B	200–600	600	30.2	200	56	Water	**80.50**
WL-5552/651	C	200–600	1200	75.6	400	140	Water	**121.00**
WL-5553/655	D	200–600	2400	192.0	800	355	Water	**265.00**
WL-5554/679		2400	1200	75.0	300	113	Water	**190.00**
WL-5555/653B		2400	2400	135.0	1105	207	Water	**370.00**
WL-654/659	Replacement only							**100.00**


WL-5555/653B

IGNITRONS

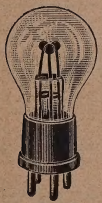
POWER RECTIFICATION SERVICE

Type Number	D-C Output Voltage	Max. Average Amps Per Tube			Type Cooling	List Price
		Continuous	2-Hour Overload	1 Min. Overload		
WL-5554/679	300 600	100 75	150 112.5	200 150	Water Water	**$190.00**
WL-5555/653B	300 600	200 150	300 225	400 300	Water Water	**370.00**

MISCELLANEOUS

Type Number	Use	Cathode	D-C Anode Volts Min	D-C Operating Current Ma	D-C Operating Volts	Regulation Volts (5–40 Ma)	List Price
OA3	Voltage Regulator	Cold	105	5–40	75	5	**$1.35**
OC3	Voltage Regulator	Cold	133	5–40	105	2	**1.35**
OD3	Voltage Regulator	Cold	185	5–40	150	4	**1.30**

Type Number	Use	Filament		Ion Collector Voltage	Grid Voltage	Sensitivity	List Price
		Volts	Amps.				
WL-5966	Ionization Vacuum Gauge	6.0	2.5	−22.5	150	1 uamp/10^{-5} mm Hg.	**$25.00**


KX-642

Type Number	Use	Volts, RMS		Current		List Price
		Breakdown	Maximum Operating	Maximum 2 Sec.	Maximum 10 Min.	
KX-642	Protector	300–500	230	50 Amps.	7 Amps.	**$12.60**

Prices subject to change without notice.

833A

813

845

HF60

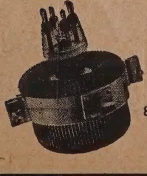
AMPEREX

AX-9902/5868

AX-9903/5894

492-R/5758

891R
892R



889R-A

RADIATION COOLED TYPES

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
AB-150	$20.00	10.0	3.25
HF- 60	12.50	10.0	2.50
HF-100	15.00	10.0	2.50
HF-120	17.50	10.0	3.25
ZB-120	17.50	10.0	2.50
HF-125	25.00	10.0	3.25
HF-130	19.00	10.0	3.25
HF-140	17.50	10.0	3.25
HF-150	19.00	10.0	3.25
HF-175	20.00	10.0	4.00
HF-200	28.50	10.5	4.00
HF-201A	28.50	10.0	4.00
HF-250	30.00	10.5	4.00
HF-300	35.00	11.0	4.00
203A	13.75	10.0	3.25
203H	25.00	10.0	3.25
204A	115.00	11.0	3.85
211	13.75	10.0	3.25
211C	19.00	10.0	3.25
211D	17.50	10.0	3.25
211H	19.00	10.0	3.25
212E, F	102.00	14.0	6.00
241B	115.00	14.0	6.00
242C	15.00	10.0	3.25

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
251A	300.00	10.0	16.00
270A	194.70	10.0	9.75
279A	355.00	10.0	21.00
308B	$100.00	14.0	6.00
805	13.50	10.0	3.25
807	2.50	6.3	0.9
810	14.50	10.0	4.50
813	16.00	10.0	5.0
833A	49.50	10.0	10.00
834	14.50	7.5	3.25
838	13.75	10.0	3.25
845	13.75	10.0	3.25
849	138.00	11.0	5.00
849A	135.00	11.0	7.70
849H	135.00	10.0	11.50
851	253.00	11.0	15.50
AX4-125-A/4D21	30.25	5.0	6.5
AX4-250-A/5D22	41.25	5.0	14.5
AX-9900/5866	22.00	6.3	5.4
AX-9901/5867	33.00	5.0	14.1
AX-9902/5868	60.00	10.0	9.7
AX-9903/5894	19.00	Series 12.6 Parallel 6.3	Series 0.9 Parallel 1.8

FULLY INTERCHANGEABLE: Type 203H with Amperex HF125. Type 211C with Amperex HF130, Type 211H with Amperex HF150.

FORCED-AIR COOLED TYPES

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
889RA*	$285.00	11.0	125.0
891R*	362.00	11.0▲	60.0
892R*	362.00	11.0▲	60.0
893AR*	1150.00	10.0‡	61.0
8002R	160.00	16.0	38.0

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
HF3000†	$400.00	21.5	40.5
ZB3200†	300.00	21.5	40.5
501R/5759	100.00	7.5	24.0
502R/5761	130.00	7.5	24.0
492R/5758	260.00	5.0	110.0

* Credits will be allowed for return of radiator and crate in good condition prepaid to factory in Brooklyn, N. Y, in accordance with this schedule.

$30.00 for Type No. 889-RA
45.00 " " Nos. 891-R, 892-R
50.00 " " Nos. 220-R, 228-R
150.00 " " No. 893-AR

▼Single or two-phase filament (two units); voltage is per unit.
‡Single-, three- or six-phase filament (three sections). Voltage is per section.
§All glass radiation and air-cooled transmitting tubes.

HELPFUL CHARTS AND LITERATURE FREE: Write for set of INTERCHANGEABILITY CHARTS, information at a glance, RAPID TUBE DATA REFERENCE TABLES, 8 pages of condensed information arranged for quick reference. Address your distributor of Amperex direct.

(See next page for more AMPEREX tubes)

857B

869B

575A

866A/866

872A/872

ELECTRONIC TUBES

COMMUNICATION - RECTIFICATION - INDUSTRIAL
ELECTRO-MEDICAL - SPECIAL PURPOSE

WATER COOLED TYPES

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
207	$242.00	22.0	52.0
220C	365.00	21.5	41.0
228A	325.00	21.5	41.0
232C	560.00	20.0	72.0
233	500.00	24.0	70.0
342A	582.00	20.0	67.0
343A	370.00	21.5	57.5
846	250.00	11.0	51.0
858	500.00	22.0	52.0
859	500.00	11.0▲	71.0
889A	210.50	11.0	125.0
891	223.00	11.0▲	60.0
892	223.00	11.0▲	60.0
893A	630.00	10.0‡	61.0

▲Single or two-phase filament (two units); voltage is per unit.

‡Single-, three- or six-phase filament (three sections). Voltage is per section.

RADIATION COOLED HIGH VACUUM RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
221A	20.00	5	10
8020	32.00	5	6

HIGH VACUUM CONDENSERS

TYPE NO.	CAPACITY	KVP RATING	PRICE
VC25	25 uuf	32,000	$24.50
VC50	50 uuf	32,000	26.50
VC100	100 uuf	32,000	33.00
VC100A	100 uuf	32,000	40.00
VC250	250 uuf	30,000	75.00
VC500	500 uuf	30,000	90.00

MERCURY VAPOR RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
249B, C	$ 9.00	2.5	7.50
258B	11.00	2.5	7.50
266B, C	210.00	5.0	42.0
267B	22.00	5.0	6.75
315A, W	38.60	5.0	10.00
575A	24.00	5.0	10.00
673	24.50	5.0	10.00
857B	209.00	5.0	30.00
866A/866	2.25	2.5	5.00
869B	132.00	5.0	20.00
872A/872	8.20	5.0	6.75
8008	8.25	5.0	6.75
AGR-9950/5869	25.00	5.0	6.5
AGR-9951/5870	110.00	5.0	14.0

WATER COOLED— HIGH VACUUM RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
222A	$300.00	21.5	41.0
237A	435.00	20.0	61.0

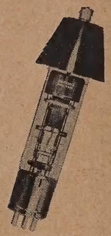
RADIATION COUNTER TYPES

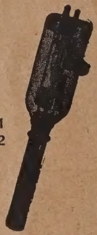
TYPE NO.	PRICE	Operating Voltage	Wall/Window Thickness
1N	$22.50	600 V.DC	1/32"
4E	27.50	1150 V.DC	1/16"
75N	10.00	700 V.DC	.009"
151N	17.50	700 V.DC	.020" wall
100C	35.00	1200 V.DC	.0005"
200N	45.00	700 V.DC	.0002"

WATER JACKET

TYPE NO.	Suitable for these Amperex types:
DW-1580	207, 494, 495, 496, 497, 891, 892
DW-2000	220C, 222A, 232C, 233, 237A, 342A, 343A
DW-2100	889A
DW-2200	501, 502, 8002
DW-2500	858, 859, 562A
DW-2600	846

NOTE: Amperex Water Jackets fit interchangeable tube types of other makers.


AGR-9951/5870


891
892

889A

VC25
VC50
VC100

AMPEREX

ELECTRONIC CORPORATION

(All prices quoted here are subject to change without notice)

CHATHAM ELECTRONIC TUBES and EQUIPMENT

TUBES LISTED ON THIS PAGE CAN BE SUPPLIED DIRECT FROM STOCK — MOST OF THESE TUBES ARE TO JAN SPECIFICATIONS

Many other types are also available for immediate delivery. Write for the completely illustrated catalog today. CHATHAM also designs, developes and manufactures special tubes to exact customer specification. Inquiries regarding this service are invited.

RUGGEDIZED TUBES

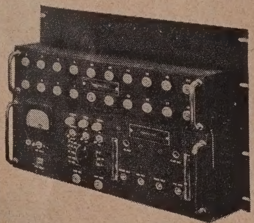
2050W
2D21W
5R4WGY
6AL5W
OD3W
OC3W
25Z6WGT
6H6WGT

HYDROGEN THYRATRONS

VC1257
VC1258
VC1754
VC1907

CONVENTIONAL TUBES

3B28
4B32
395A
1Z2
BS101
338A
1B46
323B

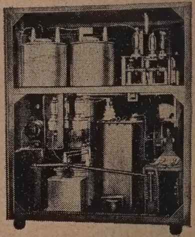


• Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse operating conditions.

CUSTOM BUILT
ELECTRONIC EQUIPMENT

CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today for complete information.

Write today for the informative CHATHAM catalog. For free copy address requests on company letterhead — no obligation.



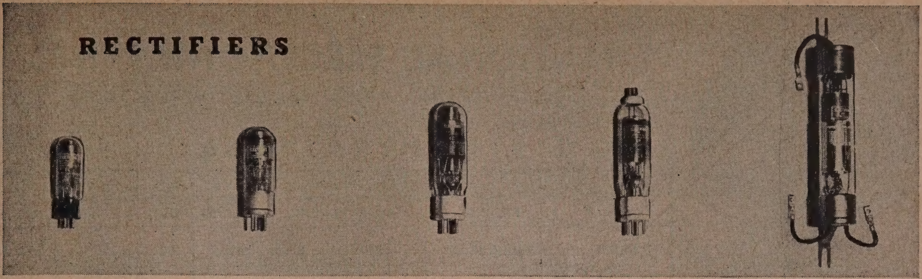
• 5 Megawatts radar modulator built by CHATHAM to rigid government standards.

CHATHAM ELECTRONICS · INC

475 WASHINGTON STREET, NEWARK 2, NEW JERSEY

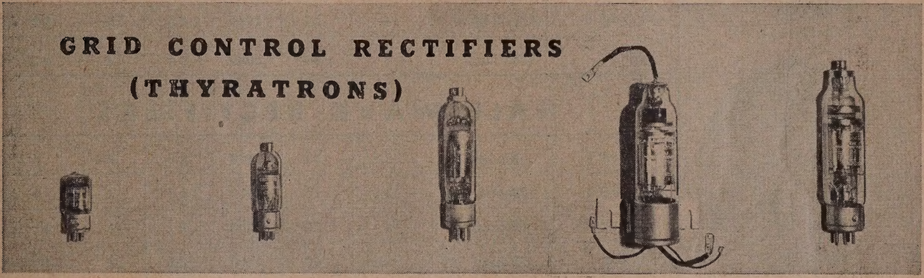
"EL" XENON GAS-FILLED TUBES

RECTIFIERS



	FULL WAVE RECTIFIER EL 1C	FULL WAVE RECTIFIER EL 3C	FULL WAVE RECTIFIER EL 6C	HALF WAVE RECTIFIER EL 6B & EL 6F	HALF WAVE RECTIFIER EL 16F
D.C. Output (Amps.)	1.0	2.5	6.4	6.4	16.0
Peak Anode Current	4.0	10.0	25.6	40.0	96.0
Peak Inverse Volts	725	725	725	920	620
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.0	11.5	17.0	21	36
Overall Length	5½"	7"	7½"	(6B) 9" (6F) 8¼" (Panel Mounting)	15⅝" (Panel Mounting)
Price	$7.80	$8.90	$17.30	$12.40	$24.30

GRID CONTROL RECTIFIERS (THYRATRONS)



	EL C1K	EL C3J	EL C6J	EL C16J	EL C6C
D.C. Output (Amps.)	1.0	2.5	6.4	16.0	6.4
Peak Anode Current	8.0	30.0	77.0	160.0	77.0
Peak Forward Volts	1000	750	750	1000	2000
Peak Inverse Volts	1250	1250	1250	1250	4000
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0	31.0	24.0
Overall Length	4¼"	6⅛"	9"	10" (Panel Mounting)	11"
Price	$10.20	$12.15	$30.90	$59.50	$45.30

	EL C1B/A	EL C3J/A	EL C6J/A
D.C. Output (Amps.)	1.0	2.5	6.4
Peak Anode Current	8.0	30.0	77.0
Peak Forward Volts	750	1000	1000
Peak Inverse Volts	1250	1250	1250
Filament Volts	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0
Overall Length	4½"	6⅛"	9"
Price	$9.80	$15.60	$31.90

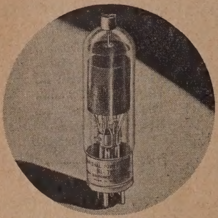
ENGINEERING MANUAL & CATALOG WILL BE SENT AT YOUR REQUEST

ELECTRONS, INCORPORATED
127 SUSSEX AVENUE
NEWARK 4, N. J.

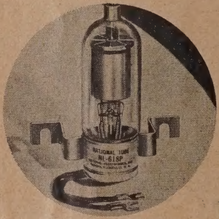
NATIONAL ELECTRONICS, INC.

QUICK-HEATING INDUSTRIAL ELECTRONIC TUBES

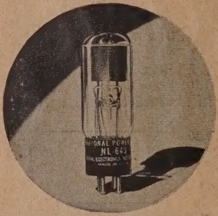
3C23 THYRATRON



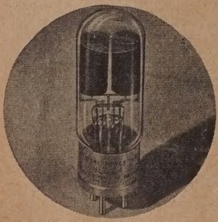
NL-740 THYRATRON



NL-618P RECTIFIER



NL-649/5834/249R RECTIFIER



NL-604 RECTIFIER

THYRATRONS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPERES	PEAK AMPS. RATING	PEAK INVERSE VOLTAGE	FILAMENT VOLTS	FILAMENT AMPERES	PRICE
3C23	Arg. & Merc.	1.5	6	1250	2.5	7	$12.50
323B	Arg. & Merc.	1.5	6	1250	2.5	7	$13.25
393A	Arg. & Merc.	1.5	6	1250	2.5	7	$13.25
NL-714	Arg. & Merc.	1	3	1250	2.5	5	$7.75
NL-715/ 5557	Mercury	1	3	5000	2.5	5	$7.75
NL-710	Arg. & Merc.	2.5	30	1250	2.5	9	$12.15
NL-740	Arg. & Merc.	4	50	1250	2.5	16	$20.50
NL-741	Mercury	4	50	5000	2.5	16	$20.50
HALF-WAVE RECTIFIERS							
NL-614	Xenon	2.5	15	900	2.5	8.5	$8.90
NL-615	Mercury	2.5	10	2000	2.5	7	$7.50
NL-617	Mercury	5	20	1000	2	12	$11.60
NL-618	Xenon	6.4	40	750	2.5	18	$12.40
NL-623	Mercury	15	45	500	2.5	20	$11.60
NL-625	Mercury	15	45	900	2.5	20	$29.00
NL-627	Mercury	20	120	1000	2.5	26	$35.00
NL-635	Mercury	6.4	40	1000	2.5	18	$12.60
NL-643	Mercury	15	90	700	2.5	23	$13.50
NL-649/ 5834/249R	Mercury	2	10	900	2.5	7	$7.50
NL-653/ 5835/BR-3	Mercury	3	12	900	2.5	10	$10.75
FULL-WAVE RECTIFIERS							
NL-600	Arg. & Merc.	1	4	900	2.5	6	$8.20
NL-602	Arg. & Merc.	2	4	900	2.5	9	$10.20
NL-604	Arg. & Merc.	2.5	10	900	2.5	12	$8.90

Prices and other data subject to change without notice.

WRITE FOR INDIVIDUAL TUBE DATA SHEETS FOR FULL DETAILS.

NATIONAL ELECTRONICS, INC.

GENEVA • ILLINOIS • U.S.A.

RAULAND *Television* PICTURE TUBES

PROVEN DEPENDABILITY • SUPERIOR PERFORMANCE

Tube type	Bulb △	Maximum diameter	Length	Deflection angle approx.	Normal anode voltage	No. 2 grid voltage	No. 1 grid cutoff volts	Face glass	List Price	Suggested resale
10BP4	G	10½"	17⅝"	50°	9,000	250	−27 to −63	Clear	$34.00	$25.50
10BP4A	G	10½"	17⅝"	50°	9,000	250	−27 to −63	Luxide	34.00	25.50
10FP4★	G	10½"	17⅝"	50°	9,000	250	−27 to −63	Clear	39.00	29.60
10FP4A	G	10½"	17⅝"	50°	9,000	250	−27 to −63	Luxide	39.00	29.60
12KP4★	G	12 7/16"	17⅝"	54°	11,000	250	−27 to −63	Clear	41.50	31.25
12KP4A★	G	12 7/16"	17⅝"	54°	11,000	250	−27 to −63	Luxide	41.50	31.25
12LP4	G	12 7/16"	18¾"	54°	11,000	250	−27 to −63	Clear	35.00	26.25
12LP4A	G	12 7/16"	18¾"	54°	11,000	250	−27 to −63	Luxide	35.00	26.25
12UP4	M	12 7/16"	18⅝"	54°	11,000	250	−27 to −63	Clear	40.50	30.25
12UP4A	M	12 7/16"	18⅝"	54°	11,000	250	−27 to −63	Luxide	40.50	30.25
—12UP4B	M	12 7/16"	18⅝"	54°	11,000	250	−27 to −63	Luxide	40.50	30.25
14BP4	G	13 11/16" ☐	16 11/16"	65°	11,000	250	−27 to −63	Luxide	35.00	26.25
14CP4	G	13 11/16" ☐	16 11/16"	65°	11,000	250	−27 to −63	Luxide	35.00	26.25
16AP4	M	15⅞"	22¼"	53°	12,000	300	−33 to −77	Clear	58.50	44.00
16AP4A	M	15⅞"	22¼"	53°	12,000	300	−33 to −77	Luxide	58.50	44.00
—16AP4B	M	15⅞"	22¼"	53°	12,000	300	−33 to −77	Luxide	58.50	44.00
16EP4	M	15⅞"	19⅝"	60°	12,000	300	−33 to −77	Clear	58.50	44.00
16EP4A	M	15⅞"	19⅝"	60°	12,000	300	−33 to −77	Luxide	58.50	44.00
—16EP4B	M	15⅞"	19⅝"	60°	12,000	300	−33 to −77	Luxide	58.50	44.00
16GP4	M	15⅞"	17 11/16"	70°	12,000	300	−33 to −77	Luxide	51.00	38.20
—16GP4B	M	15⅞"	17 11/16"	70°	12,000	300	−33 to −77	Luxide	51.00	38.20
16TP4	G	14⅞" ☐	18⅛"	65°	12,000	300	−33 to −77	Luxide	46.50	34.75
16KP4	G	14⅞" ☐	18" ☐	65°	12,000	300	−33 to −77	Luxide	46.50	34.75
16RP4	G	14⅞" ☐	18" ☐	65°	12,000	300	−33 to −77	Luxide	46.50	34.75
17BP4A	G	16⅝" ☐	19¼"	70°	12,000	410	−33 to −77	Luxide	46.50	34.75
17AP4	G	16⅝" ☐	19¼"	70°	12,000	410	−33 to −77	Luxide	46.50	34.75
17CP4	G	16⅝" ☐	19¼"	70°	12,000	410	−33 to −77	Luxide	46.50	34.75
19AP4A	M	18⅝"	21½"	66°	13,000	250	−27 to −63	Luxide	66.25	49.50
—19AP4B	M	18⅝"	21½"	66°	13,000	250	−27 to −63	Luxide	66.25	49.50
20CP4	G	20 3/32" ☐	21 7/16"	70°	15,000	410	−33 to −77	Luxide	69.50	52.25

★ Aluminized type, no ion magnet required.

△ Metal-Glass—M

All Glass —G

— Etched Face.

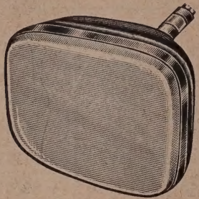
☐ Rectangular bulb—diagonal dimension.

All heaters 6.3 volts, 0.6 amps.

All types magnetic deflection and focus.

DUMONT TELETRONS

Du Mont Teletrons are available in all popular sizes. They offer the user several distinct advantages. The Du Mont bent-gun assembly makes possible sharper focusing over the entire screen area, which is very important in modern large screen sizes. Long-life screen materials assure the user of the longest service life.



All-Glass Rectangular TELETRONS

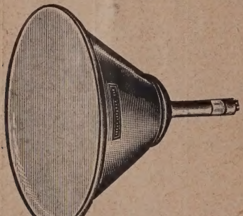
Type 14CP4 — 14" picture tube; gray-filter face plate; Du Mont Bent-Gun; 70-degree deflection; external conductive coating.

Type 16TP4 — 16" picture tube; gray-filter face plate; Du Mont Bent-Gun; 70-degree deflection; external conductive coating.

Type 17BP4A — 17" picture tube; gray-filter face plate; Du Mont Bent-Gun; 70-degree deflection; external conductive coating.

Type 20CP4 — 20" picture tube; gray-filter face plate; Du Mont Bent-Gun; 70-degree deflection.

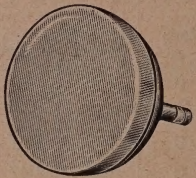
Type 20CP4A — 20" picture tube; gray-filter face plate; Du Mont Bent-Gun; 70-degree deflection; external conductive coating.



METAL-GLASS ROUND TELETRONS

Type 19AP4A — 19" picture tube; gray-filter face plate; Du Mont Bent-Gun.

Type 19AP4 — 19" picture tube; clear-glass face plate; Du Mont Bent-Gun.



ALL-GLASS ROUND TELETRONS

Type 12JP4 — For replacement see Type 12QP4A.

Type 12LP4A — 12½" picture tube; gray-filter face plate; Du Mont Bent-Gun; external conductive coating.

Type 12QP4A — 12½" picture tube; may be used readily to replace Types 12JP4 and 12RP4; no electrical changes, except that an ion-trap magnet (single-field) must be obtained when replacing the Type 12JP4. Mechanical differences, in most cases, are compensated for by the special rectangular 12" mask listed below.

Type 12RP4 — For best replacement see Type 12QP4A.

Type 15DP4 — For replacement see B1014P4A.

Type B1014P4A — 15" picture tube; gray-filter face plate; Du Mont Bent-Gun; identical to the Type 15DP4 except for anode contact. Anode connector must be changed to fit cavity type contact when replacing 15DP4 with B1014P4A.

Type 16FP4 — 16", all-glass, picture tube; Du Mont Bent-Gun; 60-degree deflection.

12" RECTANGULAR MASK

12" RECTANGULAR MASK — Used when installing the Type 12QP4A as a replacement for the Types 12JP4 and 12RP4.

CATHODE-RAY TUBE DIVISION

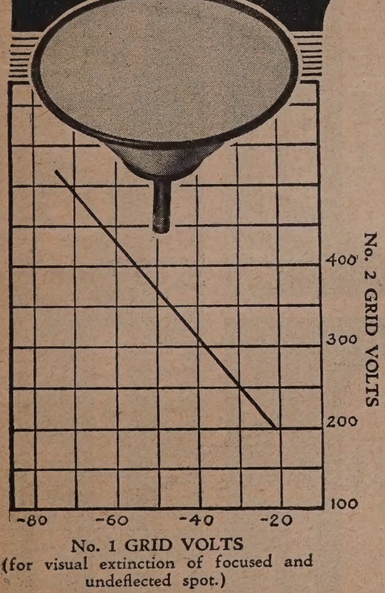
ALLEN B. DU MONT LABORATORIES, INC.

CLIFTON, N. J., U.S.A.

SARKES TARZIAN INC.

Pioneers in Outstanding TV Development

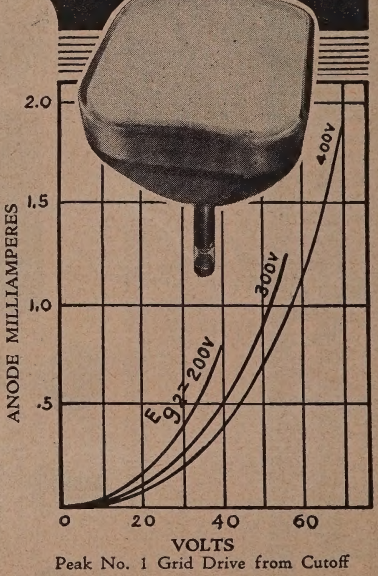
WTTS - TUNERS - RECTIFIERS - TUBES



*Advanced Engineering Features of *S-T picture tubes in both glass and metal.*

1. **HIGH CONTRAST**—This is achieved by a special treatment of the interior surface of the tube in both glass and metal types and also by high transconductance of the electron gun.
2. **LONG USEFUL LIFE**—One of the many reasons for this is the unusually high vacuum attained and controlled by measuring the degree of vacuum with ionization gauges. This method requires reading ion currents of one billionth of an ampere.
3. **TRUE REPRODUCTION**—Engineering design of bulb neck and gun focusing provides excellent reproduction in corners as well as in the center of the picture achieving true life gamma.
4. **HIGH BRIGHTNESS**—Better efficiency of the electron gun design plus advanced chemical technique in phosphor application insures a more uniform and bright picture.
5. **HIGH SCREEN VOLTAGE**—By approximately joining the second anode electrode to the fluorescent screen in both the metal and glass type tubes assurance is provided the screen potential will be the same as the second anode voltage.
6. **LOW TUBE NOISE**—Assures freedom from snow scintillations and other disturbances arising from insufficient resistance between picture tube electrodes.

*USED BY LEADING SET MANUFACTURERS



		Picture Area	Defl. Angle	Len. In.	Focus Current	List Price
Metal	16AP4A	11 x 14⅝†	52°	22¼	100	$54.00
	16GP4	11 x 14⅝†	70°	16¾	100	50.00
	19AP4A	13 x 17⅜†	66°	21½	100	66.00
Glass	16RP4	10⅛ x 13½	70°	18¾	100	50.00
	16TP4	10⅛ x 13½	70°	18⅛	100	50.00
	17BP4	10¾ x 14¼	70°	19¼	100	50.00
	20CP4	12¾ x 17	70°	21½	100	76.50

† Without Corners

(Write for data on electrostatic focus and other types.)

COMMON CHARACTERISTICS

E_f = 6.3v.
I_f = .6a.
E_{g1} = — 33 to — 77v.
E_{g2} = 250 to 410v.
Anode Voltage = 17000 Max.
Face Transmission — 67% (Grey Glass)
Specular Reflection — Less than 1.5% on metal only.
Interelectrode Cap.
  Cathode to other elements — 5 mmf.
  Grid No. 1 to other elements — 6.5 mmf.
Phosphor White (6700° K)

SARKES-TARZIAN, Inc., Tube Division • Hawthorne, N. J.

Sheldon TELEVISION PICTURE TUBES

MAKE ANY SET BETTER

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

RECTANGULAR TYPES

14BP4	Black Screen
16KP4	Black Screen
16TP4	Black Screen
17BP4A	Black Screen
19EP4	Black Screen
20CP4	Black Screen

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

GLASS-METAL TYPES

16GP4	Black Screen
19AP4	Crystal Face
19AP4A	Black Screen
19AP4B	VITATRON*
19AP4D	VITATRON* Black Screen
24AP4	Black Screen

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

ALL-GLASS ROUND TYPES

10BP4	Crystal Face
10BP4A	Black Screen
12LP4	Crystal Face
12LP4A	Black Screen
16DP4	Crystal Face
16DP4A	Black Screen
16HP4	Crystal Face
16HP4A	Black Screen
16JP4	Crystal Face
16JP4A	Black Screen
16LP4	Crystal Face
16LP4A	Black Screen
16YP4	Black Screen
19DP4	Crystal Face
19DP4A	Black Screen

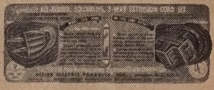
ELECTROSTATIC FOCUS

17FP4	Black Screen
20FP4	Black Screen

Spring Action (TRADE MARK, REG. U. S. PAT. OFF.) PLUGS and CAPS

Tapmaster CUBE TAPS & CORD SETS

Work Better in Any Outlet


A

B

C

D

E

F

G

H

I

J

A—Cat. No. 810, Tapmaster Solderless, Indestructible, 3-way Extension Cord Set. 6, 9, 12 or 15 ft. lengths. Brown.

B—Cat. No. 715, Tapmaster Solderless, Indestructible, Single Extension Cord Set. 6, 9, 12 or 15 ft. lengths. Brown.

C—Cat. No. 135, Rubber Tapmaster Cube Tap. Brown. List Price 25c.

D—Cat. No. 109, Brown Bakelite Tapmaster Cube Tap. List price 15c.

E—Cat. No. 100, Brown Bakelite Pony Grip Cap. List Price 10c.

F—Cat. No. 102, Black Rubber Handle Grip Cap. List Price 15c.

G—Cat. No. 107, Flat Side Brown Bakelite Grip Cap. List Price 10c.

H—Cat. No. 117, Black Rubber Handle Grip Cap. List Price 15c.

I—Cat. No. 105, Flat Side Brown Bakelite Handle Grip Cap. List Price 15c.

J—Cat. No. 101, Heavy Duty Brown Bakelite Handle Grip Cap. List Price 15c.

Bakelite plugs also supplied in Ivory.

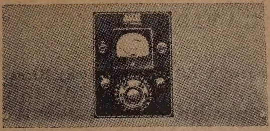
ALLIED ELECTRIC PRODUCTS INC.
SHELDON ELECTRIC COMPANY DIVISION
68-98 COIT STREET • IRVINGTON 11, N. J.

amplifiers

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.



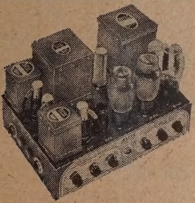
A-127 AMPLIFIER

Rack mounted power amplifier. POWER: 18 watts. GAIN: 66 db. IN: A-127—100,000 ohms; A-127A, A-127B—30, 250, 500-600 ohms. OUT: A-127, A-127A—8, 16 ohms; A-127B—500, 2,000, 3,000 ohms. FREQUENCY: ±1 db, 20-20,000 cycles, NOISE: —53 db. POWER SUPPLY: 105-130 V. at 50-60 cycles. EXT. VOLTAGES: 6.3 V. at 2.5 amp.; 350 V. at 20 Ma. DIM: 19″ wide; 8¾″ high; 7″ deep. WT.: 18 lbs. COLOR: Blue Gray. **NET PRICE: A-127—$210.00; A-127A or A-127B—$252.00.**

A-287WS AMPLIFIER

Class B power amplifier especially adaptable to installations where large audio power is required in 1 package. POWER: 250 watts. GAIN: 12 db. IN: 3,000 ohms. OUT: 2.25-20 ohms. FREQUENCY: ±1 db, 100 - 10,000 cycles. NOISE: —27.8 db. POWER SUPPLY: 105-130 V.; 50-60 cycles. DIM: 23$\frac{15}{16}$″ high; 20$\frac{1}{16}$″ wide; 13″ deep, in wall cabinet. WT.: 141 lbs. COLOR: Gray.

NET PRICE: $715.00



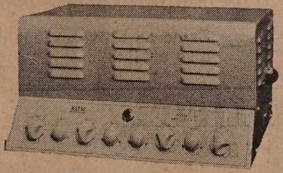
A-324A AMPLIFIER

Portable public address amplifier. POWER: 18 watts. IN: 2 microphone inputs—30, 250, 500/600 ohms, 102 db gain; 2 radio phonograph inputs—500,000 ohms, 72 db gain. OUT: 2.5-5, 8-12, 16-24 ohms. FREQUENCY: ±1 db, 20-20,000 cycles. NOISE: —45 db. POWER SUPPLY: 110-125 V.; 50-60 cycles. DIM: 9″ deep; 12″ wide; 9″ high. WT.: 14 lbs. COLOR: Gray.
NET PRICE: 198.00; 10349 dust cover—$8.50.

A-247B AMPLIFIER

Single stage Class AB2 push-pull beam power amplifier. POWER: 75 watts. GAIN: 10 db. IN: 16 ohms. OUT: 4, 8 and 16 ohms. FREQUENCY: ±1 db; 20-20,000 cycles. NOISE: —27 dbm. POWER SUPPLY: 105-125 V.; 50-60 cycles. DIM: 10½″ high; 19″ wide; 8½″ deep. WT.: 56 lbs. COLOR: Blue gray.

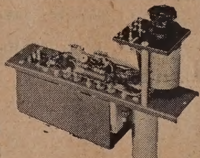
NET PRICE: $276.00



A-332A AMPLIFIER

Portable public address amplifier designed to operate with the Altec 21B Microphone. POWER: 18 watts. GAIN: 110 db. INPUT: for Altec 21B microphones and variable reluctance pickup. OUT: 2, 4, 8 and 16 ohms. NOISE: —27-. dbm. POWER SUPPLY: 117 V.; 50-60 cycles. DIM: 17″ wide; 11″ deep; 9″ high. WT.: 35 lbs. COLOR: Gray.

NET PRICE: $299.00.

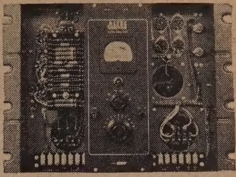


A-425B AND A-426B AMPLIFIERS

Pre-amplifier and line amplifier designed to permit flexible assembly of complete pre-amplifying mixing consoles or rack panels. **A-425B Pre-Amplifier:** GAIN: 47 or 53 db. IN: 30, 250, 500 ohms. OUT: 22,000 ohms. POWER SUPPLY: 300 V. at 7.5 Ma.; 6.3 V. at .6 amp. **NET PRICE: $103.50.**

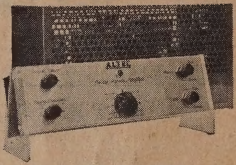
A-426B Line Amplifier: For use with 1 to 4 A-425B Pre-amps. GAIN: 55 db. IN: 20,000 ~~ohm~~ control. OUT: 62.5, 125, 250, 500 ohms. POWER SUPPLY: 300 V. at 12 Ma.; 6.3 V. at .6 amp.

NET PRICE: $108.00.



A-256C AMPLIFIER

Beam power rack mounted amplifier designed for high quality public address and monitor purposes. POWER: 75 watts. GAIN: 50 db. IN: 500 ohms, 5,000 ohm bridging. OUT: 4, 8 and 16 ohms (can be supplied with TM-226 output transformer—500 ohm and 70 V. line). FREQUENCY: ±1 db, 20-20,000 cycles. NOISE: —45 dbm. POWER SUPPLY: 105-130V.: 50-60 cycles. EXT. VOLTAGES: 6.3 V. at .6 amp., 300 V. at 5 Ma. DIM: 14″ high; 19″ wide; 9″ deep. WT.: 60 lbs. COLOR: Blue gray. **NET PRICE: $348.00**



A-333A POWER AMPLIFIER A-433A REMOTE CONTROL PRE-AMPLIFIER

Designed especially for use in home music systems for the highly critical audiophile. Extremely versatile. Remote pre-amplifier contains controls for bass rise and droop; treble rise and droop; 3 selections for recording crossover frequencies; equalization for variable reluctance pickup; filter for 33⅓ recording characteristic rise; 3 input selector switch and volume control. System frequency response flat to +0 —1 db from 20 cycles to 20,000 cycles and is within 3 db of flat response up to 100,000 cycles. Power amplifier will deliver full 27 watts of audio power at less than 5% total harmonic distortion; 20 watts at less than 2% total harmonic distortion; and 15 watts at less than ½% total harmonic distortion.
NET PRICES: A-333A—$111.00; A-433A—$75.00

10576 KIT

Basic components including chassis, transformers, R.C. board and dial plate for building A-323-B Amplifier. This is a portable general-purpose amplifier designed for high quality sound reproduction from records, radio and microphones. POWER: 18 watts. IN: 1 phonograph input for variable reluctance pickup. GAIN: 117 db; 1 radio input 500,000 ohms. GAIN: 77 db. OUT: 2.5-5, 8-12. 16-24 ohms. NOISE: —50 db. POWER SUPPLY: 110-125 V., 50-60 cycles. DIM: 9″ deep; 12″ wide; 9″ high. WT.: 12 lbs. COLOR: Gray.

NET PRICE: $54.00.

1400 SERIES AMPLIFIERS WITH 30A POWER SUPPLY*

This series forms a versatile amplifying, pre-amplifying mixing group that can be adapted to meet all quality amplifying requirements.

1410A PRE-AMPLIFIER: 2 channels. **Gain:** 32 db or 38 db. **In:** 30, 250, 600 ohms. **Out:** 10,000 ohms. **Dim:** 4$\frac{7}{16}$″ wide; 5$\frac{3}{16}$″ high; 5″ deep. **List Price: $94.80.**

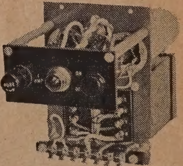
1420A AMPLIFIER: Rack mounted. **Power:** 35 watts. **Gain:** 96 db. **In:** 100,000 ohms. **Out:** 4, 8, 16 ohms and 70 V. line. **Ext. Voltages:** for one 1410A pre-amplifier mounted on chassis and two mounted remotely. **Dim:** 19″ wide; 10½″ high; 9″ deep. **Wt.:** 55 lbs. **List Price: $253.20.**

1430A AMPLIFIER: Rack mounted. **Power:** 75 watts. **Gain:** 98 db. **In:** 100,000 ohms. **Out:** 4, 8, 16 ohms and 70 V. line. **Ext. Voltages:** for two 1410A pre-amplifiers mounted on chassis and four mounted remotely. **DIM:** 19″ wide; 14″ high; 9″ deep. WT.: 60 lbs. **List Price: $327.15.**

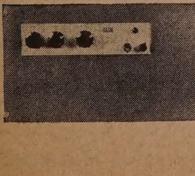
1440A AMPLIFIER: Gain: 65 db. **In:** 100,000 ohms. **Out:** 62.5, 125, 500 ohms. **Dim:** 3½″ wide; 5$\frac{3}{16}$″ high; 6¼″ deep. **List Price: $94.95.**

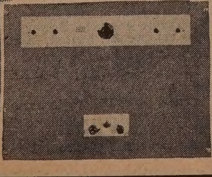
1450A APPARATUS UNIT: Line level matching transformer and 100,000 ohm gain control. **Trans.-Pri.:** 30, 150, 250, 600 ohms; **Sec.:** 15,000-60,000 ohms. **Dim:** 4$\frac{7}{16}$″ wide; 5$\frac{3}{16}$ high; 5″ deep. (Not shown) **List Price: $38.25**

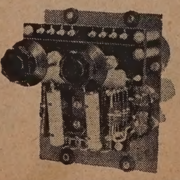
30A POWER SUPPLY: 300 V.—50 Ma. Max.; 6.3 V.—3.2 amp. max. **Dim:** 3½″ wide; 5$\frac{3}{16}$″ high; 6¾″ deep. **List Price: $48.00.**

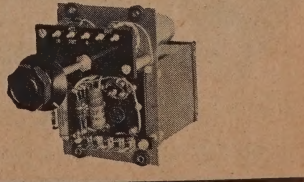


*Distributed by Graybar Electric Co.



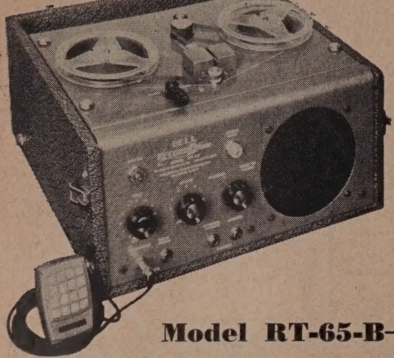






BELL SOUND EQUIPMENT

TAPE RE-CORD-O-*fone* — Model RT-65-A



SPECIFICATIONS

Power Output: 3.5 Watts
Controls: Re-wind-Off-Forward; Tone with AC Power Switch; Erase or Record-Playback; Volume.
Output: 3.2 Ohms and High Impedance for Headphones.
Input: Microphone and External Radio or Phono.
Forward Speed: Seven and one-half inches per second.
Speaker: 8 Watts 6″ P.M. Alnico V.
Rewind Ratio: Six to one.
Record: Dual Track Type "A" Tape.
Frequency Response: 70 Cycles to 8,000 Cycles.
Tubes: 1-12AX7; 1-12AU7; 1-6V6GT; 1-6X5GT.
Power: 80 Watts—117 Volts—60 Cycles A.C.
Dimensions: 16″ Deep; 8½″ High; 15″ Wide.
Weight: 33 Lbs. Net; Shipping Wt. Approx. 37 Lbs.

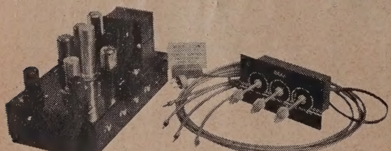
Model RT-65-B— Same as above except dual speed (3¾ IPS and 7½ IPS) also available.

HIGH FIDELITY AMPLIFIER — Model 2122

SPECIFICATIONS

Output: 10 Watts at Less than 3%. Peak Power 15 Watts.
Frequency Response: ±¾ db. 30 to 15,000 Cycles with Controls set for Flat Response.
Gain: Radio (Hi-Z) 76 db; Xtal Phono (Hi-Z) 74 db; Mag #1 92db; Mag #2 110 db.
Hum Level: —65 db. Below Rated Output.
Inputs: 1-Radio; 1-Xtal Phono; 1-Mag #1; 1-Mag #2.
Input Impedance: Radio 750K; Xtal Phono 1 Meg.; Mag #1 1 Meg.; Mag #2 22K.
Controls: 1-Overall Volume Control; 1-Off-On AC Power Switch; 1-Bass Control —9 db. to +12 db; at 100 Cycles; 1-Treble Control —18 db. to +9 db; at 10K Cycles.
Output Impedance: 3.4 to 4 ohms; 6 to 8 ohms; 15 to 18 ohms.
Power Consumption: 76 Watts; 117 Volts; 60 Cycles.
Tubes: 1-5Y3GT; 2-6V6GT; 2-6SC7; 1-6SL7GT.
Dimensions: 7½″ Deep; 6″ High; 11½″ Long.
Net Weight: 8½ Lbs.

BELL
MODEL 2122
HIGH FIDELITY AMPLIFIER

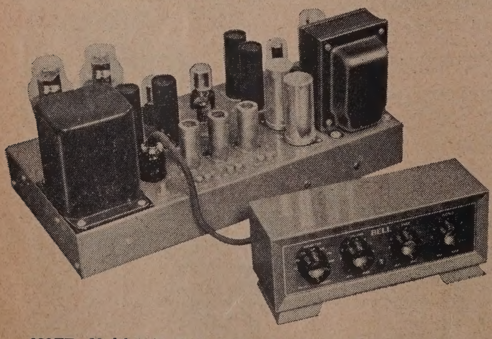


Model 2122-R

SHOWN IN ILLUSTRATION AT LEFT

Specifications are the same as Model 2122 shown above with the addition of four foot extension cables to permit more flexible installations.

CUSTOM HIGH FIDELITY AMPLIFIER — Model 2145



NOTE: Model 2148 20 ft. extension cable available for above.

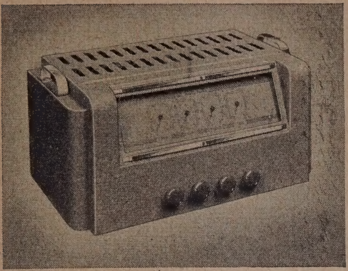
SPECIFICATIONS

Frequency Response: Within ±.25 db. 20 to 30,000 cycles.
Power Output: Less than 2% total distortion at 20 watts. Peak power 30 watts. Distortion contributed by pre-amplifier and control unit less than 0.1% 50 to 10,000 cycles at ALL levels.
Hum Level: Hum and noise level—80 db. below rated power output.
Inputs: Six—(1) High level mag input for Pickering pickup or equal; (2) Low level input for G.E. pickup or equal; (3) Crystal pickup; (4) High impedance microphone; (5) Radio—low level such as detector output; (6) Radio—high level such as first audio output.
Controls: Remote Control Unit; Selector Switch: 5 phono positions, 2 radio positions; Volume control (compensated); Bass control; Treble control; Power Amplifier: AC switch, Provision for remote AC switch, Master gain control.
Output Impedance: 4, 8, 16 ohms.
Tubes: Eleven—3-12AU7; 3-12AX7; 2-6SN7GTA; 2-6B4G; 1-5V4G.
Power Consumption: 150 watts normal at 117 Volts, 50-60 cycles.
Dimensions and Weights: Remote Control Unit: 3½″ deep, 10″ wide, 4¼″ high—Weight: 3½ Lbs.
Power Amplifier: 8½″ deep, 17″ wide, 7″ high—Weight: 23 Lbs.

BELL SOUND EQUIPMENT

15 WATT BELL AMPLIFIER

Model 3715



This amplifier is as fine in performance as it's functional and modern design suggests. The beautiful gray and silver case, with it's illuminated, full-view control panel, is high lighted by distinctive red plastic control knobs. The amplifier has an undistorted output of 15 watts with a peak of 18 watts. It utilizes push-pull beam power output tubes, inverse feedback that reduces harmonic distortion, and has three input channels with separate volume controls that permit mixing of two microphones and a phonograph simultaneously.

- Three Input Circuits.
- Illuminated Control Panel.
- Beam Power Output Tubes.
- Simplified Operation.
- Exceptional Tone Quality.

SPECIFICATIONS
Model 3715

Power Output: 15 Watts at less than 5%. Peak Power 18 Watts.
Freq. Response: Plus or Minus 1 db. 30 to 13,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 87 db.
Hum Level: —63 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs; Phono Channel ½ Meg.
Controls: 2 Microphone Volume Controls; 1 Phono Volume Control; 1 Tone Cont. W/AC Switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Cons: 100 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2—7B7; 1—6SF5; 1—6N7; 2—6V6G; 1—5U4G.
Dimensions: 11½" Deep; 8" High; 16½" Wide.
Shipping Weight: 32 lbs.

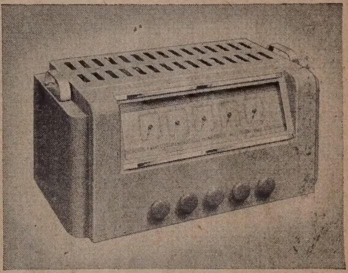
25 WATT BELL AMPLIFIER

Model 3725

An ideal Amplifier of medium wattage. This seven tube model has proven to be one of the most popular units that Bell has ever manufactured. For a good all around amplifier of medium price it cannot be beaten. Experienced engineering and time proven circuits has made it one that thousands of users rely on day in and day out for continuous satisfactory service. The Model 3725 is truly the "Work Horse" of Bell's entire amplifier line.

SPECIFICATIONS
Model 3725

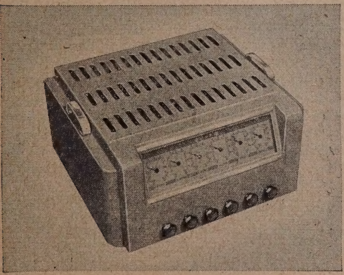
Power Output: 25 Watts at Less than 5%. Peak Power 33 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 18,000 Cycles.
Overall Gain: Microphone Channels 122 db.; Phono Channel 89 db.
Hum Level: —65 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Micro. Channels 10 Megs: Phono Channel ½ Meg.
Controls: 2 Microphone Volume Controls: 1 Phono Vol. Control: 1 Bass Tone Cont.; 1 Treble Tone Cont. W/AC Sw.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohm.
Power Cons.: 150 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2—7B7; 1—6SF5; 1—6N7; 2—6L6G; 1—5U4G.
Dimensions: 11½" Deep; 8" High; 16½" Wide.
Shipping Weight: 38 lbs.



- Treble and Bass Boost.
- Ultra-Modern Design.
- Three Input Circuits.
- Illuminated Control Panel.
- Built to Last—Easy to Service.

50 WATT BELL AMPLIFIER

Model 3750



This unit offers "powerhouse" performance with sufficient wattage to cover 90% of all commercial sound requirements. It has power to spare and has been designed for the ultimate in flexibility and operation. Three microphones and a phonograph can be simultaneously mixed by the operator. New tone control circuits, operating in an inverse feedback network, provide extremely wide tone adjustments with greatly reduced distortion. For example, the Bass Control is adjustable from flat response to plus 10 db or to minus 20 db and the treble control from plus 8 db to minus 22 db, 30 db overall.

- Rugged Construction.
- Four Inputs.
- Bass and Treble Boost.
- Available for Remote Standby Operation.
- Excellent Frequency Response.

SPECIFICATIONS
Model 3750

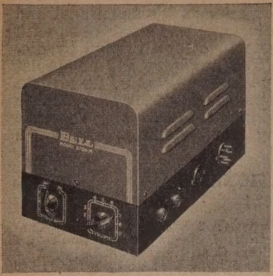
Power Output: 50 Watts at Less than 5%. Peak Power 88 Watts.
Freq. Response: Plus or Minus 1 db., 30 to 15,000 Cycles.
Overall Gain: Microphone Channels 125 db.; Phono Channel 90 db.
Hum Level: —67 db. Below Rated Output.
Inputs: 3 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs: Phono Channel ½ Meg.
Controls: 3 Microphone Volume Controls; 1 Phono Volume Control; 1 Bass Tone Cont; 1 Treble Tone Cont. W/AC Switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Cons: 260 Watts; 117 Volts; 50-60 Cycles.
Tubes: 3—7C6; 3—6SC7; 1—6SN7; 2—6L6G; 1—5U4G; 1—5R4GY; 1—5V4G.
Dimensions: 16½" Deep; 8" High; 16½" Wide.
Shipping Weight: 62 lbs.

Model 3750-R same as above but provided with a relay to permit remote operation of "B" supply.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

BELL SOUND EQUIPMENT

6 WATT BELL MOBILE AMPLIFIER Model 3706-M



- Phono & Micro Inputs.
- Chassis Removable for Servicing.
- Fits under most dashboards.
- Battery Stand-by Switch.

Here is a brand new addition to the time-proven Bell line of amplifiers. A compact, rugged and amazingly efficient low wattage mobile amplifier. It was especially designed for use by Municipal Police and Fire Departments, Safety Patrols, Traffic Control and outdoor audible advertising. The tubes and vibrator can be inspected or changed without disturbing the installation because the chassis and front panel are so constructed that they easily slide out of the case. In an emergency a whole new spare unit can be inserted in the case. It will operate on 6 volts DC or 117 volts 60 cycles and is provided with a standby switch to conserve battery drain. It comes complete with two cables. Any high impedance microphone can be used with this amplifier.

SPECIFICATIONS
Model 3706-M

Power Output: 6 Watts at Less than 5%. Peak Power 8 Watts.
Freq. Response: Plus or Minus 2 db., 60 to 15,000 Cycles.
Overall Gain: Microphone Channel 112 db.; Phono Channel 75 db.
Hum Level: —60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel 1 meg.
Controls: 1 Microphone and Phono Volume Control with Power Switch; 1 Battery saver stand-by switch.
Output Imp: 4; 8; 15 ohms.
Power Cons: 45 Watts; 117 Volts; 60 Cycles; 8 Amperes; 6 Volts D.C.
Tubes: 1-6SJ7; 1-6SN7; 1-6L6; 1-6X5GT.
Dimensions: 10″ Deep; 6½″ High; 5½″ Wide.
Shipping Weight: 15 lbs.

25 WATT BELL MOBILE AMPLIFIER Model 3723-M

This unit is another new member of the Bell line of Amplifiers. It is a medium wattage mobile Amplifier of the most modern design. It has a microphone input and a built-in phono unit. The volume of both the microphone and phono are individually controlled and in addition, a tone control is provided to permit individual selection or adjustment of the bass or treble response. There is also a stand-by switch provided to turn off the "B" supply while the filaments remain heated. This permits economical operation and extends the life of the battery power supply.

SPECIFICATIONS
Model 3723-M

Power Output: 25 Watts at Less than 5%. Peak Power 38 Watts.
Freq. Response: Plus or Minus 2 db. 30 to 15,000 Cycles.
Overall Gain: Microphone Channel 115 db.; Phono Channel 82 db.
Hum Level: —60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel ½ meg.
Controls: 1 Microphone Volume Control; 1 Phono Volume Control; 1 Tone Control W/AC Switch, 1 Standby Switch, 1 Phono motor off-on switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Con: 115 Watts; 117 Volts 60 Cycles; 19 Amperes; 6 Volts D.C.
Tubes: 1-7B4; 1-6C5; 1-6SN7; 2-6L6; 2-6X5GT.
Dimensions: 11½″ Deep; 10″ High; 16½″ Wide.
Shipping Weight: 40 lbs.

- Built in Phono unit.
- Standard Bell Cabinet.
- Illuminated Control Panel.
- Remote Drive on Controls.
- Heavy Steel Construction.

30 WATT BELL MOBILE AMPLIFIER Model 3728-M

- Astatic AB-8M Mobile Pickup.
- Circuit Breaker Protection on 6 volts.
- Bass Boost and Treble Compensators.
- Power Economizer Switch.
- Three Input Channels.
- Heavy Duty Dual Vibrator.

One of the most completely satisfying mobile Amplifiers ever offered for general use. The "Moto-Master" combines a 30-watt amplifier of tone and quality, with a phono pickup of new design, that plays all 12″ and smaller records. Market research proves it's capacity is more than ample for the majority of needs.

This high gain unit operates on either a 6 volt DC storage battery or 117 volt 60 cycle AC line current. Conversion from one type of current to another is achieved by simply removing one plug and inserting the other. Current consumption on battery is reduced by a power economizer switch. High fidelity; improved wide range tone controls; beam power output tubes; and two microphones inputs and one phono input, each with separate volume controls are features of the "Moto-Master".

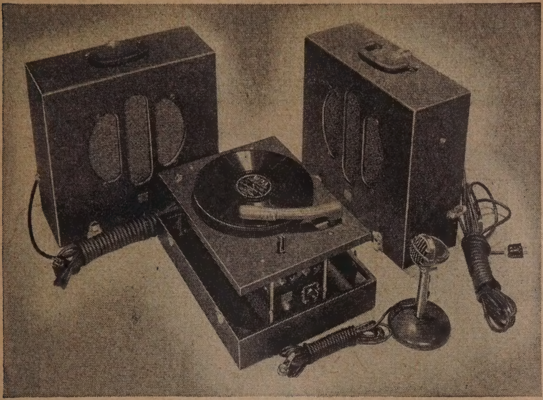
Turntable speed of 78 r.p.m. New type crystal pickup stays "in the groove."

SPECIFICATIONS
Model 3728-M

Power Output: 30 watts at Less than 5%. Peak Power 45 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 14,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 84 db.
Hum Level: —60 db. Below Rated Output AC; —58 db. on DC.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Meg.; Phono Channel 1 Meg.
Controls: 2 Microphone Volume Controls; 1 Phono Volume Control; 1 Bass Tone Cont; 1 Treble Tone Cont. with Power Switch; 1 Stand by Switch; 1 Phono OFF-ON Switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Cons: 22 amp., 6 volts DC; 120 watts; 117 volts; 60 Cycles.
Tubes: 1-7Y4; 2—7Z4; 3—7B4; 1—6SL7; 2—6L6GA.
Dimensions: 16½″ Deep; 10″ High; 16½″ Wide.
Shipping Weight: 60 lbs.

Mfg. by **THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio**

BELL SOUND EQUIPMENT



10 WATT BELL PHONO-PA SYSTEM

SPECIFICATIONS Model PA-3710-P

Amplifier: 3710.

Speakers: 2-10″ Heavy Duty P.M.

Cables: 2-25′ Type SV with Plugs.

Phono Equipment: 78 RPM Turntable with Crystal Pickup.

Microphone: JT-30 with desk type stand.

Microphone Cable: 15′ Shielded Rubber with Connector.

Microphone Stand: Furnished with Micro.

Case: Model 3710, 3 piece Portable.

Dimensions: 12″ Deep; 18½″ High; 15¾″ Wide.

Shipping Weight: 50 lbs.

15 WATT BELL SINGLE CASE PA SYSTEM

SPECIFICATIONS Model PA-3715-E

Amplifier: 3715 (See page B-5).

Speakers: 2-10″ Heavy Duty P.M.

Cables: 2-25′ Type SV with Plugs.

Built-in Phono Equipment: None.

Microphone: JT-30 with desk-type stand.

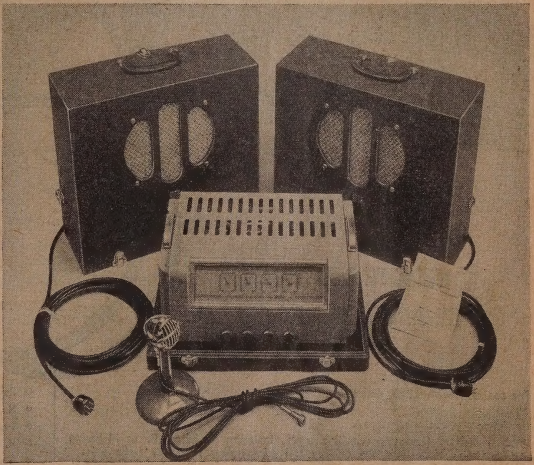
Microphone Cable: 15′ Shielded Rubber with Connector.

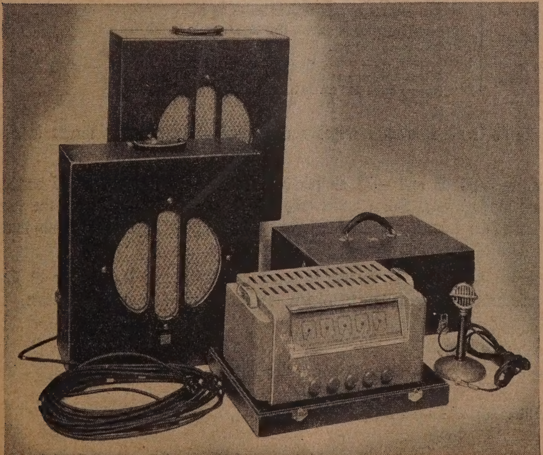
Microphone Stand: Furnished with Micro.

Case: Model 15 Three pc.

Dimensions: 13¾″ Deep; 19¾″ High; 17¾″ Wide.

Shipping Weight: 62 lbs.





25 WATT BELL DUO-CASE PA SYSTEM

SPECIFICATIONS Model PA-3725-E

Amplifier: 3725 (See Page B-5).

Speakers: 2-12″ Heavy Duty P.M. with Line Matching Trans.

Cables: 2-50′ Type SV with Plugs.

Built-in Phono Equipment: None.

Microphone: JT-30 with desk type stand.

Microphone Cable: 15′ Shielded Rubber covered with Connector.

Microphone Stand: Furnished with Micro.

Case: 1 Model 95. 1 Model 14-A.

Dimensions: Model 14-A, 13½″ Deep; 10¼″ High; 18″ Wide.

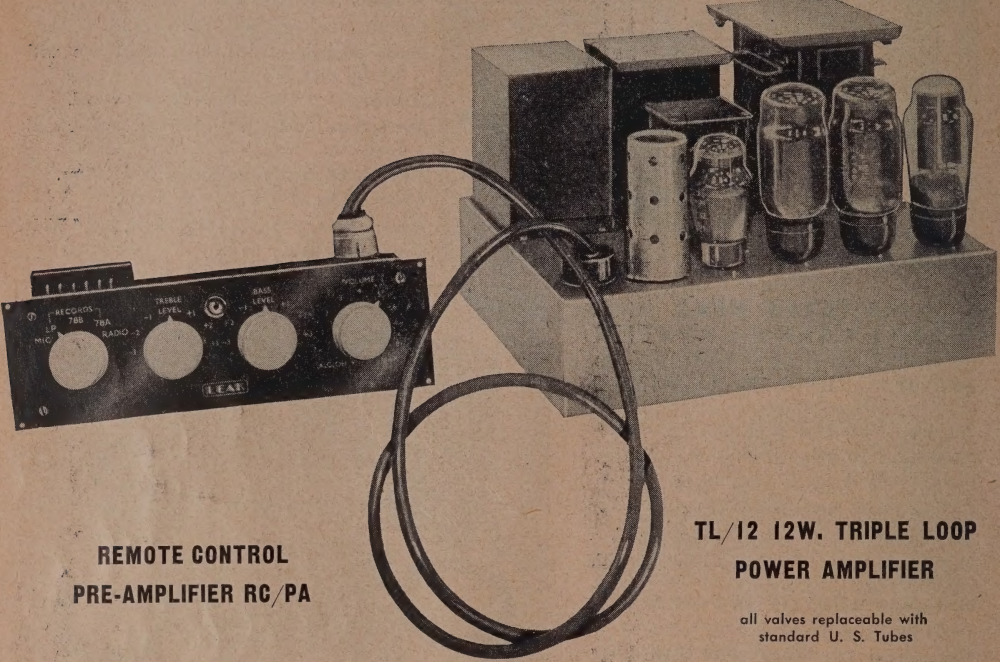
Model 95, 10¼″ Deep; 19¾″ High; 19″ Wide.

Shipping Weight: Complete System, 90 lbs.

***Mfg. by* THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio**

LEAK "POINT ONE"

BRITAIN'S BEST AUDIO AMPLIFIER DISTORTION: 0.1%



REMOTE CONTROL PRE-AMPLIFIER RC/PA

For use only with LEAK amplifiers.

An original feedback tone-control circuit.
No resonant circuits employed.

- Will operate from any cartridge made, including Audak, G.E. or Pickering Cartridges; from from any moving coil microphone; from any radio unit.
- Equalization circuit: Proper equalization positions for LP records, Foreign or American recordings of all speeds.
- Switching for Pick-up, Microphone and Radio, with automatic alteration of tone-control characteristics.
- Controls: Input Selector; Bass Gain and Loss; Treble Gain and Loss; Volume. Output Impedance: 0-30,000ω at 20 kc.p.s.

The unit will mount on motor-board through a cutout of $10\frac{1}{8} \times 3\frac{1}{8}$ in., or it can be bolted to the power amplifier, when, with a top cover, the whole assembly becomes portable.

TL/12 12W. TRIPLE LOOP POWER AMPLIFIER

all valves replaceable with
standard U. S. Tubes

- Push-pull triode output stage. 400 V. on anodes.
- No H.T. electrolytic smoothing or decoupling condensers.
- Impregnated transformers; tropically finished components.
- H.T. and L.T. supplies for pre-amp, and radio units.
- Distortion: at 1,000 c/s and 10 W. output, 0.1%: at 60 c/s and 10 W. output, 0.19%; at 40 c/s and 10 W. output 0.21%.
- Hum and Noise: —72 to —80 db on 10 W.
- Frequency response: ±0.1 db, 20 c/s-20 kc/s.
- Sensitivity: 160 mV.
- Damping Factor: 20. Input impedance: 1 Meg. Output impedances: 2ω; 7-9ω; 15-20ω; 28-36ω. Phase margin 20° ± 10°: Gain margin 10 db + 6 db.

The Leak triple Loop feedback circuit (the main loop giving 26 db feedback over 3 stages and the output transformer) results in the following major advantage:

> In the TL/12 amplifier the hum and noise levels fall within —80 db and —72 db relative to 10 watts. This amount of power, as hum and noise, is inaudible from the most efficient loudspeakers. Notice particularly that feedback is taken from the low side of the output transformer. Many circuits show it as taken from the anode side, which will result in higher hum levels than without feedback.
>
> In this amplifier, due to magnitude of feedback, there can be no rise of voltage to cause "boom" in the loudspeaker at the frequency of bass resonance, and the capability of a loudspeaker to reproduce transients, especially low-frequency transients, is astonishingly improved.

AVAILABLE:

12W Amplifier complete with pre-amplifier	25W Amplifier complete with pre-amplifier
12W Amplifier only	25W Amplifier only

Pre-Amplifier not sold separately

BRITISH INDUSTRIES CORPORATION • New York 13, N. Y.

BOGEN SOUND EQUIPMENT

MODEL HX50

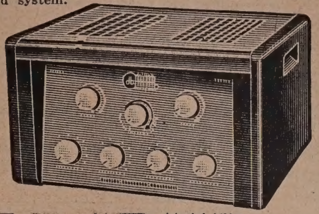
50 WATTS

SPECIFICATIONS

POWER OUTPUT: 50 watts at less than 3%.
PEAK POWER: 90 watts.
FREQUENCY RESPONSE: 20120,000 cycles ±2 db.
TONE CORRECTOR RANGE: bass control: —30 to +20 db at 100 cycles; treble control: —14 to +21 db at 10,000 cycles.
HUM: **Fund.:** —65 db. Mic.: —58 db.
OUTPUT IMPEDANCE: 4-8-15 ohm and 2 constant voltage taps (70 and 140 V).
POWER CONSUMPTION: 240 watts, 117 V, 50-60 cycles AC.
TUBES: Total 12. 5-6SC7, 2-6SL7, 1-6SN7, 1-5R4GY, 2-807, 1-5Y3.
DIMENSIONS: 17" long, 9" high, 14" deep.

THREE MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — DUAL ELECTRONIC TONE CORRECTORS — CONSTANT VOLTAGE OUTPUT
UNDERWRITERS' LABORATORIES APPROVED

The proudest achievement in Bogen's 15 years of sound leadership. Incorporates the new Bogen ANTI-FEEDBACK CONTROL which permits easy "tuning out" of acoustic feedback. Allows greater output to be used—makes mike placement less critical—stabilizes entire sound system.


Model HX50

HX50 HIGH IMPEDANCE AMPLIFIER: Complete with tubes.
List Price........$279.40

HXL50 LOW IMPEDANCE AMPLIFIER: Same as HX50 but first microphone input is low impedance 200 ohms. (50 or 500 ohms available if specified.)
List Price........$304.15

MODEL H30

30 WATTS

SPECIFICATIONS

POWER OUTPUT: 30 watts at less than 5%.
PEAK POWER: 40 watts.
FREQUENCY RESPONSE: 30-12,000 cycles, ±2.5 db.
GAIN: Microphone: 119 db. Phono: 77 db.
HUM: Fund.: —68 db. Mic.: —60 db.
OUTPUT IMPEDANCE: 4-8-16 ohms and 70V-TAP (167 ohms.)
POWER CONSUMPTION: 140 watts, 117 V, 50-60 cycles AC.
TUBES: Total 7: 3-6SF5, 1-6SL7, 2-6L6G, 1-5U4G.
DIMENSIONS: 15½" long, 11" deep, 7½" high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL
SIX POSITION MULTI-RANGE TONE CORRECTOR
LOW NOISE LEVEL — UNDERWRITERS' LABORATORIES APPROVED

H30 HIGH IMPEDANCE AMPLIFIER: Complete with tubes.
List Price........$132.83

HL30 LOW IMPEDANCE AMPLIFIER: Same as H30 but first microphone input is low impedance, 200 ohms. (50 or 500 ohms available if specified.)
List Price........$157.58

Model H30

MODEL H623

23 WATT MOBILE SYSTEM

SPECIFICATIONS

POWER OUTPUT: AC: 23 watts at 5%. DC: 20 watts at 5%.
PEAK POWER: 30 watts.
FREQUENCY RESPONSE: 30-14,000 cycles ±2.5 db.
GAIN: Microphone channel: 116 db. Phono channel: 73 db.
HUM: AC: Fund.: —74 db.; Mic.: —60 db. DC: Fund.: —75 db.; Mic.: —62 db.
OUTPUT IMPEDANCE: 4-8-15 ohms and 70 V.
POWER CONSUMPTION: 115 watts, 117 V. AC; 14 amp, 6 V DC.
TUBES: Total 6: 2-6SF5, 1-6SL7GT, 2-6L6G, 1-7Z4.
DIMENSIONS: 15¼" long, 10⅞" deep, 10⅛" high.

UNIVERSAL OPERATION 6 VOLT DC OR 110 VOLT AC
ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL
SIX POSITION TONE CORRECTOR
BUILT-IN PHONOGRAPH — UNDERWRITERS' LABORATORIES APPROVED

H623 AMPLIFIER: Complete with phono and tubes.
List Price........$204.88

H623TJ OUTDOOR SYSTEM: Includes: H623 amplifier with tubes; 1 Jensen VH20 projector unit, 1 Bogen-Shure 710 crystal microphone with stand adapter, 7' cable and plug.
List Price........$291.83

H623TU OUTDOOR SYSTEM: Same as H623TJ substituting Bogen-University PH trumpet with MA25 unit.
List Price........$269.83

Model H623

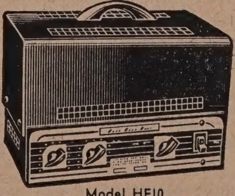
MODEL HE10

10 WATTS

SPECIFICATIONS

POWER OUTPUT: 10 watts at 4%.
PEAK POWER: 15 watts.
FREQUENCY RESPONSE: 60-10,000 cycles, ±1.5 db.
GAIN: Mic. channel: 117 db. Phono channel: 66 db.
HUM: Fund.: —66 db. Mic.: —59 db.
OUTPUT IMPEDANCE: 4-8-15-500 ohms.
POWER CONSUMPTION: 70 watts, 117 V, 50-60 cycles AC.
TUBES: Total 5: 1-6SJ7, 1-6SL7, 2-6V6, 1-5Y3GT.
DIMENSIONS: 7" deep, 11" wide, 7¼" high.

ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL
SIX POSITION MULTI-RANGE TONE CORRECTOR — PUSH-PULL OUTPUT
FIVE TUBE, HIGH GAIN CIRCUIT — LOW NOISE LEVEL
UNDERWRITERS' LABORATORIES APPROVED


Model HE10

HE10 HIGH IMPEDANCE AMPLIFIER:
List Price........$71.23

HEL10 LOW IMPEDANCE AMPLIFIER: Complete with tubes.
Same as HE10 but microphone input is low impedance, 200 ohms. 50 or 500 ohms available on transformer.
List Price........$95.98

FOR FURTHER INFORMATION ON AMPLIFIERS AND COMPLETE BOGEN SYSTEMS ASK FOR THE LATEST BOGEN CATALOG
PRICES IN ZONE 2 ARE APPROXIMATELY 5% HIGHER • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN HIGH FIDELITY EQUIPMENT

MODEL PX15

15 WATT PHONO AMPLIFIER

SPECIFICATIONS

POWER OUTPUT: 15 watts at less than 2% distortion. **PEAK POWER:** 30 watts.
FREQUENCY RESPONSE: 30-20,000 cycles ±1½ db.
TONE CORRECTOR RANGE: Bass control: —23 db. to +20 db. at 60 cps. Treble control: —20 db. to +20 db. at 10,000 cps.
GAIN: Magnetic: 106 db.; Crystal: 78 db.
HUM: —75 db (referred to rated output).
OUTPUT IMPEDANCE: 4-8-16-500 ohms.
POWER CONSUMPTION: 117 V, 50-60 cycles, 105 watts.
TUBES: Total 6: 1-12SJ7, 1-12AH7, 1-6SL7, 2-6L6G, 1-5Y3GT.
DIMENSIONS: 15" x 8" x 9¼".

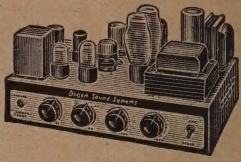
THE VERY FINEST IN HIGH FIDELITY FOR THE MOST CRITICAL LISTENER

New rangemaster control corrects for various conditions of record noise. Built-in preamplifier for G.E., Pickering, Astatic and similar magnetic pickups. Preamplifiers and voltage amplifier tubes use D.C. heated filaments for minimum hum. Dual tone controls provide bass boost and attenuation, treble boost and attenuation. Fifteen watts output at less than 2%. Provision for simple external switching of pickup and tuner removing preamplifier load when tuner is in the circuit. Underwriters' Laboratories approved.

PX15 AMPLIFIER and tubes (less cage).
List Price..........$160.33

EXT-5 4 ft. control extension kit for PX15, to facilitate cabinet installations.
List Price..........$23.38

CAG15—Cage for PX15.
List Price..........$7.26



Model PX15

MODEL DB10

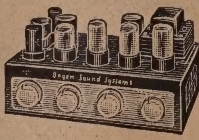
10 WATT PHONO AMPLIFIER

SPECIFICATIONS

POWER OUTPUT: 10 watts at 3%.
PEAK POWER: 15 watts.
FREQUENCY RESPONSE: 30-18,000 cps ± 1 db.
GAIN: Phono: 70 db.; with preamp. section: 92 db.
HUM: —68 db. (referred to rated output).
OUTPUT IMPEDANCE: 4, 8 and 16 ohms.
POWER CONSUMPTION: 70 watts at 117 v, 60 cps.
TUBES: 1-6SC7, 1-6SL7, 2-6V6GT, 1-5Y3GT.
DIMENSIONS: 11" w. x 7" d. x 7 5/16" h. (with cage.)
WEIGHT: 15 lbs.
TONE CONTROL: Bass: +19 to –20 db at 100 cps. Treble: +14 to –16 db at 10,000 cps.

FOR TRUE HIGH FIDELITY AT MODERATE COST

Separate bass and treble controls. Built-in preamplifier for G.E., Pickering, Astatic and similar magnetic pickups. Provision for simple external switching of pickup and tuner, removing preamplifier load when tuner is in circuit. Extremely low hum and noise level. Underwriters' Laboratories Approved.



Model DB10

DB10 AMPLIFIER and tubes (less cage).
List Price..........$90.75

EXT-4 4 ft. control extension kit for DB10, to facilitate cabinet installations.
List Price..........$19.25

CAG8—Cage for DB10.
List Price..........$5.78

MODEL PH10

10 WATT MULTI-RANGE PHONO AMPLIFIER

MODEL PH10 AMPLIFIER: Complete with tubes.
List Price..........$56.38

EXT-2 4 ft. control extension kit for PH10, to facilitate cabinet installations.
List Price..........$11.00

MULTI-RANGE TONE SWITCH WITH FOUR LABORATORY SELECTED RESPONSE CURVES — VIRTUALLY HUMLESS PERFORMANCE IN ANY TONE POSITION — PUSH-PULL OUTPUT.

SPECIFICATIONS

POWER OUTPUT: 10 watts at 5%.
PEAK POWER: 14 watts.
FREQUENCY RESPONSE: (Full Range) 40-15,000 cps ±1 db.
GAIN: 72 db.
INPUT IMPEDANCE: (1) 500,000 ohms.
OUTPUT IMPEDANCE: 3.2 and 8 ohms.
HUM: —80 db. (referred to rated output).
POWER CONSUMPTION: 60 watts, 117 V, 60 cycles.
TUBES: Total 4: 1-6SL7GT, 2-6V6GT, 1-5Y3GT.
DIMENSIONS: 5" x 11" x 3" (overall height 6").

Model PH10

THREE SPEED HIGH FIDELITY PORTABLE TRANSCRIPTION PLAYER

MODEL DP16—For standard, transcription and long playing records and microphone.

Model DP16

Player is housed in sturdy ⅜" plywood case, covered in heavy airplane cloth. Amplifier employs famous Bogen PH10 circuit. Jensen 10" speaker is mounted in removable cover. Single constant speed motor for 78, 45 and 33⅓ RPM. Record carrying compartment built-in. The Model DP16 uses a single ASTATIC N400 arm with LQD turnover cartridge. Excellent for schools, broadcast stations, advertising agencies, lecturers, and social clubs. Underwriters' Laboratories Approved.

SPECIFICATIONS

POWER OUTPUT: 10 watts at less than 5%.
PEAK POWER: 14 watts.
FREQUENCY RESPONSE: 40-15,000 cps ±1 db.
GAIN: Phono channel: 68 db; Microphone channel: 115 db.
HUM: Phono channel: —75 db (referred to rated output) in flat response. Microphone channel: —58 db.
INPUT IMPEDANCE: Phono channel: 500,000 ohms. Microphone channel: 2 megohms.
OUTPUT IMPEDANCE: 8 ohms.
POWER CONSUMPTION: 85 watts — 117 V 60 cycle AC (with motor).
TUBES: Total 5: 1-6SJ7, 1-6SL76T, 2-6V6GT, 1-5Y3GT.
DIMENSIONS: 20¼" deep, 18½" wide, 12¼" high.

MODEL DP16—Complete with tubes, speaker.
List Price..........$187.83

MODEL DP16D—Same as DP16 but with variable speed model D motor (78 and 33⅓ RPM).
List Price..........$216.70

WRITE FOR DESCRIPTIVE HIGH FIDELITY FOLDER LISTING ADDITIONAL UNITS.

PRICES IN ZONE 2 ARE APPROXIMATELY 5% HIGHER • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN CENTRALIZED SOUND SYSTEMS AND COMMUNO-PHONES

BOGEN CENTRALIZED SCHOOL SOUND SYSTEMS: The entirely new Bogen centralized school systems now make available to progressive educators an instructional tool for which they have long sought. Simple—yet versatile—the new systems provide for radio and record program transmission selectively to any or all classrooms. Skillful design, which embodies many exclusive features, enables the entire school body to participate in dramatic presentations, school debates and similar activities where the audience was previously limited to the seating capacity of the auditorium.

Bogen Centralized School Sound Systems are designed to meet every requirement of the modern educational institution, regardless of size. They comply fully with requirements of the U. S. Office of Education and the RMA. Simplicity of operation enables the administrator to reduce confusion and thus to assure efficient effective work in all departments. Versatility of the systems speed learning, provide instant communication for fire drills and supplement the general routine.

Write for Complete Descriptive Catalog C10-50S.

BOGEN CUSTOM DIVISION: The Custom Division of the David Bogen Co. is maintained for the express purpose of offering engineering consultation on custom built requirements. This technical service covers initial design and layout of electrical specifications of any sound installation, large or small.

Although the David Bogen Co. manufactures the largest and most complete line of standard and De Luxe sound equipment, very often a customer's problem requires the design and construction of special equipment to meet particular requirements.

We invite you to submit your sound problems, technical inquiries, or request for quotations on special equipment to our Custom Division. If no specifications are available for your particular problem, merely send a description and pencilled sketch of the intended installation to our Custom Division. Its Engineering Staff is equipped with the finest facilities in the country and they will be glad to aid you in the solution of your particular problem, without obligation.

NEW BOGEN DELUXE COMMUNO-PHONE SYSTEMS

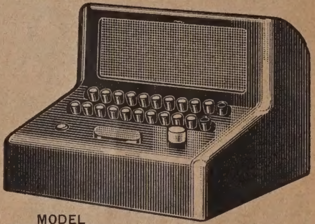
Three Versatile Models to Solve Every Intercommunication Problem

MODEL "X"—Completely universal. Will serve installations requiring single master and several remote stations—installations requiring several masters—or installations requiring several masters and several remotes. Hand-rubbed walnut finished cabinets; typewriter keyboard action; automatic busy signal; provision for plug-in of handset; 115 v. A.C.; U.L. Approved.

MODEL "U"—A.C. - D.C. version of the Model "X". Incorporates most of the above features—no busy signal.

MODEL "D"—Serves installations requiring either a single master and several remote stations or several master stations only. Operates on voice coil lines. Will not serve installations requiring a combination of several masters and remotes—similar to Model "U" in other respects.

WRITE FOR LATEST BOGEN COMMUNO-PHONE CATALOG



MODEL
21X, 21U, 21D

CHALLENGER SOUND EQUIPMENT

30 WATT AMPLIFIER

FEATURES

- Individual controls for two microphones, phonograph, selectone.
- Terminal strip and 2 speaker plug-in sockets for connection of speaker lines.
- Moulded bakelite sockets throughout.
- Inverse feedback for better response and regulation.
- Extractor type fuse. • Recessed carrying handles.
- Underwriters' Lab. Approved.

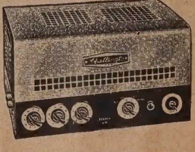
Model CH30X

MODEL CH30X—30 watt amplifier, tubes and built-in phono. top. **List Price**..........**$121.28**

MODEL CH30XP-1—Complete portable system containing 1-CH30X amplifier with tubes; 2-12" Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price..........**$198.00**

SPECIFICATIONS

Power Output: 30 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic. No. 1: 118 db. Mic. No. 2: 118 db. Phono: 85 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tubes: 2-6SC7, 1-6SL7GT, 2-6L6G, 1-5U4G.
Tone Control: SelecTone.
Dimensions: CC30: 15" W. x 10" D. x 8" High.



Model CH30

MODEL CH30—30 watt amplifier, tubes and cage.
List Price..........**$96.80**

MODEL CH30P-1—Complete portable system containing 1-CH30 amplifier with tubes, cage; 2-12" Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price..........**$170.50**

MODEL CH618 18 WATT UNIVERSAL MOBILE AMPLIFIER

For 115 Volt A.C. and 6 Volt D.C.

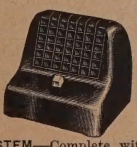
Features individual controls for microphone, phono, tone; inverse feedback for better response and regulation; constant voltage output for easy speaker matching. Built-in constant speed phonograph. Complete with tubes and cage. Underwriters' Lab. Approved.

List Price..........**$153.18**

SPECIFICATIONS

Power Output: 18 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic.: 118 db.. Phono: 78 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tone Control: SelecTone.
Tubes: 2—6SF5, 1—6SL7GT, 2—6V6GT, 1—7Z4.
Dimensions: 15" Wide x 10" Deep x 10" High.

CHALLENGER INTERCOM SYSTEMS



CHALLENGER 200 is a complete system—a master, a remote station and 50 ft. of cable. Operates 117V. AC-DC. Dual-Duty volume control keeps remote "alive" or permits master to silence it. Excellent for nursery, restaurant, business use. Underwriters' Lab. Approved.

CHALLENGER 200 SYSTEM—Complete with 50 ft. of cable and plugs.
List Price..........**$43.95**

CHALLENGER 600 Master may be used in one of two systems: (1) A single master with up to five remote stations; (2) An all master system of six stations. Operates 117 V AC-DC. In sturdy beautiful polystyrene cabinet. Remote can initiate calls also. Underwriters' Lab. Approved.

CHALLENGER 600 MASTER with tubes. **List Price**..........**$39.05**

CHALLENGER 60R REMOTE STATION.
List Price..........**$12.93**

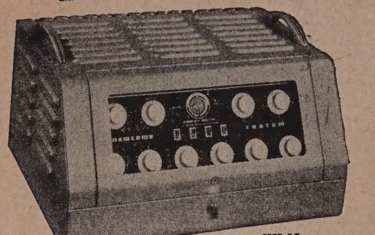
For further information on CHALLENGER Amplifiers, Systems and Intercoms, ask for latest CHALLENGER catalog.

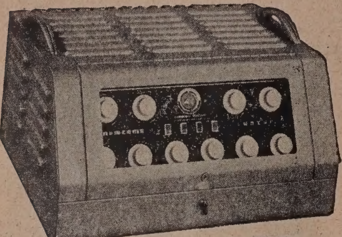
PRICES APROXIMATELY 5% HIGHER IN ZONE 2.

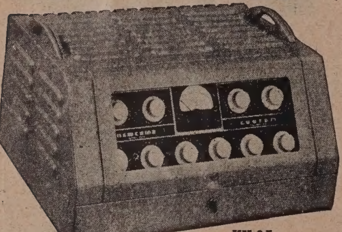
CHALLENGER AMPLIFIER CO., NEW YORK 12, N. Y.

Newcomb CUSTOM K SERIES AMPLIFIERS

Designed and Built To The
Very Highest Standards of
Quality In The Entire Industry


KX-25


KX-50


KX-6A

K-50B

Without equal at any price. The best examples why the name Newcomb is so revered by Engineers and Owners alike. Will improve any system. A **must** when using the new 2-way wide range speakers. Check these important features and specifications.

- ★ **20—20,000 cycles ± 1 db**
- ★ **Less than 3% distortion**
- ★ **90% of rating at less than 1%**
- ★ **Full power any output tap**
- ★ **Audio bandwidth selectors**
- ★ **Hum and noise level—80 db.**
- ★ **Remote control provision—all inputs**
- ★ **U/L approved**
- ★ **Continuous duty—longer life parts**
- ★ **Key locked control cover**
- ★ **Sensitive volume and overload indicators**
- ★ **Wired for plug-in input transformers**

Full audio power, 50 to 5000 cycles (region of all major power requirements) within ± ¼ db, less than 5% distortion. Separate tone controls for Bass and Treble Boost or Attenuation of advanced design for better curve shape, greater range. Feedback controlled, 2 stage mike pre-amplifiers. Hum balancing control, all models but booster. Linear mixer frequency response. All but Pre-Amplifier have output impedance of 4, 8, 16, 250, 500 ohms, PLUS a 70 volt "constant voltage" tap, with convenient, simple, impedance selector. Multistage inverse feedback. Large, heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installation. A. C. convenience outlet in rear, all models except booster. Cabinets: Heavy gauge welded steel beautifully styled. Finish: Silver Grey Hammertone Baked Enamel. Panels: Etched metal, illuminated. Knobs: Round, large, skirted type, for easy operation. Additional specifications given under specific model numbers.

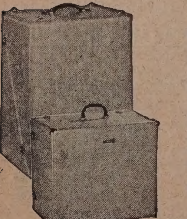
KX-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 3% distortion any output tap. PEAK POWER: 40 watts design center, 48 watts max. INPUTS (6): 5 mike (2 meg.), gain 123 db; 1 phono either Magnetic input gain 99 db based on 27,000 ohm input, bass equalization + 10 db or Crystal input ½ meg. gain 90 db REMOTE CONTROL: Use RC-6 remote control unit. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —75 db crystal phono, —65 db mike and magnetic pickup inputs (Referred to rated output). CONTROLS (15): 5 mike, 1 phono, 1 bass, 1 treble, 4 bandwidth, 1 master, 1 volume indicator (all under keylocked control cover) A.C. power switch. TUBES (15): 6—6SC7, 2—6J5, 1—6J7, 1—6SQ7, 1—6SN7, 2—6L6G, 1—6AF6G, 1—5U4G. POWER CONSUMPTION: 135 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 40 lbs. LIST: (with tubes) $379.50. Plug Kit: $6.92.

KX-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 3% distortion any output tap. PEAK POWER: 80 watts design center, 90 watts, max. BOOSTER COUPLING JACK for connecting K50B Boosters for 100 watts or more. All other characteristics identical with KX-25 except gains, which are all 3 db higher than KX-25. TUBES (18): 6—6SC7, 2—6J5, 1—6SQ7, 1—6J7, 1—6SN7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSUMPTION: 235 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 49 lbs. LIST: (with tubes) $460.00. Plug Kit: $7.03.

KX-6A: A 6 channel mixer pre-amplifier designed to feed broadcast lines or boosters for finest quality. OUTPUT: +31 VU, less than 3% distortion, +30 VU at less than 1%. Has built in power supply and genuine VU meter with meter range extension switch. INPUTS for 5 mikes (2 meg.) gain 97 db and 1 phono either crystal (½ meg.) gain 64 db or magnetic (27,000 ohms) gain 73 db. Requires RC-6 Remote Control Unit. Includes Master Volume Control and same fine Dual Tone Controls and Audio Bandwidth Selectors as in KX-25 and KX-50. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —80 db crystal —75 db mike and magnetic. CONTROLS (12): 5 mike, 1 phono, 1 bass, 1 treble, 1 master, 1 four position bandwidth (all under key locked cover), 1 A.C. power switch, 1 VU meter range switch (in rear). TUBES (12): 6—6SC7, 4—6J5, 1—6J7, 1—6X5. POWER CONSUMPTION 35 WATTS, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 32 lbs. LIST: (with tubes) $345.00. Plug Kit: $5.29.

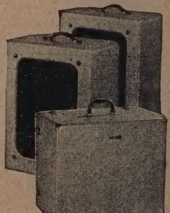
K50B: Booster Amplifier. Performance, power and output impedance same as KX-50 with but one input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Built for continuous duty with long life parts, separate plate, and filament power transformers, individually fused, permits dependable plate power switching. Includes volume and overload indicators as in KX-50. Ample multistage feedback to minimize effects of speaker load variations. Etched metal panel. TUBES (10): 1—6SJ7, 1—6SN7, 1—6SQ7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSTRUCTION: 230 watts 117 volts 60 cycles. 129 volts max. DIMENSIONS: 9⅜" x 17¾" x 12¼". SHIPPING WEIGHT: 45 lbs. LIST: (with tubes) $210.00. Plug Kit: $2.50.

NEWCOMB CUSTOM PORTABLE SYSTEMS



KX-2512X: Portable system with KX-25 amplifier and two heavy duty, extremely efficient speakers, each with 50' cable. System is carried in two cases: Model KA for the amplifier, size 19" x 11¾" x 16⅞"; Model K-212 for two speakers, size 18½" x 12½" x 22½". Speakers face inside for maximum protection when split case is closed. Mikes and mountings not included as requirements vary.

KX-25R12X: Portable system identical to KX-2512X but with each speaker mounted in an individual portable reflex baffle, Model KR-112, for utmost tone quality. Speaker cases size, 18½" x 12½" x 24½". Mikes and mountings not included as requirements vary.



KA: Amplifier case fits all model K amplifiers.

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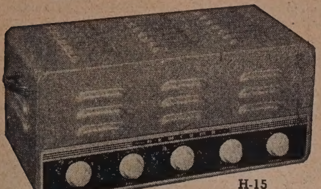
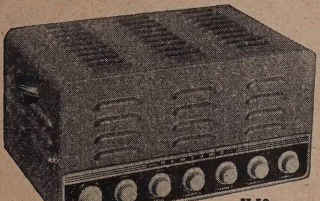
Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA

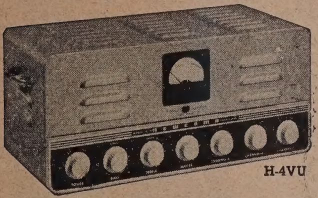
Newcomb DELUXE H SERIES AMPLIFIERS

Compare These Deluxe Amplifiers with Any Other Brand at Any Price

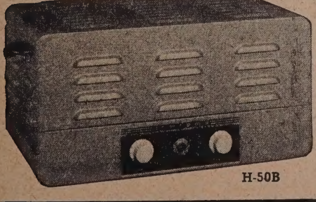

H-15

H-25


H-50


H-4VU

H-25B


H-50B

For Performance, Dependability and Value check these features and specifications:

- ★ **20-20,000 cycles ± 2 db**
- ★ **Full Power any output tap**
- ★ **Less than 5% distortion**
- ★ **90% of rated power at less than 2%**
- ★ **Remote Control provision—all mikes**
- ★ **U/L approval**
- ★ **Continuous duty—longer life parts**
- ★ **Wired for plug-in input transformers**

Full Audio Power, 50 to 5000 cycles (region of all major power requirements) within ± ½ db, less than 5% distortion. Individual boost and attenuate type bass and treble tone controls in new distortion free circuit. Linear mixer frequency response. All models but pre-amplifier have output impedances of 4, 8, 16, 250, and 500 ohms PLUS a 70 volt "constant voltage" tap, with easily-operated impedance selector. Multi-stage inverse feedback. Large heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installations. A. C. convenience outlet in rear, all models except boosters. Cabinets: Heavy gauge welded steel beautifully styled in modern functional simplicity that endures. Finish: Silver Grey Hammertone Baked Enamel. Panel: Etched metal, illuminated. Knobs: large, round, skirted type, for ease of operation. Additional specifications under specific model numbers.

H-15 POWER OUTPUT: 17 watts design center rating, 20 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 26 watts design center, 31 watts max. INPUTS (3): 2 mike (2 meg.), gain 120 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: —34 to +13 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (5): 1 mike-phono, 1 mike, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-2 remote control unit. TUBES (7): 2-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5Z4. POWER CONSUMPTION: 85 watts, 117 volts 60 cycles A.C. Max. input 129 volts. DIMENSIONS: 8¼" x 19" x 10⅛". SHIPPING WEIGHT: 23 lbs. LIST: (with tubes) $149.50. Plug Kit: $4.09.

H-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 40 watts design center, 48 watts maximum. INPUTS (4): 3 mike (2 meg.), gain 124 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: —18 to +15 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (6): 2 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-3 remote control unit. TUBES (8): 3-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5U6G. POWER CONSUMPTION: 125 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8½" x 19" x 10⅛". SHIPPING WEIGHT: 27 lbs. LIST: (with tubes) $186.50. Plug Kit: $5.03.

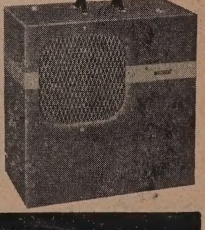
H-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 80 watts design center, 90 watts max. INPUTS (5): 4 mike (2 meg.), gain 124 db. 1 phono (½ meg.), gain 81 db. BOOSTER COULPING JACK for connecting H-25B or H-50B Boosters for 75 to 100 watts or more. BASS TONE CONTROL: Range —21 to +16 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (7): 3 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-4 remote control. TUBES (12): 4-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 225 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 42 lbs. LIST: (with tubes) $250.00. Plug Kit: $6.10.

H-4VU Mixer Pre-Amp. with built-in power supply. Extremely low hum. Suitable for feeding telephone lines or booster amplifiers such as the H-25B or H-50B. Output +22 db at less than 5% distortion. +21 db at less than 2%. INPUTS for three mikes (2 mg.), gain 90 db. 1 phono (½ meg.), gain 51 db. HUM: Better than, —80 db from phono input or —75 db, **mike inputs.** Requires RC-3 remote control unit. Includes master control and genuine VU meter with meter range extension switch. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: Range —27 to +13 db. TUBES (7): 3-6SF5, 1-6SJ7, 1-6SN7, 1-6J5, 1-6X5. POWER CONSUMPTION: 30 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 21 lbs. LIST: (with tubes) $195.00. Without VU meter: $150.00. Plug Kit: $3.44.

H-25B Booster Amplifier — Performance Power and Output Impedances same as H-25 with but one input of ½ meg. impedance, gain 68 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. power switch and volume control. Ideal for use with H-4 Pre-amplifier. Built for long life. TUBES (5): 1-6SJ7, 1-6J5, 2-6L6G, 1-5U4G. POWER CONSUMPTION: 120 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 25 lbs. LIST: (with tubes) $127.50. Plug Kit: $1.69.

H50B Booster Amplifier — Performance, Power and Output Impedances are same as H-50 with but ont input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. switch and volume control. Built for long life. Ideal for use with H-4 Pre-Amp. TUBES (8) 1-6SJ7, 1-6J5, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 220 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 38 lbs. LIST: (with tubes) $162.50. Plug Kit: $1.69.

Newcomb Deluxe Portable Systems



H-1512R: Portable system with H-15 amp. and two 12" speakers, each with 25' cable, in split case Model EH-212, size 11⅛" x 20½" x 21", covered in washable fabricoid. Kickproof metal grills protect speakers. Mikes and mountings not included as requirements vary.

H-2512Q: Portable system with H-25 amp. and two heavy duty 12" speakers, each with 25' cable in split case, Model EH-212. Size, 20½" x 11⅛" x 21". Mikes, and mountings not included as requirements vary.

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Newcomb

E SERIES AMPLIFIERS

A Low Priced Line of
Superior Utility Amplifiers

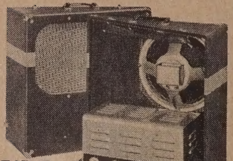
The same fine workmanship and materials as the incomparable KX- and H-Series. Designed to lead the low-price field. For performance, dependability and economy the E-Series is today's best combination of high quality and low cost. All models U/L approved.

E-1010S

E-10 AMPLIFIER . . . Delivers full 10 watts from push-pull 6V6 tubes. Inputs for mike and phono. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 40 to 15,000 cycles ±2 db. Inputs (2): 1 mike (2 meg.), gain 116 db; 1 phono (½ meg.), gain 77 db. TONE CONTROL: Range 0 to —24 db. MULTI-STAGE INVERSE FEEDBACK CIRCUIT. OUTPUT IMPEDANCES: 4, 8 and 16 ohms to octal socket. TUBES (5): 1-6SC7, 1-6SQ7, 2-6V6GT and 1-6X5GT. FINISH: Silver-gray hammertone baked enamel. PANEL: Genuine etched metal. DIMENSIONS (Incl. cover): 5¾" x 10⅜" x 6¾" high. POWER CONSUMPTION: 60 watts at 117 volts; 60 cycles A.C. SHIPPING WEIGHT: Amplifier only, less cover, 9 lbs. Including cover, 10½ lbs. LIST: (with tubes) $65.00, Cover: $6.00. Plug Kit: $1.71.

E-1010S PORTABLE SYSTEM . . . 10 watt basic system with 10" speaker, 25' cable and plug, and E-10 amp. Case model E-110, size 12¼" x 15¾" x 8¾". Mike and mountings not included.

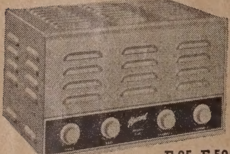
E-17 AMPLIFIER . . . A conservative 17-watt amplifier with separate bass and treble tone controls, phonograph bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike input. Input controls for mike and phone. **SPECIFICATIONS** . . . POWER UNIT 17 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS: 1 mike (2 meg.) gain 115 db; 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (5): 1-6SC7, 1-6SJ7, 2-6L6G, 1-5Z4. PANEL: Etched metal, illuminated. FINISH: Silver-gray hammertone baked enamel. DIMENSIONS: (Incl. cover): 8⅜" x 14⅛" x 8" high. POWER CONSUMPTION: 75 watts at 117 volts, 60 cycles A.C.SHIPPING WT.: 18 lbs. LIST: (with tubes less cover) $93.00. Cover $6.50. Phono Cover $39.50*. 3 Speed Cover $49.50*. Changer Cover $99.50. Plug Kit: $2.28. (*Plus Excise Tax.)


E-1712R
E-2512R

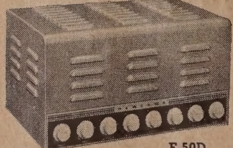
E-1712R PORTABLE SYSTEM . . . 17 watt amp. model E-17 and two 12" speakers each with 25' cable and plug. Split case model EH-212, size 20½" x 11⅛" x 21". Mikes and mountings not included.

E-25 AMPLIFIER . . . A dependable full 25-watt amplifier with inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . POWER OUTPUT: 25 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS (3): 2 mike (2 meg.), gain 117 db; and 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 2-6L6G and 1-5Z4. FINISH: Two-tone hammertone baked enamel. PANEL: Etched metal, illuminated. POWER CONSUMPTION: 90 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 19 lbs. LIST: (with tubes less cover) $118.50. 3 Speed Cover $49.50*. Cover $6.50. Phono Cover $39.50*. Changer Cover $99.50*. Plug Kit: $3.24. (*Plus Excise Tax.)

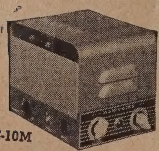
E-2512R PORTABLE SYSTEM . . . 25 watt amp. model E-25 and two 12" speakers each with 25' cable and plug. Split case model EH-212, size 20½" x 11⅛" x 21". Mikes and mountings not included.


E-25, E-50

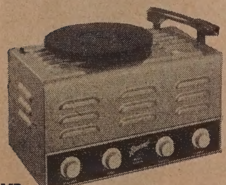
E-50 AMPLIFIER . . . A distortion-free conservatively rated 50-watt amplifier using push-pull parallel 6L6 tubes and multistage inverse feedback circuit. Has inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . same as E-25 except as following: POWER OUTPUT: 50 watts at less than 5% distortion. Mike gain 120 db.; phono gain 79 db. OUTPUT IMPEDANCES: 4, 8, 16 and 250 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 4-6L6G and 2-5Z4. DIMENSIONS (including cover): 11¼"x14¾". POWER CONSUMPTION: 170 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 31 lbs. LIST: (with tubes) $189.50. Plug Kit: $3.24.


E-50D

E-50D AMPLIFIER . . . A 50 watt amp. with separately controlled, individual 25 watt output channels and inputs for 3 mikes and 1 phono. Separate bass and treble controls. Bass boost on phono only. Additional amp. jack. **SPECIFICATIONS:** POWER OUTPUT: 50 watts, 25 watts each channel at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS: (4) 3 mike (2 meg.), gain 127 db, 1 phono (½ mag.), gain 85 db. OUTPUT IMPEDANCES: (each channel) 4, 8, 16 and 500 ohms. TUBES (12): 3-6SF5, 1-6SJ7, 2-6SN7, 4-6L6G, 2-5Z4. DIMENSIONS (with cover): 17½" x 9¼" x 11¼". POWER CONSUMPTION: 190 watts, 117 volts, 60 cycles A.C. WEIGHT: 32 lbs. LIST: (with tubes) $239.50. Plug Kit: $3.50.


E-10M

E-10M MOBILE AMPLIFIER . . . The Model E-10-M is a particularly rugged, dependable, low cost 10 watt mobile amplifier, designed for use on 6 V.D.C. or 117 volts, 60 cycles A.C. power. Features push-pull beam power output tubes with inverse feedback for low distortion; Standby battery saver switch; New freedom from vibrator hash; Special mounting to simplify removal of chassis for servicing; Inputs for mike and phono; Sturdy Jones connectors for battery and A.C. cables. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 50 to 15,000 cycles ±2 db. Mike Input (2 megs.), gain 115 db; Phono Input (½ meg.), gain 75 db. OUTPUT IMPEDANCES: 4, 8, and 16 ohms. Jewelled pilot lamp. Etched metal panel. Silvertone-gray, baked enamel hammertone finish. TUBES (5): 1-6SC7, 1-6SF5, 2-6V6GT, 1-6X5GT. POWER CONSUMPTION: 60 watts at 117 volts A.C. 8 amps at 6 V.D.C. SHIPPING WEIGHT: 13½ lbs. LIST: (with tubes) $97.50. Plug Kit: $1.39.


E-25MP

E-25MP PHONO TOP MOBILE AMPLIFIER . . . A full 25 watts from either 6 V. Storage Battery or 117 V. A.C. at new low price. Consumes least possible current per watt output. "Standby" switch reduces battery consumption, keeps tubes warm for instant use. Separate A.C. power and turntable switches. Heavy duty Jones plugs and receptacles provide dependable connections to battery or A.C. power source. **SPECIFICATIONS** . . . POWER OUTPUT: A full 25 watts at less than 5% distortion from either 117 volts A.C. or 6-volt storage battery. RESPONSE: ±2 db, 50-15,000 cycles. INPUTS for two mikes (2 meg.) gain 119 db; and one phono (½ meg.), gain 78 db. HIGH FREQUENCY ATTENUATOR range, 28 db. CIRCUIT FEATURES: Multi-stage inverse feedback, resistance capacity coupling, phase correction for phono motor, 2000 volt Hermetically sealed oil buffer condenser. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to two octal speaker sockets and impedance selector. PHONOGRAPH MOTOR: Constant speed 78 R.P.M. PICKUP: Crystal. TUBES (7): 1-6SC7, 1-6SJ7, 1-6J5, 2-6L6, 2-6X5GT. POWER CONSUMPTION: 107 watts at 117 volts, 60 cycles A.C. or 20.5 amps. including phono motor from 6-volt storage battery. FINISH: Silver-gray hammertone baked enamel. PANEL: Etched metal, illuminated. DIMENSIONS (including cover): 8¾" x 14⅛" x 10" high overall. SHIPPING WT.: 30 lbs. LIST: (with tubes and phono cover) $199.50. Plug Kit: $3.24. (Excise Tax on cover).

E-25M . . . Same as E-25MP, Mobile Amplifier, with cover, tubes, less phono unit. Power consumption: 91 watts A.C. or 17 amps. from 6 V.D.C. Dimensions: 8⅜" x 14⅛" x 8" high. SHIPPING WT.: 27 lbs. LIST: (with tubes and plain cover) $181.00. Plug Kit: $3.24.

All Prices and Specifications Subject to Change Without Notice.

Newcomb PHONO AMPLIFIERS

For the Finest Phonograph Performance Ever Achieved

KXLP-30

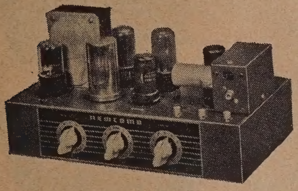
KXLP-30 A phonograph amplifier unsurpassed by any other in the field, regardless of price. Ample power permits use of KX Series dual tone control circuit. Provides tonal range and balance unattainable in less costly circuits, and controlled emphasis of desirable but power-consuming fundamental bass tones, avoiding emphasis of harmonic bass—the "Boomy" or one-tone bass so unacceptable to true music lovers. U/L approved. Features "Magic Red Knob" Record Condition Compensator and built in magnetic pick-up pre-amplifier.

SPECIFICATIONS: POWER OUTPUT: 30 watts at less than 5% distortion. 27 watts at less than 1%. FREQUENCY RESPONSE: 20 to 20,000 cycles ±1 db. Response of magnetic and variable reluctance inputs corrected for requirements of these pickups. INPUTS: For radio and choice of crystal or variable reluctance pickup inputs. GAIN: Crystal input, 90 db. at ½ meg. input impedance. Magnetic or variable reluctance input, 112 db. at ½ meg., input impedance of 95 db. at 10,000 ohms. Signal required at radio and TV inputs for full output is .5 v. BASS TONE CONTROL: 0 to +22 db. with special curve shape for maximum emphasis of fundamental bass tones and minimum emphasis of harmonic bass. TREBLE TONE CONTROL: —25 db. to +25 db. RECORD CONDITION COMPENSATOR: Five positions: #1, radio #2, records, condition "A" (Perfect); #3, records, condition "B"; #4, records, condition "C"; #5, records, condition "D" (badly worn, very noisy). HUM BALANCER CONTROL: To correct variation in tubes. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to octal socket. POWER CONSUMPTION: 150 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. TUBES (7): 1-6SC7, 3-6J5, 2-6L6G, 1-5U4G. DIMENSIONS: Chassis: 13½" x 9½" x 3". Height overall, 7⅞". WEIGHT: 22 lbs. LIST: (with tubes) $250.00. Plug Kit: $.83.

HLP-14

HLP-14 Brings to music lovers new listening pleasure in a unit less expensive than the KXLP-30. It, too, features the "Magic Red Knob" record condition compensator. Built-in pre-amplification and equalization, required for new low level pickups, make the HLP-14 ideal for the lower cost home installation. Exceptional tonal balance at whisper volumes is an outstanding feature. U/L approved.

SPECIFICATIONS: POWER OUTPUT: 14 watts at less than 5% distortion. 12½ watts at less than 2%. PEAK POWER OUTPUT: 19 watts. FREQUENCY RESPONSE: 30 to 15,000 cycles ±1 db for crystal pickup and radio inputs. Magnetic and variable reluctance inputs have response adjusted to requirements of these pickups. INPUTS: Same as KXLP-30. GAIN: Crystal input 90 db. at ½ meg. input impedance. Magnetic or variable reluctance input 109 db. at ½ meg. or 92 db. at 10,000 ohms impedance. Signal from radio or TV required for full output is .5 v. TONE COMPENSATION: Variable. BASS TONE CONTROL: 0 to +16 db. TREBLE TONE CONTROL: —29 db. to +12.5 db. RECORD CONDITION COMPENSATOR: (Same as KXLP-30). OUTPUT IMPEDANCES: 3, 4, 6, 8, 16 and 500. POWER CONSUMPTION: 75 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. TUBES (6): 1-6SC7, 1-6SJ7, 1-6J5, 2-6V6GT and 1-5Y3LT. DIMENSIONS: Chassis, 13⅛" x 8⅛" x 3". Height overall: 6¾". WEIGHT: 13 lbs. LIST (with tubes) $162.50. Plug Kit: $.83.



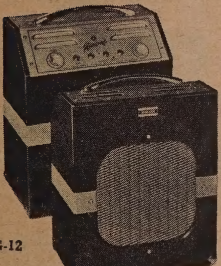
P-10A

P-10A This remarkable new amplifier has a frequency response with ±1 db. from 30 to 15,000 cycles and delivers a full clean 10 watts. Includes distortion free, individual bass and treble tone controls for bass boost and treble boost or attenuation. Plus three individual inputs to permit connection of Radio, Phono and T.V. without need of switching. Basic amplifier designed for high impedance inputs. Plug-in pre-amp, illustrated, permits use of all magnetic cartridges. Circuit includes multi-stage inverse feedback. The low hum level achieved is of utmost importance when used with modern efficient speakers in bass reflex cabinets operated in quiet rooms. The low price makes it the truly outstanding buy in the field. U/L approved.

SPECIFICATIONS: POWER OUTPUT: 10 watts at less than 5%, 9 watts at less than 2%. INPUTS: (3 ½ meg.; Gain, 75 db. Bass tone control range 0 to +16 db. Treble tone control range: —25 db. to +15 db. Output Impedances: 4, 8 and 16 ohms. Etched metal panel, grey baked enamel hammertone finish. Tubes (5): 1-6SC7, 1-6SQ7, 2-6V6GT and 1-6X5GT. Dimensions: 11⅛" x 6¼" x 5¾" high. Power consumption: 60 watts at 117 volts, 60 cycles A.C. WEIGHT: 7¾ lbs. LIST: (with tubes) no cover, $72.50. Plug Kit: $.91.

MPA Plug-in Pre-Amplifier provides additional gain and equalization needed for magnetic pickups with the P-10A. Includes effective scratch suppressor that can be cut in or out at will by means of a switch. LIST: (with tubes and plug) $15.00.

PROFESSIONAL MUSICAL INSTRUMENT AMPLIFIER



G-12

(All Prices & Specifications subject to change)

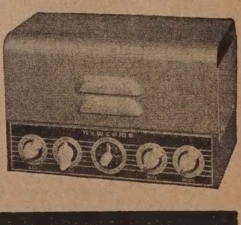
G-12 Gives full, clear true tones at any desired volume. Lightness and beautiful appearance. Plus exceptional ruggedness and dependability characterize the Model G-12. There are three inputs with ample gain for Musical Instruments, plus an additional higher gain input for a microphone. Entire unit weighs only 20½ lbs. for easy carrying. The amplifier frequency response is 30 to 15,000 cycles. Special circuit designed for musical instruments, provides a full 12 watts power at less than 5% distortion (over 90% of full output at less than 2% distortion). Exceptionally efficient big full 12" Alnico V permanent magnet speaker in an acoustically designed enclosure. A kickproof grill gives real protection for speaker. Case construction gives needed rigidity for best tone and freedom from rattles and strength necessary to stand the abuse of constant traveling. Amplifier mounting screws enter into metal inserts. The case is covered in durable, washable, airplane type fabric. Truly a professional instrument. Built for years of trouble free service under the most rugged conditions. U/L Approved.

SPECIFICATIONS: Power Consumption: 65 watts at 117 volts, 60 cycles A.C. Tubes (5): 1-6SC7, 1-6SF5, 2-6V6GT, and 1-5Y3GT. Size: 9¼" deep x 14⅞" x 18⅜" high. WEIGHT: 23 lbs. LIST: (with tubes) $115.00.

RESTAURANT AMPLIFIER

PM-10 PM-10 differs from usual phono or P.A. Amplifiers in that a switch on the panel cuts music and selects area to be paged. When paging, tonal adjustments set for music are automatically cut and flat response is substituted for proper voice quality. Paging Switch returns to music and music response when released. Operator has choice of paging "All" or a selected area. Bass boost tone control and separate high frequency tone control for boost or attenuation give desired response for music. Ideal for use with Long Playing Microgroove Changers for good music at lowest cost with added feature of paging. U/L Approved.

SPECIFICATIONS: POWER OUTPUT: 10 watts at less than 5% distortion. Frequency Response: ±1 db., 40 to 15,000 cycles. Mike Input (2 meg.) gain 105 db. Phono Input (½ meg.) gain 77 db. Bass tone control range: 0 to +14 db. Treble Tone Control Range: +15 db. to —22 db. Output Impedances: .7, 1.4, 4, 8, and 16 ohms. Etched metal illuminated panel. Two-toned, grey, baked enamel hammertone finish. Tubes (5): 1-6SC7, 1-6SN7, 2-6V6GT, 1-6X5GT. Dimensions: 11⅛" x 6¼" x 6⅝" high. WEIGHT: 10¼ lbs. LIST: (with tubes and cover) $95.00. Plug Kit: $1.97.



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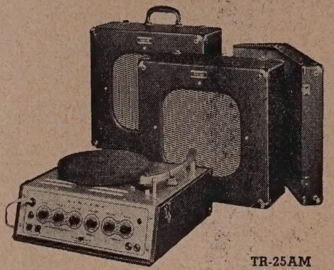
Newcomb COMBINATION TRANSCRIPTION PLAYERS—P. A. SYSTEMS

TR-25AM A 25 watt, 3-speed transcription player and P.A. system that plays all records up to 17¼". Features 2 mike inputs and separate tone controls for phono and mike with second mike unaffected by either set of tone controls. Speed control knob provides variation from any of the three basic speeds, 33⅓, 45 or 78 rpm. Scratch suppressor controls surface noise. Pickup is twist type, dual needle G.E. variable reluctance. "Floating Sound" prevents needle skipping due to jars. Two 12" speakers in split case, protected by kickproof metal grills. Each has 25' cord. Amp-phono case is 16¼" x 16¼" x 7⅞", weighs 36 lbs. Speaker case 16¼" x 16¼" x 12", weighs 19 lbs. Power Output: 25 watts at less than 5% distortion. Frequency response ±2 db 40-15,000 cycles. Inputs for 2 high impedance mikes, gain 120 db. Tubes (10) 2-6SC7, 1-6SJ7, 1-6SN7, 4-6V6GT, 2-5Y3. Output impedances 4 or 8 ohms to two speaker sockets. Power consumption 130 watts 117 volts 60 cycles A.C. including phono motor. LIST: $352.50.


TR-25AM

TR-16AM

TR-16AM Deluxe 10 watt, 3-speed player and P.A. system plays all records up to 17¼". Separate mike and phono volume controls allow mixing. Individual bass and treble tone controls prevent phono bass boost from adding unwanted bass to mike. 3-speed motor is also variable. Has extra speaker socket, an A.C. receptacle, and a radio jack for connecting to phono changer or B-100 radio. Scratch suppressor controls surface noise. Pickup is G.E. dual needle, variable reluctance, magnetic. "Floating Sound" avoids needle skipping. 12" Alnico #5PM dynamic speaker in removable lid with 25' cord and kickproof grill. Size: 14¾" x 15¾" x 11⅞". Weight 33 lbs. Power consumption 70 watts 117 volts 60 cycles A.C. including phono motor. Amp. response ±2 db 50-10,000 cycles. Tubes (6) 2-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. LIST: $235.00.

CR-11

T-112R

TR-16A A 10 watt, 3-speed player and P.A. system with dual needle, crystal pickup. Has all features of TR-16AM except scratch suppressor. Needles are semi-permanent, easily replaceable. Tubes (5) 1-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. Weight 33 lbs. LIST: $212.50.

TR-16M A 10 watt, 2-speed player and P.A. system with G.E. variable reluctance, magnetic pickup and the Newcomb scratch suppressor. Plays 33⅓ and 78 rpm records up to 17¼". Otherwise identical to TR-16AM. LIST: $212.50.

TR-16 A 10 watt, 2-speed player and P.A. system with crystal pickup (no scratch suppressor) otherwise identical to TR-16A. LIST: $189.00.

T-112R EXTRA SPEAKER for TR-16 series. A 12" Alnico #5PM dynamic, with 25' cord, kickproof metal grill. Plywood case covered with fabricoid. Size 16¼" x 16¼" x 7⅞". Weight 12 lbs. LIST: $45.00.

R-12

CR-11 NEWCOMB-SHURE hand or desk mike. For all TR models and R-16. New controlled reluctance principal combines good voice with ruggedness. Has on-off switch. Comes with bracket for mounting in system case, 7' cable and plug. LIST: $23.75.

NEWCOMB PORTABLE PHONOGRAPHS AND RADIOS

R-12 Here is "Console" quality in a portable case only 13¾" x 14⅛" x 7¾" weighing only 20 lbs. Complete A.C. construction. Has a 5 watt amp. with inverse feedback. A 3-speed turntable with crystal pickup and a 6" x 9" Alnico #5 dynamic speaker. Plays 33⅓, 45 or 78 rpm records any size up to 12". Has tone control, volume control and pilot light. "Floating Sound" prevents needle skipping. Case is plywood covered with fabricoid. Speaker grill is kickproof metal. Designed especially for classroom use, it is ideal wherever portable quality is desired. LIST: $79.50.

R-16

R-16 A 3-speed transcription player and P.A. system for schools. Weighs only 22 lbs. in case 14" x 15" x 8½". Has a 5 watt straight A.C. amp. with inverse feedback and a 10" Alnico #5 dynamic speaker. A mike input jack and mixing volume control make it a practical P.A. system. Speaker section has 25' cord. Plays all control, volume control and pilot light. "Floating Sound" prevents needle skipping. Panel includes pilot light, tone control, mike volume control, and phono volume control. Speaker protected by kickproof metal, case is plywood covered with fabricoid. LIST: $115.00.

RC-12

RC-12 Combines a dependable 3-speed record changer with all the quality and performance features of the R-12 model. Plays all records up to 12". Smartly styled case is plywood covered with fabricoid, size 14⅜" x 9⅝" x 18½". Weighs only 31½ lbs. LIST: $115.00.

B-100 A portable AM radio, extremely sensitive, gives exceptional performance in all areas. Has built-in loop. 3-gang design eliminates heterodynes squeals and assures adequate selectivity. Has jack for connection to any TR-16 series system for added volume. May also be used for headphones. All A.C. construction. Speaker is 6" Alnico #5PM dynamic. Amp. design utilizes inverse feedback circuit and beam powered output. Plywood cabinet covered in two-toned fabricoid. Metal grill protects speaker. Size 7⅝" x 14¼" x 8". Weighs 13¼ lbs. Tubes (6) 2-6SK7, 1-6SA7, 1-6SQ7, 1-6V6GT, 1-6X5GT. LIST: $69.50.

B-100

(All Models Subject to Excise Tax) **ALL MODELS U/L APPROVED**

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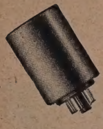
Newcomb

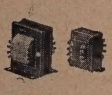
TRANSFORMERS



TR-91: A distinct contribution to high quality P.A. systems. Features sextuple alloy and copper shielding for quiet operation right in amp. proper; alloy core and specially designed windings for extended frequency response from 20 to 20,000 cycles; plug base for easy installation without tools in any H or K series Newcomb amp. For use between 30-50 or 200-250 ohm mikes and grid. Shipping weight, 1¼ lbs. LIST: $27.50.

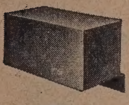
TR-92: Input impedance 5,000 ohms to grid for bridging a 500-600 ohm line. Alloy shielded for minimum hum. When plugged into the socket provided on K50B, H50B, H25B, it converts these amps for use as bridging amps. Shipping weight, 1¼ lbs. LIST: $25.00.

TR-100: Identical to TR-91 but designed for use between 125-150 or 500-600 ohm microphone and grid. LIST: $27.50.



LS-2: (not shown) High Power Impedance matching auto-transformer having 28 impedance from 580 ohms to 1.21 ohms. Capacity 100 watts. Shipping weight, 5¼ lbs. LIST: $22.50.

LS-4: Multi-winding general purpose transformer. Range of impedance from 3,000 to 18,000 ohms in steps of 1,500 ohms. Capacity 8 watts. LIST: $10.00.



LS-5: Transformer: Similar to LS-4 with range of impedances from 500 to 3,000 ohms in steps of 250 ohms. Capacity 20 watts. LIST: $12.50.

TC-: Weatherproof housing for use with all three transformers. Box size: 3¼" x 4" x 5¾". LIST: $7.50.

REMOTE CONTROL UNITS

RC-2

RC-3

RC-4

RC-6

Permit mixing and fading from a remote point all "H" Series microphone inputs. On "K" Series, all microphone inputs PLUS phonograph may be controlled. Up to 2000 ft. cable may be used. No inductive pickup.

RC-2 for H-15 amp. Requires ordinary 3 wire cable. Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $10.50.

RC-3 for H-25 or H-4 amplifiers. Requires ordinary 4 wire cable Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $15.50.

RC-4 for H-50 amp. Requires ordinary 5 wire cable. Dimensions: 2¾" x 7⅝" x 2⅛". Shipping weight: 1¼ lbs. LIST: $19.50.

RC-6 for KX-25, KX-50, KX-6A amplifiers. Requires ordinary 7 wire cable. Dimensions: 2¾" x 11¼" x 2⅛". Shipping weight: 2 lbs. LIST: $27.50.

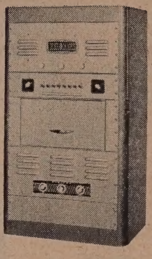
LP-1 SCRATCH FILTER

For improved record response. Simple to install in commercial or professional systems or home phonographs. Wired between a crystal pickup and an amplifier, it greatly improves the response of the pickup and provides a remarkably effective control of needle scratch. Unlike other methods the LP-1 retains excellent brilliance of response. Four steps of adjustment provide adequate control for all records, regardless of quality. LIST: $30.00.

MA-1 MAGNETIC PICKUP ADAPTER

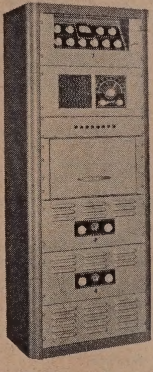
MA-1 provides an inexpensive means of connecting variable reluctance pickups such as the new G.E., to any mike input. Added feature is an effective scratch filter which cuts in or out with switch. Initial wiring is for G.E. Pickup. Simple jumper charge quickly adapts the MA-1 for others such as Pickering, Lear, Astatic, etc. Size: 3" x 3¼" x 1¼". Shipping weight: 1 lb. LIST: $6.50.

INDUSTRIAL SOUND SYSTEM



MODEL 4151C: Designed to furnish phonograph, A.M. Radio, or Wired Music, plus paging facilities to 6 selected areas. A 50 watt amplifier supplies ample power for the majority of applications. Operating controls include a monitor key, monitor volume control, an "all" key, and a program selector. Provides inputs for two microphones. Construction is by individual panels permitting future modifications to fit changing needs. Phono is enclosed in a ball bearing slide drawer. Radio is a dependable, full A.C., A.M. Radio. For detailed amplifier specifications refer to Model E-50. Special sockets permit use of plug-in type input transformers for low impedance mike input and balanced line wired music input when desired. Includes a monitor speaker wired to permit checking of program before connecting to various areas. Amplifier plate supply is relay operated. LIST: (with tubes and plugs) $950.00. (Subject to Excise Tax.)

RACK AND PANEL ASSEMBLIES



To assist engineers in assembling sound units, for the varied applications of industry, schools, churches, fairs, stadiums, etc., Newcomb offers the basic elements for custom cabinet rack systems. Designed for flexibility, the rack assemblies enable the engineer to install public address equipment of the highest quality, tailored to each customer's exact needs. Any standard Newcomb amplifier may be obtained panel mounted on special order in 19" x 8¾" panels, thus giving the custom designer a wide choice of equipment to meet any need.

MODEL 595-19 CABINET: (Illustrated) Supplies a demand for a beautifully finished housing that is fully in keeping with the Newcomb tradition and reputation for quality. Panel space is 56". Design accepts standard 19" wide panels. Mounting holes are RMA standard 1¼" and ½" spacings. Panel mounting holes are tapped in ⅛" stock. Fully ventilated rear door provides easy accessibility. Entire cabinet is a complete welded assembly ready for use as you receive it. Finish is dark grey hammertone. Provision is made in the rear for nine ½" conduits. Included is a removable terminal strip mounting plate located near conduit inlets. Overall dimensions: 59½" x 23" wide x 16" deep. Shipping weight: 92 lbs. LIST: $189.50.

MODEL 385-19 CABINET: Identical to model illustrated except that it provides 35" of panel space for standard 19" panels. Mounting holes are standard RMA, 1¼" and ½" spacings. Overall dimensions: 38½" x 23" wide x 16" deep. Shipping weight: 72 lbs. LIST: $149.50.
In addition to the panel mounted amplifiers Newcomb also provides a wide selection of other equipment designed for custom rack installations.

MODEL 1050-C PHONOGRAPH CHANGER PANEL is a practical solution to mounting a phono changer in cabinet 595-19. Ball bearing drawer with wood motor board is adaptable for mounting most popular changers. Panel size 19" x 10½". All panels are finished in silver-grey hammertone baked enamel. **MODEL E2-525 PRE-AMPLIFIER** answers the need for a simple, dependable but economical pre-amp for rack use. **MODEL TB2-525 INTERCOM AMPLIFIER** has built-in power supply, speaker, talk-listen switch and separate talk and listen volume controls. **MODEL B-100-875 AM RADIO** is the Newcomb B-100 radio mounted on an 8¾" panel. (See listing page B-35.) **MODEL 700-MP MONITOR** is available for installation of any 6" speaker. **LEVER KEY PANELS** are provided for use with CRL keys, 3½" deep with slots for 6, 8, 10 or 12 keys. **LOUVERED PANELS** for additional ventilation and **BLANK PANELS** are made in assorted sizes. A self-powered **TONE GENERATOR** can be furnished on special order on panel 3½" deep. **SPECIAL PANELS** are made to order to fit special equipment. Templates or suitable drawings must accompany order for any special sheet metal work. Full details of Newcomb rack and panel equipment available on request.

(All Newcomb specifications and prices subject to change without notice)

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6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA

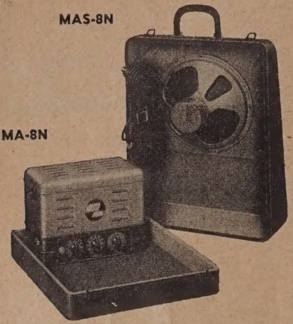
SOUND MASCO EQUIPMENT

MASCO manufactures complete deluxe and economy lines of amplifiers and sound systems ranging in power output from 8 to 60 watts, including phono-top, mobile and high fidelity amplifiers and magnetic tape recorders, transcription players, school systems, plant broadcasting and intercommunication systems. All *MASCO* amplifiers, many of which are shown as portable systems, are also recommended for use in FIXED SYSTEMS.

MA-8N 8-WATT AMPLIFIER *and* MAS-8N 8-WATT PORTABLE SYSTEM

AMPLIFIER FEATURES: Microphone and phono input separately controlled • Bass-treble tone control • Hammertone-finish chassis • Light, compact and sturdy • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM: Both units are ideal for paging systems for bus and railroad stations and they are recommended for side shows, auction rooms, sales meetings, small taverns and clubs.



AMPLIFIER SPECIFICATIONS MODEL MA-8N

POWER OUTPUT	8 Watts, Class A, at less than 5% distortion
PEAK POWER	13 Watts
INPUTS	Two: 1-microphone, and 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 10,000 CPS
POWER GAIN	Microphone, 128.5 DB; Phono, 75 DB
CONTROLS	Three: Microphone, Phono, Tone (On-Off Switch)
TUBES	1-6SF5, 1-6SJ7, 1-6L6G. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	3.2, 8 and 500 Ohms
HUM LEVEL	60 DB below output level of 8 Watts
POWER CONSUMPTION	75 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS
DIMENSIONS	10″ x 6″ x 7½″ high

MA-8N Amplifier (less cover, with Tubes) Shipping Weight: 14 lbs.	$85.32
Cover for MA-8N	12.96
Kit of Matched Plugs and Connectors	1.73
MAS-8N Portable System Shipping Weight: 30 lbs.	152.82

Consists of: 1—MA-8N Amplifier with Cover with tubes
1—10″ PM Speaker
1—25-ft. Speaker Cable and Plug
1—Model 303 Portable Carrying Case (Attractive Luggage Style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-17N 17-WATT AMPLIFIER *and* MAS-17N 17-WATT PORTABLE SYSTEM

AMPLIFIER FEATURES: Two microphone inputs • One phono input • Individual volume controls • Separate bass and treble controls • Tapped line and voice-coil impedances • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM: They are suitable for small orchestras, lecturers, ballyhoo, store demonstrations, night clubs and ballrooms.

AMPLIFIER SPECIFICATIONS • MODEL MA-17N

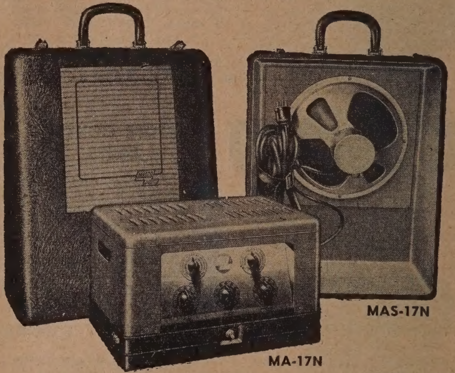
POWER OUTPUT	17 Watts, Class A, at less than 5% distortion
PEAK OUTPUT	26 Watts
INPUTS	Three: 2-microphone, 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 12,000 CPS
POWER GAIN	Microphone, 132 DB; Phono, 78 DB
CONTROLS	Five: 2-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES	1-6SC7, 1-6SJ7, 1-6SL7GT, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT IMPEDANCES	4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL	62 DB below output level of 17 Watts
POWER CONSUMPTION	125 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS

Has tapped primary to compensate for line voltage fluctuations.

DIMENSIONS	13″ x 8″ x 8⅜″ high

PRICES	**List Price**
MA-17N Amplifier with Tubes Shipping Weight: 20 lbs.	$126.90
Kit of Matched Plugs and Connectors	2.65
MAS-17N Portable Systems Shipping Weight: 45 lbs.	218.70

Consists of: 1—MA-17N Amplifier with Tubes
2—12″ PM Speakers
2—25-ft. Speaker Cables and Plugs
1—Model 304 Portable Carrying Case (attractive luggage style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors



MA-17PN 17-WATT PHONO TOP AMPLIFIER *and* MAS-17PN 17-WATT PHONO TOP PORTABLE SYSTEM

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

For recorded music, alone or combined with voice • Plays 12″ and smaller records • Widely preferred as record demonstrators.

AMPLIFIER SPECIFICATIONS MODEL MA-17PN

Same as MA-17N (Described on this page) but includes phono-top.
Chassis size: 14″ x 11″ x 8⅜″.

PRICES	**List Price**
***MA-17PN** Amplifier with tubes, with single-speed motor	$172.80
Kit of Plugs and Connectors	1.73

PRICE	**List Price**
***MAS-17PN** Portable System Shipping Weight: 56 lbs.	$280.80

Consists of:
1—MA-17PN Amplifier with tubes
2—12″ PM Speakers
2—25-ft. Speaker Cables and Plugs.
1—Model 305 Portable Carrying Case (attractive luggage style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

*MA-17PN with three-speed motor and all purpose pickup with "Turn-Over" cartridge, add to List Price $10.80.

To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-18

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.

WRITE TO FACTORY FOR COMPLETE CATALOG

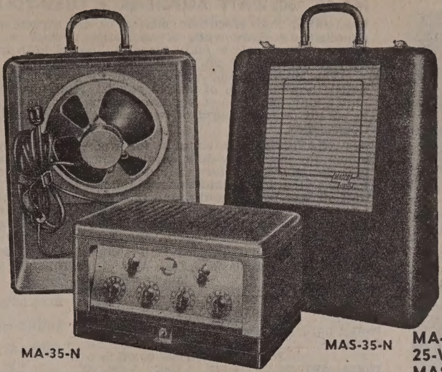
MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

SOUND MASCO EQUIPMENT

TYPICAL PORTABLE SYSTEM ILLUSTRATED

MAS-25N and MAS-25PN Systems incorporate carrying case as illustrated.

MA-25N MA-25NR



MA-35-N

MAS-35-N

MA-25PN

MA-25N 25-Watt Amplifier *and* MAS-25N 25-Watt Portable System

AMPLIFIER FEATURES: Four inputs • Four-channel electronic mixing • Separate bass and treble controls • Tapped line and voice-coil impedances • Full 25 watts of undistorted output • Over-all negative feedback • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

They are ideal for the larger auditoriums, churches, night clubs, orchestras, indoor sports arenas, and also for outdoor use at fairs, bazaars, children's camps, and similar locations.

AMPLIFIER SPECIFICATIONS MODEL MA-25N

POWER OUTPUT	25 Watts, Class AB-1, at less than 5% distortion
PEAK POWER	40 Watts
INPUTS	Four: 3-microphone, 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 15,000 CPS
POWER GAIN	Microphone, 133.5 DB; Phono, 79 DB
CONTROLS	Six: 3-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES	4-6J7, 2-6SC7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT IMPEDANCES	4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL	64 DB below output level of 25 Watts
POWER CONSUMPTION	145 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS Has tapped primary to compensate for line voltage fluctuations.
DIMENSIONS	15″ x 8½″ x 8⅜″ high

PRICES **List Price**

MA-25N Amplifier with tubes....................$159.30
Shipping Weight: 30 lbs.
Kit of Matched Plugs and Connectors............ 3.24

MAS-25N Portable System.......................... 268.38
Shipping Weight: 60 lbs.
Consists of:
- 1—MA-25N Amplifier with tubes
- 2—12″ PM Speakers
- 2—25-ft. Speaker Cables and Plugs
- 1—Model 305 Portable Carrying Case (Attractive Luggage Style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-25NR 25-Watt Remote-Control Amplifier

The Model MA-25NR Remote-Control Amplifier follows closely all specifications for the Model MA-25N, but has, in addition, a built-in circuit for remote control of two of the microphone channels when used with the Model RCB Remote-Control Box.

PRICES **List Price**

MA-25NR Remote-Control Amplifier with tubes $189.00
Kit of Matched Plugs and Connectors for MA-25NR 3.24

MA-35N 35-Watt Amplifier *and* MAS-35N 35-Watt Portable System

AMPLIFIER FEATURES: Four inputs • Three microphone and one phono input, each separately controlled • Electronic mixing over-all • Individual bass and treble equalizers • Tapped output impedances of 4, 8, 15, 125, 250, and 500 ohms • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

They are suitable for use at beaches and fairs, for paging and announcing at airports and terminals and the like, and equally ideal for orchestras, theatres and carnivals.

AMPLIFIER SPECIFICATIONS MODEL MA-35N

POWER OUTPUT	35 Watts, Class AB-2, at less than 5% distortion
PEAK POWER	50 Watts
INPUTS	Four: 3-microphone, 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 15,000 CPS
POWER GAIN	Microphone, 135 DB; Phono, 80.5 DB
CONTROLS	Six: 3-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES	1-6SC7, 3-6J7, 3-6SN7GT, 2-6L6G. 1-5U4G, 1-6X5GT (Rectifiers)
OUTPUT IMPEDANCES	4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL	65 DB below output level of 35 Watts
POWER CONSUMPTION	190 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS Has tapped primary to compensate for line voltage fluctuations.
DIMENSIONS	15″ x 9½″ x 8⅜″ high

PRICES **List Price**

MA-35N Amplifier with tubes......................$205.20
Shipping Weight: 32 lbs.
Kit of Matched Plugs and Connectors........... 3.24

MAS-35N Portable System.......................... 335.88
Shipping Weight: 63 lbs.
Consists of:
- 1—MA-35N Amplifier with tubes
- 2—EXTRA-HEAVY-DUTY 12″ PM Speakers
- 2—25-ft. Speaker Cables and Plugs
- 1—Model 305 Portable Carrying Case (Attractive Luggage Style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-25PN 25-Watt Phono Top Amplifier *and* MAS-25PN 25-Watt Phono Top Portable System

Application for Amplifier and System for recorded music alone, or combined with voice. Plays 12″ and smaller records. Widely preferred as record demonstrators.

AMPLIFIER SPECIFICATIONS MODEL MA-25PN

Same as MA-25N Amplifier (described on this page) but includes phono top. Chassis size for MA-25PN: 14″ x 11″ x 8⅜″ high.

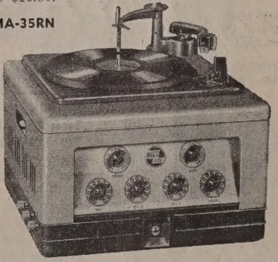
PRICES **List Price**

***MA-25PN** Amplifier with tubes, with single speed motor $204.12
Shipping Weight: 32 lbs.
Kit of Matched Plugs and Connectors............ 2.27

***MAS-25PN** Portable System.................... 312.12
Shipping Weight: 61 lbs.
Consists of:
- 1—MA-25PN Amplifier with tubes
- 2—12″ PM Speakers
- 2—25-ft. Speaker Cables and Plugs
- 1—Model 305 Portable Carrying Case (Attractive Luggage Style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

*MA-25PN with three-speed motor and all-purpose pickup with "Turn-Over" cartridge, add to List Price $10.80.

MA-35RN



MA-35RN 35 Watt Amplifier featuring the Webster Model 100, Three-speed Record Changer Top

Amplifier specifications same as MA-35N (except for record changer mechanism). Chassis size: 15″ x 15″ x 10½″ high.

PRICES **List Price**

MA-35RN Amplifier with tubes, with Webster Model 100, 3 speed record changer top $309.42
Shipping Weight: 52 lbs.
Kit of Matched Plugs and Connectors........... 2.27

To secure a **LOW-IMPEDANCE INPUT** for amplifiers, see **PAGE B-18**

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

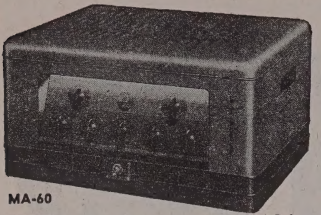
Specifications and prices subject to change without notice.

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

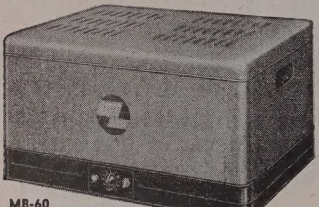
SOUND MASCO EQUIPMENT

HIGH-POWERED AMPLIFIERS FOR CIVIL DEFENSE, MILITARY, INDUSTRIAL AND INSTITUTIONAL USE



MA-60

PRICES	**List Price**
MA-60 Amplifier with tubes Shipping Weight: 41 lbs.	$280.80
Kit of Matched Plugs and Connectors	3.67



MB-60

PRICES	**List Price**
MB-60 Booster Amplifier with tubes, with Cover	$221.40
If cover is not desired for MB-60 deduct from list	12.42
MB-60P Booster Amplifier with tubes, with 10½" x 19" panel, less cover Shipping Weight: Either model—41 lbs.	232.20
Kit of Output Plugs for either model	1.19

MA-60 60 WATT AMPLIFIER • PUSH-PULL 807 TUBES

FEATURES: Full electronic mixing of all channels • Individual bass and treble equalizers • Sixty watts of undistorted power • Peak Power output 80 watts • Negative feedback • Fully fused • Special high impedance jack for driving MB-60 booster amplifier (0 db. level) • U/L Approved.

The Models MA-60 and MA-60R are powerful wide-range amplifiers that deliver better than 60 watts of usable power. Multi-tapped line and voice coil impedances match any speaker, or speaker groups and lines . The model MA-60R is designed to permit remote control of two microphone channels by means of the RCB Remote Control Box.

APPLICATION: It is suitable for rack mounting and heavy-duty service, and is successfully used for the larger auditoriums, theatre re-inforcement, indoor and outdoor rinks, stadia, and the like, wherever numerous speakers are required. It is excellent for church chime applications. With suitable speakers and horns, the power can be concentrated where needed at points of high noise level, as at the starting line of an auto race, or in steel mills. Other speaker arrangements permit uniform coverage of large areas, such as football fields or circuses. Ideal as the basic unit for paging and fire-alarm systems in hotels.

AMPLIFIER SPECIFICATIONS FOR MODELS MA-60 AND MA-60R

POWER OUTPUT	60 Watts, Class AB-1 at less than 5% distortion
PEAK POWER	80 Watts
INPUTS	Five: 4-microphone, 1 phono
FREQUENCY RESPONSE	2 DB 50 to 15,000 CPS
POWER GAIN	Microphone, 136.5 DB; Phono, 82 DB
CONTROLS	Seven: 4-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES—TWELVE	4-6J7, 1-6SJ7, 1-6SL7GT, 1-6SC7, 1-6SN7GT, 2-807, 3-5Y3GT (Rectifiers)
OUTPUT IMPEDANCES	4, 8, 16, 250 Ohms 70 Volt, 140 Volt (constant voltage)
HUM LEVEL	67 DB below 60 Watts
POWER CONSUMPTION	190 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS Has tapped primary to compensate for Line Voltage fluctuations
DIMENSIONS	16" x 11" x 8⅜" high

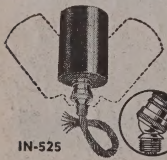
MB-60 60-WATT BOOSTER AMPLIFIER • PUSH-PULL 807 TUBES

FEATURES: Zero-level input • May be parallelled for any audio power requirements • Tapped line and voice-coil impedances • Constant voltage outputs • Master gain control • 60 watts of undistorted power • U/L Approved.

DESIGN AND CONSTRUCTION: A new circuit in booster amplifiers. The driving power needed is only 1.45 volts RMS with a balanced line (0.8 volts with unbalanced line). The input impedance is 500 ohms. Adaptable for either line or bridging. These boosters are designed to operate with the Models MA-60 and MA-60R described above when additional power is required or may be driven by the MA-8N amplifier shown on page B-16. Chassis finished in blue and gray Hammertone. The booster may be used either in or out of a rack. The master gain control is especially desirable when more than one booster is in the circuit. On-Off switch and indicating light. The circuit is fused, and the components built to withstand long-hour usage. The MB-60P is supplied with mounted panel and supporting side brackets for standard 19" rack installation. Panel finished in baked gray wrinkle.

AMPLIFIER SPECIFICATIONS FOR MB-60 AND MB-60P

POWER OUTPUT	60 Watts, Class AB-1 at less than 5% distortion
PEAK POWER	80 Watts
INPUTS	500 Ohms balanced or unbalanced line
FREQUENCY RESPONSE	2 DB 50 to 15,000 CPS
POWER GAIN	46 DB
CONTROLS	One: Master Gain, Separate On-Off Switch
TUBES	1-6SL7GT, 1-6SN7GT, 2-807, 3-5Y3GT (Rectifiers)
OUTPUT IMPEDANCES	4, 8, 16, 250 Ohms, 70 Volts, 140 Volts (Constant Voltage)
HUM LEVEL	60 DB below output level of 60 Watts
POWER CONSUMPTION	185 Watts at 117 Volts
VOLTAGE	105-125 Volts 60 CPS Has tapped primary to compensate for line voltage fluctuations.
DIMENSIONS (MB-60)	17" x 12" x 8½" high
DIMENSIONS (MB-60P)	Chassis: 17" x 12", Panel: 10½" x 19"

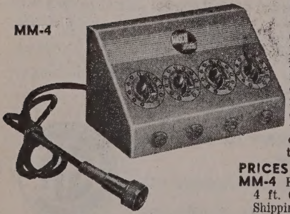


IN-525

IN-525 • LOW-IMPEDANCE TRANSFORMER CONVERSION TO LOW-IMPEDANCE INPUT

MASCO Amplifiers may be readily converted to a low impedance by the installation of *MASCO* Transformer No. IN-525. Available are: 50 ohms unbalanced line; 200 ohms or 500 ohms balanced or unbalanced line. Specify tap-setting when ordering.

Prices	**List Price**
IN-525 Low Impedance Transformer	$32.40
Factory-installed (per input) Shipping Weight: 2 lbs.	39.96



MM-4

MM-4 FOUR CHANNEL MICROPHONE MIXER

Can be connected to the high-impedance microphone input of any amplifier. Four independent gain controls and four microphone connectors allow for mixing and fading over-all. Converts an amplifier having only one microphone input to four-channel operation.

PRICES	**List Price**
MM-4 Four Channel Mixer, with 4 ft. Cable and Connector Shipping Weight: 4 lbs.	$29.16

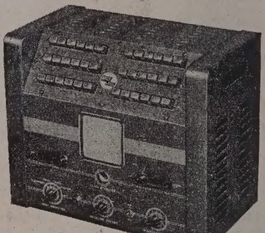
Specifications and prices subject to change without notice.

School and Institutional Control Amplifier with Complete Program Facilities

MICROPHONE · RADIO · PHONOGRAPH

MS SERIES FOR 6 TO 36 STATIONS

28 Watts of Audio Power, 40 Watts Peak Power for 6, 12, 18, 24, 30 and 36 Stations with Built-in Intercommunication Channel.



MS-36

FEATURES: 28 Watt Amplifier • Built-in Intercommunication Channel • Two-way conversation • Simultaneous or selective paging • External phono provision • Volume-level indicator • Input selector switch • External microphone provision • Provision for external radio • U/L approved.

DESIGN AND CONSTRUCTION: Ample power for each speaker. Ample gain for external microphone and phonograph pickup. Speaker switches connected for group or selective paging. Master switch permits simultaneous paging. Calls may originate from any room to master when proper interconnecting cable is used. Separate volume controls for level adjustment of all calls. Volume-level indicator for correct level setting. Provision for connecting an external phonograph. Any standard radio may be adjusted for use with this system. Two-way conversation feature permits easy communication. Balanced line for simplicity of installations. Use of more than 15 db of inverse feed back assures negligible change of volume level regardless of varying speaker loads.

PRICES	**List Price**
MODEL MS-6 —Control Amplifier with tubes for 6 stations	$302.40
MODEL MS-12—Control Amplifier with tubes for 12 stations	307.80
MODEL MS-18—Control Amplifier with tubes for 18 stations	313.20
MODEL MS-24—Control Amplifier with tubes for 24 stations	318.60
MODEL MS-30—Control Amplifier with tubes for 30 stations	330.48
MODEL MS-36—Control Amplifier with tubes for 36 stations	345.60

WEST OF THE ROCKIES, ADD 5% TO ABOVE LIST PRICES

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

MASCO'S OUTSTANDING MOBILE SOUND EQUIPMENT

6-VOLT DC AND 117-VOLT AC MOBILE AMPLIFIERS

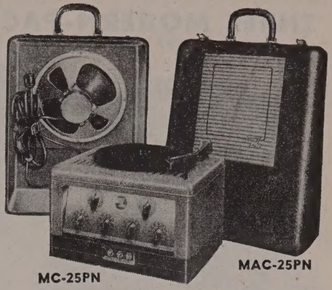
THE ONLY COMPLETE LINE OF U/L APPROVED MOBILE EQUIPMENT

25 Watts, Class AB-1, at less than 5% distortion — 40 Watts Peak Power

FEATURES contained in these six models are: Four input channels • Standby switch • Heavy-duty switches • Low battery drain • Fused circuit • Hum- and ripple-free operation • Heavy-duty dual vibrator • Crystal pick-up input • Lock-in arm rest • Underwriters' Laboratories approved.

Operate as efficiently from 6-volt batteries as from 117-volt AC source. Rugged and powerful, expressly designed for sound truck and other outdoor applications. The battery-saver switch, which shuts off the vibrator during intermissions, reduces battery drain to a minimum. The extra-heavy-duty dual vibrator maintains steady voltage and frequency. These amplifiers are provided with separate cables, fitted with rugged heavy-duty plugs and receptacles for each voltage supply.

APPLICATION: The widely varied types of these amplifiers adequately meet all possible needs for applications such as outdoor gatherings, bathing beaches, traveling road shows, open-air theatres, election campaigns and charity drives, traveling evangelists, police and fire department rescue work, and other locations where AC power is unavailable.


MC-25PN
MAC-25PN

GENERAL AMPLIFIER SPECIFICATIONS:

POWER OUTPUT...25 Watts, Class AB-1, at less than 5% distortion
PEAK POWER........40 Watts
INPUTS........Four: 3-microphone, 1-phono
FREQUENCY RESPONSE........± 2 DB 50 to 15,000 CPS
POWER GAIN........Microphone, 133.5 DB; Phono, 79 DB
CONTROLS........Six: 3-microphone, Phono, Bass, Treble, Separate Motor Switch and Battery-Saver Switch
TUBES......4-6J7, 1-6SC7, 2-6L6G, 1-6SL7GT. 2-7Z4 (Rectifiers)
OUTPUT IMPEDANCES......4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL..........AC: 64 DB below 25 Watts DC: Ripple-free
POWER CONSUMPTION......AC: 145 Watts at 117 Volts (including phono motor);
DC: 23 Amps. at 6 Volts (battery) (includes phono motor)
VOLTAGE........105-125 Volts, 60 CPS AC or 6 Volts DC (Storage Battery)

Power Cables included with all Mobile Amplifiers.

***MC-25PN** **List Price**
Phono-top Mobile Amplifier with tubes....$270.00
Shipping Weight: 44 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 14″ x 11″ x 8⅜″ high

***MAC-25PN** **List Price**
Portable Mobile System........................$385.56
Shipping Weight: 72 lbs.
Consists of:
1—MC-25PN Phono-top Amplifier with tubes
2—12″ PM Speakers
2—25-ft. Speaker Cables and Plugs
1—Model 305 Portable Carrying Case (Attractive Luggage Style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors
(If amplifier is desired with plain cover less phono-top mechanism, deduct from above list price $10.80)

***MC-25PC** **List Price**
Phono-top Mobile Amplifier with Hinged Cover with tubes..............................$302.40
Shipping Weight: 46 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 14″ x 11″ x 10⅞″ high

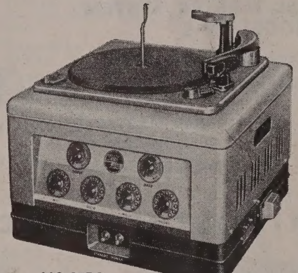
***MCO25PN** **List Price**
Outdoor Mobile System..........................$415.80
Shipping Weight: 86 lbs.
Consists of:
1—MC-25PN Phono-top Amplifier with tubes
2—Masco-University PH Trumpets
2—Masco-University MA-25 Driver Units
2—25-ft. Cables and Connectors
1—Astatic JT-30 microphone with 15-ft. Cable and Connectors
(If amplifier is desired with plain cover less phono-top mechanism, deduct from above list price $10.80)

MC-25N **List Price**
Mobile Amplifier, Plain Cover without Phono-top with tubes..........................$259.20
Shipping Weight: 39 lbs.
Kit of Matched Plugs and Connectors...... 2.27
Dimensions: 14″ x 11″ x 8⅜″ high

MC-25RC **List Price**
Mobile Amplifier with Webster Model 100 3-speed record changer top with tubes $372.60
Shipping Weight: 52 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 15″ x 15″ x 10½″ high

*If desired with 3-speed motor and all-purpose pickup with "Turnover" Cartridge, add to list price $10.80. If Astatic MODEL AB8-M Pickup is desired, add to list price $11.88.

MC-25PC


MC-25RC

MASCO 12 WATT MOBILE AMPLIFIERS

FOR 6-VOLT DC AND 117-VOLT AC OPERATION

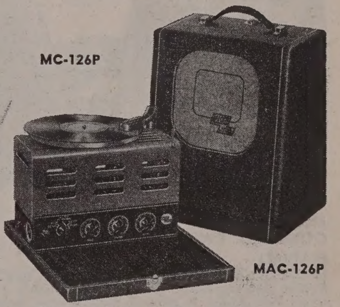
12 WATTS POWER OUTPUT • 18 WATTS PEAK POWER

FEATURES: Two inputs, microphone and phono • Push-pull output • Separate microphone and phono control • Low battery drain • Ripple-free operation • Light-weight, rugged • Remote control permits within-reach adjustment of amplifier controls • U/L approved.

APPLICATION: 12-watt mobile amplifier built expressly for operation in a moving vehicle. Easily mounted, it fits under the dashboard. Separate volume controls provide independent or simultaneous use of both inputs. For application in police safety and traffic work, fire department, transportation systems, hearses and ambulance service. Any standard speaker may be used.

AMPLIFIER SPECIFICATIONS:

POWER OUTPUT......12 Watts, Class AB-1 at less than 5% distortion
PEAK POWER..................................18 Watts
INPUTS..................Two: 1-microphone, 1-phono
FREQUENCY RESPONSE..........±3 DB 100 to 8,000 CPS
POWER GAIN..................Microphone, 110 DB; Phono 75 DB
CONTROLS..........Microphone, Phonograph, On-Off Standby-Operate (Battery-Saver) Switch
TUBES...............1-6SF5, 1-6SL7GT, 2-6V6GT, 1-7Z4 (Rectifier)
OUTPUT IMPEDANCES......3.2, 8 and 15 Ohms
HUM LEVEL......................60 DB below output level of 12 Watts
POWER CONSUMPTION...........AC: 60 Watts at 117 Volts; DC: 8 Amps at 6 Volts (Battery)
DIMENSIONS.....................12″ x 6″ x 8″ high


MC-126P
MAC-126P

PRICES: Amplifiers

List Price

MC-126P Phono-top Mobile Amplifier, 12 Watts (6 Volt DC and 117 Volt AC), with tubes, with cables..........................$156.60

MC-126 Same as above with plain cover less phono-top mechanism........................$113.40

Shipping Weight: 15 lbs.

PRICES: Mobile Portable Systems

List Price

MAC-126P Phono-top Portable Mobile System $224.10
Shipping Weight: 36 lbs.
Consists of:
1—12 Watt Mobile Amplifier with Tubes
1—10″ PM Speaker
1—25-ft. Speaker Cable and Plug
1—Model 303 Portable Case
1—Astatic JT-30 microphone with 15-ft. Cable and Connectors

PRICES: Mobile Outdoor Systems

MCO-126P **List Price**
Mobile Outdoor System..............................$214.92
Consists of:
1—12 Watt Mobile Amplifier with Tubes
1—Masco University Model 1B8 Loudspeaker
1—25-ft. Cable and Plug
1—Astatic JT-30 microphone with 15-ft. Cable and Connectors

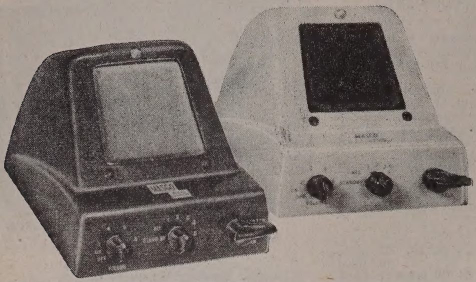
RCM Remote Control and Clamp attachment to steering post ....$ 15.66

WRITE TO FACTORY FOR COMPLETE CATALOG

WEST OF THE ROCKIES ADD 5% TO ABOVE LIST PRICES • **Specifications and prices subject to change without notice**

SOUND MASCO EQUIPMENT

THREE MODERN-PACKAGED INTER-COMMUNICATION SYSTEMS



FOR HOME, PROFESSIONAL AND COMMERCIAL USE

AVAILABLE IN WHITE BAKED ENAMEL OR BROWN HAMMERTONE FINISH UNBREAKABLE CAST ALUMINUM HOUSINGS

FEATURES:

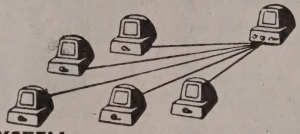
- Master Station equipped with Volume Control with on-off switch
- Master Station has On-Off Pilot Light
- Separate "press to talk" switch
- Remote Station has "press to talk" switch to originate call to Master Station if desired and allow for privacy
- Remote Station can be used for two way conversation without manual operation
- Natural voice reproduction
- Ample Sensitivity
- Matching Master and Remote Stations
- Unbreakable Cast-Aluminum housings
- Finished in attractive Walnut Hammertone or white Baked Enamel
- U/L Approved

PACKAGED TWO STATION SYSTEM MODEL JMR

One Master with On-Off Pilot Light and One Remote Station Complete with 50 Feet of Cable.

MASTER TO REMOTE SYSTEM MODEL JM-5

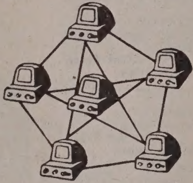
Takes up to five remote stations



ALL MASTER SYSTEM MODEL IM-5

Accommodates up to Six Master Stations

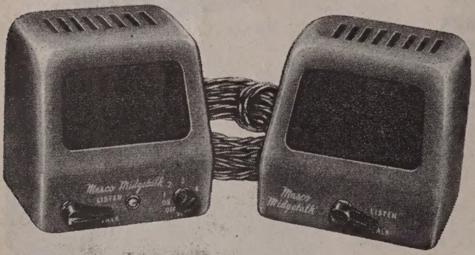
ALL MASTER HOOK-UP NO CROSS-TALK



PRICES:	**List Price**
MODEL JMR—Two-Station System complete. One master with tubes, one remote, and 50 ft. of cable	$56.70
***MODEL JMRW**—Master and Remote with 50 ft. of cable	60.97
MODEL JM-5—Master, with tubes. For communication between it and five remote stations; can converse with all 5 stations or can select any one remote station. Master has press-to-talk and station selector switch and volume control with on-off switch	45.90
***MODEL JMW-5**—Master Station	48.06
MODEL JR—Remote. "Press-to-talk" switch allows remote to originate call to JM5 Master, permitting privacy; JR can be used as two-way paging system. Use of switch may be omitted. System uses 3-Wire Vinylite Covered Cable	16.20
***MODEL JRW**—Remote Station	18.36
MODEL IM-5—All Master, with tubes. Communication between it and 5 other masters. Each master can converse two-way with any or all masters in system. Has press-to-talk and station selector switches and volume control with on-off switch	45.90
7-Conductor Cable. Must be used with 5 or more master stations.. (per ft.)	.29
5-Conductor Cable for use with up to 4 master stations (per ft.)	.24
***MODEL IMW-5**—All Master	48.06

*In white baked enamel finish.

MIDGETALK — COMPLETE TWO STATION INTERCOM SYSTEM



MIDGETALK COMPLETE TWO STATION SYSTEM

FEATURES:

Master Station has Volume Control with on-off switch • Master Station has separate "press to talk" switch • Master Station has on-off Pilot Light • Remote Station has "press-to-talk" switch to originate call to Master Station if desired and to allow for privacy • Remote Station can be used for two-way conversation without manual operation • Natural voice reproduction • Ample sensitivity • Matching Master and Remote Stations • Unbreakable Cast Zinc Housings • Finished in attractive, beautiful mahogany • U/L Approved.

No other intercom in the field can match the value of the MASCO MIDGETALK

$43.15 list complete.

Nothing more to purchase.

U/L and CSA approved one master with on-off pilot light and one remote with 50 feet of 3-wire cable.

Color styled . . . $43.15 in mahogany. Slightly higher prices for white, blue, pink, green, yellow matched stations.

Remote may be used for private or non-private operation; has press-to-talk switch that allows it to originate call to master.

Natural voice reproduction. Ample sensitivity. Unbreakable cast zinc housings.

SPECIFICATIONS:

VOLTAGE	117 volts AC or DC
POWER OUTPUT	2.5 Watts
POWER CONSUMPTION	30 Watts
TUBES	12SJ7—Voltage Amplifier 50B5—Beam Power Amplifier Selenium Rectifier
SPEAKERS	In Master and Remote are 3" Alnico V Magnet—3.2 ohm voice coil
DIMENSIONS	5" x 4½" x 5⅜" high Shipping Weight: 7½ pounds

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

MASCO CON-FER-PHONE —A Completely Flexible Master for any Combination System.

Build a system around any one Master to meet your requirements. Available in Six and Twelve Station Masters. Remote Available With or Without Call Switch and With 6 Position Master Station Selector.

JMP-12 MASTER STATION

JMP-6 MASTER STATION

JS-6 REMOTE

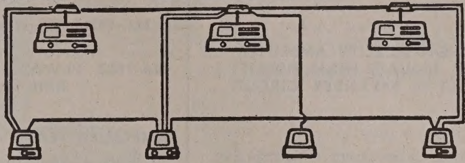


Illustration of a Master-to-Master-to-Remote Inter-Mixed Installation

FEATURES:

- For Master-to-Master-to-Remote Intermixed Installation.
- For Master-to-Master Installation.
- For Master-to-Remote Installation.
- Remote Station for two-way conversation with Masters.
- Remote Station can originate call to Masters.
- Masters may have personal remotes.
- Push-Button station selection.
- Press-to-talk switch with dictate position on Master.
- Individual or group conversation.
- Volume control with on-off switch.
- On-Off indicating light
- AC-DC operation.
- Finished in attractive walnut hammertone.
- Finish available in baked white enamel.
- U/L Approved.

The above is an inter-mixed system using both Masters and Remotes.
Masters may call selectively or to all masters and remotes in the circuit. Master stations can originate calls to any remote at will.
Remotes can answer any master from a distance but cannot originate calls nor talk to other remotes. Remotes can originate calls to any master in the circuit, but cannot talk with other remotes. Model JS Remote may originate a call to only one master. Model JS-6 Remote may originate a call to as many as six masters.
Remotes with switch can be installed for private or non-private use.

Each master can have his own private hook-up of remotes. The remotes may or may not originate calls to the individual master. Masters can call each other regardless of whether master being called has its power on or off.

Illustration shows less than the maximum number of units possible in installation.

A JMP-6 Master may be connected to a total of six other units and a JMP-12 Master to a total of twelve other units. These units may be other masters or the JL, JS, and JS-6 Remotes, or the MB-8N Booster Amplifier. All of these units may be mixed.

SPECIFICATIONS FOR MODELS JMP-6 *and* JMP-12 MASTERS *and* MODELS JL, JS, *and* JS-6 *REMOTES*

MASTER

VOLTAGE	117 Volts AC or DC
POWER OUTPUT	2.5 Watts
POWER CONSUMPTION	30 Watts
CONTROLS	6 and 12 Push-Button station selectors Volume control with on-off switch Talk-Listen—Dictate Switch
TUBES	1-12SJ7 Dual Triode Amplifier 1-50L6 Beam Power Amplifier Selenium Rectifier

MASTER AND REMOTE

SPEAKER	4" Alnico V Magnet 13-Ohm Voice Coil
FINISH	Walnut Hammertone or White Baked Enamel
DIMENSIONS	Master: 12⅝" x 7½" x 5½" high Remote: 6⅝" x 7⅛" x 5¼" high
SHIPPING WEIGHT	Master: 8 lbs. Remote: 3¼ lbs.

PRICES		**List Price**
JMP-6	Six-Station Master with Tubes	$71.28
JMP-12	Twelve-Station Master with Tubes	83.16
JL	Remote Less Call Switch	16.20
JS	Remote With Call Switch	18.09
JS-6	Remote with 6-Position Master Station Selector and Call Switch	32.40
MB-8N	Booster Amplifier, 8 Watts, with Cover, with Matched Tubes	85.32
BJ-6	Junction Box for use with JMP-6 Master and JS-6 Remote. Consists of a terminal strip containing 8 pair of terminal lugs mounted on a metal chassis including dust cover	10.26
	Above Junction Box, factory installed	16.69
BJ-12	Junction Box for use with JMP-12 Master. Consists of a terminal strip containing 14 pair of terminal lugs mounted on a metal chassis and includes a dust cover	14.04
	Above Junction Box, factory installed	18.36

CABLE PRICES		**List Price, per 100 ft.**
SC	One Pair Shielded Twisted No. 20 Solid. No outside covering	$ 7.83
SCB	One Pair Shielded Twisted No. 20 Solid, with over-all Weather-proof Braid Covering. (This is not water-proof)	11.61
TW-4	Four Pair, each pair Twisted No. 20 Solid with over-all outside Braid Covering all four pair	19.76
TW-7	Seven Pair, each pair Twisted No. 20 Solid with over-all outside Braid Covering all seven pair	32.94
TW-13	Thirteen Pair, each pair Twisted No. 20 Solid with over-all outside covering all thirteen pair	55.08
S	One Pair Twisted Unshielded No. 20 Solid. No outside covering	4.32

MB-8N 8-WATT BOOSTER AMPLIFIER

FEATURES: U/L Approved • Tapped Output • Master Gain Control • Input Matched to Master • Designed for Long-Hour Usage.

APPLICATION: Where paging is required in conjunction with intercommunication. It is the answer to high noise level voice penetration or for large area voice coverage. It is used with separate speakers and baffles.

AMPLIFIER SPECIFICATIONS • MODEL MB-8N

POWER OUTPUT	8 Watts, at less than 5% distortion
PEAK OUTPUT	13 Watts
INPUT	One, 13 Ohms
FREQUENCY RESPONSE	±2 DB 50 to 10,000 CPS
CONTROLS	One Master Gain with On-Off Switch
TUBES	1-6SJ7, 1-6L6G. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	3.2, 8, 500 Ohms
HUM LEVEL	60 DB below output of 8 Watts
POWER CONSUMPTION	75 Watts, 117 Volts, 60 Cycles
DIMENSIONS	10" x 6" x 7½" high
SHIPPING WEIGHT	14 lbs.

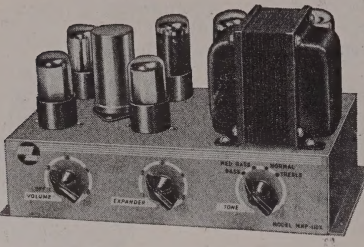
Write to factory for catalog giving complete description of Con-Fer-Phone Intercommunication Equipment.

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

SOUND MASCO EQUIPMENT

THE ULTIMATE IN HIGH FIDELITY AMPLIFIERS . . . UNEXCELLED BY ANY STANDARD



MHP-110
MHP-110X

MHP-110 10-WATT HIGH FIDELITY AMPLIFIER
MHP-110X *(illustrated)* 10-WATT HIGH FIDELITY AMPLIFIER WITH BUILT-IN EXPANDER CIRCUIT

AMPLIFIER FEATURES:

Exclusive *MASCO* 4-Way Tone Compensator • Voltage Supply Socket for Attachment of External Pre-amplifier • Power Supply Socket • Crystal Pickup input provision • Radio Tuner input provision • Pre-amplifier input provision • Safety fused • Over-all negative feedback • U/L Approved • Expander circuit available • 10-Watt power output

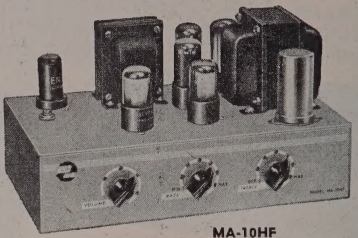
AMPLIFIER SPECIFICATIONS:
MODEL MHP-110 *and* MODEL MHP-110X

POWER OUTPUT	10 Watts at less than 5% distortion
PEAK POWER OUTPUT	14 Watts
FREQUENCY RESPONSE	± 1 DB 40 to 15,000 CPS (Tone Compensator Normal)
GAIN AND SENSITIVITY	MHP-110: .9 Volts — 70 DB MHP-110X: .5 Volts — 75 DB
FLAT RESPONSE	With Tone Compensator at Normal: Response is ± 1 DB 40 to 15,000 CPS
VOLUME CONTROL	Continuously Variable; with Power On-Off Switch
4-WAY INDIVIDUAL TONE COMPENSATOR:	Position — No. 1: Deep bass with high cut No. 2: Medium bass (Bass Boost with normal treble) No. 3: Normal (Flat response) No. 4: Treble (Normal bass with treble boost)
VARIABLE EXPANDER (MHP-110X only):	Manually controlled from zero to + 10 DB. Operates instantaneously. No chopping effect. No time lag.
TUBES USED MHP-110	1-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
TUBES USED MHP-110X	3-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	4 and 8 Ohms
POWER CONSUMPTION	60 Watts at 117 Volts, 60 CPS
HUM LEVEL	80 DB below 10 Watts
AC RECEPTACLE	Provided for external attachment of phonograph or radio tuner. (Radio tuner may be adjusted for use.)
CHASSIS DIMENSIONS	10" x 5½" x 2½" high

PRICES	**List Price**
MHP-110 High Fidelity 10-Watt Amplifier with Tubes and Input Connector Weight: 9 lbs.	$ 65.88
MHP-110X High Fidelity 10-Watt Amplifier with Built-in Expander Circuit, with Tubes and Input Connector Weight: 9½ lbs.	85.32
FS-1 Flexible extension shaft 3 foot long for cabinet or panel mounting. Each flexible shaft is supplied with two coupling connectors. One end of shaft connects to the control and the other end of shaft takes a standard knob. List Price each shaft	3.51

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.



MA-10HF
MA-10EX

MA-10HF *(illustrated)* 10-WATT HIGH FIDELITY AMPLIFIER
MA-10EX 10-WATT HIGH FIDELITY AMPLIFIER WITH BUILT-IN EXPANDER CIRCUIT

AMPLIFIER FEATURES:

10 Watts of hum-free power • Built-in compensated pre-amplifier • Four inputs • Two inputs equalized for various magnetic and reluctance pickups • One input equalized for crystal pickup • One input unequalized for radio tuner • Ideal for L.P. pickups • Expander circuit available • Individual bass and treble boost and attenuation • Heavy duty output transformer with impedances of 2-4-8-16 and 500 ohms to match most speakers • Inverse feedback 12 DB over-all • Safety fused • UL/L Approved.

AMPLIFIER SPECIFICATIONS:
MODEL MA-10HF *and* MODEL MA-10EX

POWER OUTPUT	10 Watts at less than 5% distortion
PEAK POWER OUTPUT	14 Watts
FREQUENCY RESPONSE	± 1 DB 40 to 20,000 CPS (Tone controls normal)
GAIN AND SENSITIVITY	Magnetic Input No. 1: .011 Volts 93 DB at 1000 CPS Magnetic Input No. 2: .1 Volts 67 DB at 1000 CPS Crystal Input: .35 Volts 76 DB at 1000 CPS Radio Input: .35 Volts 76 DB at 1000 CPS
VOLUME CONTROLS	Continuously variable
TREBLE CONTROLS (MA-10HF only)	High frequency boost 15 DB Attenuation at 15,000 CPS 14 DB
BASS CONTROL (MA-10HF only)	12.5 DB boost at 50 CPS, and 12.5 DB attenuation at 50 CPS
FLAT RESPONSE	With controls at normal, response is ± 1 DB 40 to 20,000 CPS
4-WAY INDIVIDUAL TONE COMPENSATION (MA-10EX only):	Position — No. 1: Deep bass with high cut No. 2: Medium bass (Bass boost with normal treble) No. 3: Normal (Flat response) No. 4: Treble (Normal bass with treble boost)
VARIABLE EXPANDER (MA-10EX only):	Manually controlled from zero to + 10 DB. Operates instantaneously. No chopping effect. No time lag.
TUBES USED MA-10HF	1-6SC7, 2-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
TUBES CSED MA-10EX	1-6SC7, 3-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	2, 4, 8, 16, 500 Ohms
POWER CONSUMPTION	75 Watts at 117 Volts, 60 CPS
HUM LEVEL	70 DB below 10 Watts Contains 2 hum balancing potentiometers
AC RECEPTACLE	Provided for external attachment of phonograph or radio tuner. (Radio tuner may be adjusted for use.)
CHASSIS DIMENSIONS	12" x 7" x 2½" high

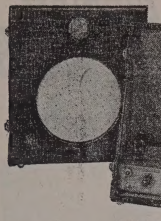
PRICES	**List Price**
MA-10HF High Fidelity 10-Watt Amplifier with Tubes and Input Connector Weight: 11½ lbs.	$ 93.96
MA-10EX High Fidelity 10-Watt Amplifier with Built-in Expander Circuit, with Tubes and Input Connector Weight: 12 lbs.	112.32
FS-1 Flexible extension shaft 3 foot long for cabinet or panel mounting. Each flexible shaft is supplied with two coupling connectors. One end of shaft connects to the control and the other end of shaft takes a standard knob. List Price each shaft	3.51

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

THE MASCO ECONOMY LINE

MASCO
SOUND SYSTEMS


MES-8

8 WATT SOUND EQUIPMENT

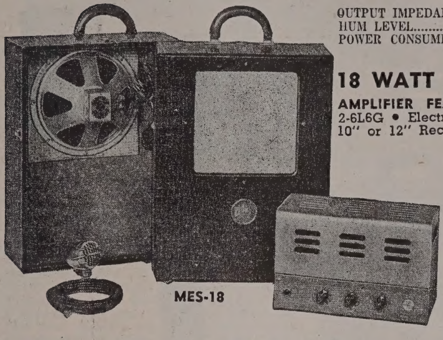
AMPLIFIER FEATURES: Microphone and phono input • Electronic mixing • Variable tone control • Standard voice coil output • 8 Watts undistorted output.

AMPLIFIER SPECIFICATIONS FOR ME-8

POWER OUTPUT	8 Watts
PEAK POWER	12 Watts
INPUTS	Two: Microphone and Phono
FREQUENCY RESPONSE	50 to 10,000 CPS ±2DB
SENSITIVITY:	
Microphone	.007 Volts for 8 Watts
Phonograph	.4 Volts for 8 Watts
CONTROLS	Three: Microphone, Phono, Tone
TUBES	1-6SJ7, 1-6SF5, 1-6L6G. 1-5Y3GT (rectifier)
OUTPUT IMPEDANCES	3.2, 8 and 500 Ohms
HUM LEVEL	25 DB below Zero Level
POWER CONSUMPTION	63 Watts
OPERATION	117 Volts, 60 Cycles
DIMENSIONS	10″ x 5½″ x 4½″ high

PRICES	List Price
ME-8 Amplifier with tubes Shipping Weight 14 lbs.	$56.16
MES-8 Portable System Shipping Weight 24 lbs.	106.92

MES-8 Portable System Consists of:
1—8 Watt amplifier, with tubes
1—10″ PM Speaker
1—25′ Cable and plug
1—Portable carrying case Model 3030
1—Astatic JT-30 microphone with cable and connectors

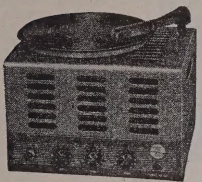

MES-18

18 WATT SOUND EQUIPMENT

AMPLIFIER FEATURES: Tapped Output, 2-4-8-15-500 ohms • Beam Power Output 2-6L6G • Electronic Mixing Overall • Full Range Controls • Plug-in Phono Top • Plays 10″ or 12″ Records • U/L Approved • Available with Three-speed Motor.

AMPLIFIER SPECIFICATIONS — Models ME-18, ME-18P

POWER OUTPUT	18 Watts
PEAK POWER	24 Watts
GAIN	Microphone 118 DB, Phono 74 DB
CONTROLS	Three: Microphone, Phono, Tone. With On-Off Switch
INPUTS	Two: Microphone and Phono
TUBES	1-6SJ7, 1-6SC7, 2-6L6G. 1-5Y3GT (Rectifier)
OUTPUT	Tapped 2-4-8-15-500 Ohms
POWER CONSUMPTION	(ME-18) 93 Watts, 117 Volts, 60 CPS
POWER CONSUMPTION	(ME-18P) 107 Watts, 117 Volts, 60 CPS
HUM LEVEL	56 DB below 18 Watts
FREQUENCY RESPONSE	50 to 10,000 Cycles ± 2 DB
DIMENSIONS	(ME-18P) 12″ x 10″ x 8″ high
DIMENSIONS	(ME-18) 12″ x 6¾″ x 7¾″ high

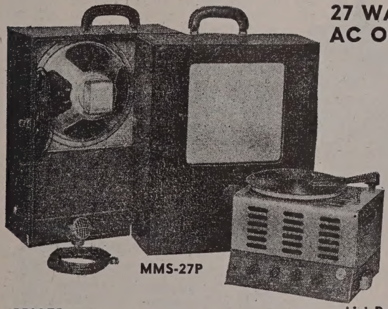

ME-18P

PRICES	List Price
ME-18 Amplifier with tubes, with streamline cover Shipping Weight 17 lbs.	$ 83.16
ME-18P Amplifier, with tubes, with phono top Shipping Weight 26 lbs.	113.40
MES-18 Complete portable system Shipping Weight 38 lbs.	167.40
MES-18P Complete portable system Shipping Weight 47 lbs.	$197.64

MES-18P Portable System Consists of:
1—ME-18 or ME-18P Amplifier, with tubes
2—12″ PM speakers
2—25-ft. Cable and plugs
1—Portable carrying case Model 3040
1—Astatic JT 30 microphone with 12-ft. cable and connectors

The models ME-18P amplifier and MES-18P system are available with a three-speed motor and all purpose pick-up with "turnover" cartridge. Add to List Price $10.80. Specify when ordering.

27 WATT MOBILE AMPLIFIER FOR 6 VOLT DC AND 115 VOLT AC OPERATION with SINGLE OR THREE SPEED PHONO TOP


MMS-27P

AMPLIFIER FEATURES: Peak power 40 watts • Self-contained power supplies • "Stand-by" battery saver switch • Extra heavy duty vibrator • Full output AC or DC operation • Ripple-free operation • Rugged construction • Available with Astatic Model AB-8M Pickup • Supplied with Power Cables • U/L Approved.

AMPLIFIER SPECIFICATIONS FOR MM-27P

POWER OUTPUT	27 Watts
PEAK POWER	40 Watts
GAIN	Microphone 125 DB, Phono 78 DB
CONTROLS	Four: Two Microphones, Phono, Tone
INPUTS	3—Two Microphone, One Phono
TUBES	2-6SC7, 1-6SJ7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-125-250-500 Ohms
POWER CONSUMPTION	AC 130 Watts, 6 Volt DC, 25 Amps.
HUM LEVEL	AC, 55 DB below Output of 27 Watts DC, Ripple-Free
FREQUENCY RESPONSE	50 to 10 000 CPS ± 2 DB
DIMENSIONS	12″ x 11″ x 8″ high

PRICES	List Price
MM-27P 25 watt mobile phono-top amplifier, with tubes, with single speed motor Shipping Weight 39 lbs.	$197.10
MMS-27P 25 watt mobile phono-top complete portable system with single speed motor Shipping Weight 62 lbs.	282.42
MMO-27P 25 watt mobile phono-top, complete outdoor system	332.10

MMO-27P Outdoor System Consists of:
1—MM-27P Phono top amplifier, with tubes
2—Masco-University Model MA-25 driver units
2—Masco-University Model PH reflex trumpets
2—25′ Cables and plugs
1—Astatic JT-30 microphone with cable and connectors

MMS-27P Portable System Consists of:
1—MM-27P Phono top amplifier, with tubes
2—12″ PM speakers
2—25′ Cables and plugs
1—Portable carrying case Model 3050
1—Astatic JT-30 microphone with cable and connectors

If Astatic Model AB-8M counterbalanced pickup is desired, add to List $11.88.

The Models MM-27P amplifier, MMS-27P portable system, and MMO-27P outdoor system are available with a three-speed motor and all-purpose pickup with "turnover" cartridge. Add to List Price $10.80. Specify when ordering.

To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-18

WEST OF ROCKIES ADD 5% TO ALL LIST PRICES

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

THE MASCO ECONOMY LINE

MASCO
SOUND SYSTEMS

27 WATT SOUND EQUIPMENT

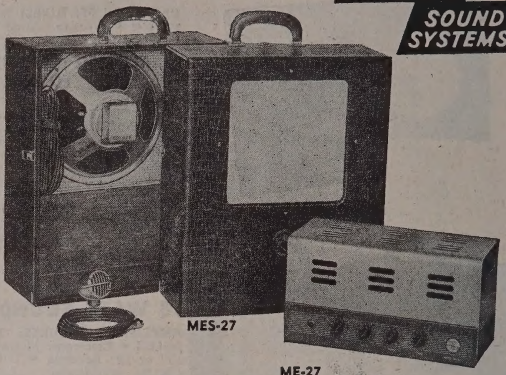
AMPLIFIER FEATURES: Output Tapped, 2-4-8-15-125-250-500 Ohms • Two Microphones and Phono • Electronic Mixing Overall • Beam Power 6L6 Output • Undistorted 27 Watts Output • Three Separate Inputs • U/L Approved.

AMPLIFIER SPECIFICATIONS FOR MODEL ME-27:

POWER OUTPUT	27 Watts
PEAK POWER	38 Watts
GAIN	Microphone 125 DB, Phono 78 DB
CONTROLS	Four—Two Microphones, Phono, Tone, with On-Off Switch
INPUTS	Three—Two Microphones, One Phono
TUBES	1-6SJ7, 1-6SC7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-125-250-500 Ohms
POWER CONSUMPTION	100 Watts, 117 Volts, 60 CPS
HUM LEVEL	55 DB below 27 Watts
FREQUENCY RESPONSE	50 to 10,000 Cycles ± 2 DB
DIMENSIONS	15" x 8" x 8"

PRICES	**List Price**
ME-27—Amplifier with tubes, with streamline cover Shipping Weight 30 lbs.	$106.92
MES-27—Complete portable system Shipping Weight 54 lbs.	192.24

MES-27 Portable System Consists of:
1—ME-27 Amplifier, with tubes
2—12" PM speakers
2—25-ft. Cables and plugs
1—Portable carrying case Model 3050
1—Astatic JT-30 microphone with cable and connectors


MES-27

ME-27

36 WATT SOUND EQUIPMENT

AMPLIFIER FEATURES: Three Input Channels • Bass and Treble Tone Equalizers • Electronic Mixing Overall • Peak Power 45 Watts • U/L Approved.

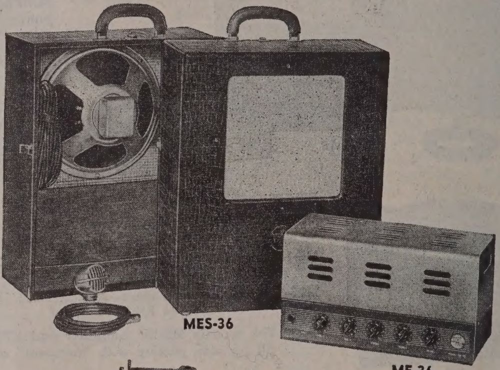
AMPLIFIER SPECIFICATIONS for ME-36 and ME-36R

POWER OUTPUT	36 watts
PEAK POWER	45 watts
GAIN	Microphone 125 DB, phono 78 DB
CONTROLS	Five—Two microphones, phono, 1-bass, 1-treble Separate On-Off Switch on Changer
INPUTS	Three—Two microphones, one phono
TUBES	2-6SJ7, 1-6SC7, 1-6SN7GT, 2-6L6G. 1-5U4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-500 ohms
POWER CONSUMPTION (ME-36)	130 watts, 117 voles, 60 cps.
POWER CONSUMPTION (ME-36)	130 watts, 117 volts, 60 cps.
HUM LEVEL	58 DB below 36 watts
FREQUENCY RESPONSE	50 to 10,000 cycles ± 2 DB
DIMENSIONS	(ME-36) 15" x 8" x 8" high
DIMENSIONS	(ME-36R) 15" x 15" x 9" high

PRICES	**List Price**
ME-36—Amplifier with tubes, with streamline cover Shipping Weight 30 lbs.	$135.00
MES-36—Complete portable system Shipping Weight 58 lbs.	220.86
ME-36R—Amplifier with tubes, with Webster Model 100 three-speed changer mounted on top of cover Shipping Weight 48 lbs.	253.80

MES-36 Portable System Consists of:
1—ME-36 Amplifier with tubes
2—12" PM Speakers
2—25' Cables and plugs
1—Astatic JT-30 microphone with cable and connectors
1—Portable carrying case Model 3050

The Model ME-36R cannot be supplied in a portable system


MES-36

ME-36

MODEL ME-36R
Featuring the
Webster Model 100
Three-Speed Changer

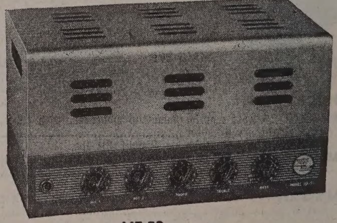
52 WATT AMPLIFIER

AMPLIFIER FEATURES: Separate Bass and Treble Equalizers • Peak Output 64 Watts • Completely Fused • Hum-free Operation • Universal Output • Four 6L6G Tubes • Full Electronic Mixing • U/L Approved.

AMPLIFIER SPECIFICATIONS for MODEL ME-52

POWER OUTPUT	52 watts
PEAK POWER	64 watts
GAIN	Microphone 130DB, Phono 80DB
CONTROLS	Five—Two Microphones, Phono, 1-Bass, 1-Treble With On-Off Switch
TUBES	1-6SJ7, 2-6SC7, 4-6L6G. 2-5V4G (Rectifiers)
INPUTS	3—Two Microphones, One Phono
OUTPUT	Tapped at 2-4-8-15-500 Ohms
POWER CONSUMPTION	215 Watts, 117 Volts, 60 CPS
HUM LEVEL	61 DB below 52 Watts
FREQUENCY RESPONSE	50 to 10,000 Cycles ± 2 DB
DIMENSIONS	16" x 10" x 10" high

PRICE	**List-Price**
ME-52 Amplifier with tubes, with streamline cover Shipping Weight 40 lbs.	$167.40


ME-52

To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-18

WEST OF ROCKIES ADD 5% TO ALL LIST PRICES

WRITE TO FACTORY FOR COMPLETE CATALOG

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

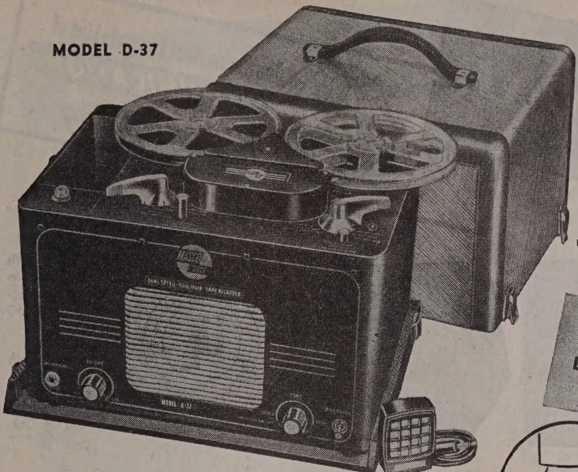
SOUND MASCO EQUIPMENT

SOUND-REEL

Dual-Speed
Dual-Track

MAGNETIC TAPE RECORDERS

MODEL D-37



Available with BUILT-IN RADIO

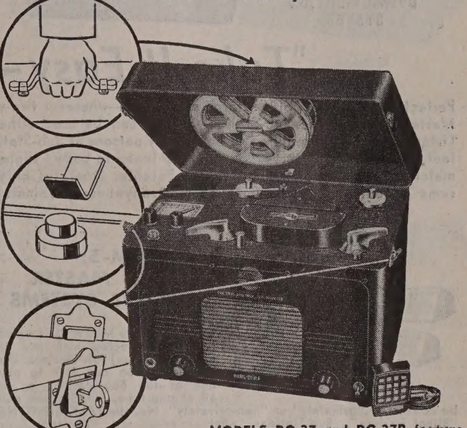
Ideal for Commercial, Professional, School and Home use. The new Masco Dual-Speed, Dual-Track Magnetic Tape Recorder offers simplicity of operation and the ultimate in flexibility and economy.

These remarkable New MASCO Tape Recorders combine the most desirable features of All Recording Requirements. Available in six models to provide maximum efficiency, utmost utility and superb performance for industrial, home, school or professional use at Remarkably Low Cost! They're easy to thread and operate. The recording unit is built into an aluminum housing, finished in "Spruce Green" hammertone, which fits into the portable carrying case. Full-range, high fidelity reproduction. These recorders operate at 2 speeds: 3.75 and 7.50 inches per second. The higher speed offers fine tone quality while the slower speed provides economy. Both speeds may be recorded and played back on same track. Dual-Track permits Full 2-Hour Recording on a Single 7" reel (1200 ft.) Volume Level Indicator (neon bulb) assures highest quality recording at all times. Reel spindles are threaded to permit bolting down. Built-in AM Radio, included in some models, has high sensitivity and selectivity. Radio will operate independently if desired. Automatic Erase Circuit permits re-use of tape indefinitely. All size reels up to 7" can be used. Mechanical construction is superb. Finest components, insure long, trouble-free performance. Carrying case is extremely rugged and attractive—covered with 2-tone tweed and Calf trim fabricoid.

PRICES		**List Price**
D-37	Complete portable recorder with carrying case	$243.00
D-37R	Complete portable recorder with carrying case, with AM tuner	*286.20
DC-37	Complete portable recorder with metal cover and lock	243.00
DC-37R	Same as above but with self-contained AM tuner	*286.20
LD-37	Complete recorder, less carrying case	221.40
LD-37R	Complete recorder, less carrying case, with AM tuner	*264.60

*Plus FET

All models supplied complete with Crystal Microphone, 7½ ft. of cable and phone plug, one 7" reel with 600 ft. of plastic tape, one 7" take-up reel and one set of instructions.



MODELS DC-37 and DC-37R feature metal cover and an interlock Switch which automatically cuts off all power when closed. Cover has space for two tape reels. It also has two tamper-proof Clasps with Key.

SPECIFICATIONS • MODELS D-37, D-37R, LD-37, DC-37 AND DC-37R

POWER OUTPUT........................5 Watts, Class A to internal or external speaker
FREQUENCY RESPONSE........................80-8,500 cps ±3 db, at 7.50 in./sec.
80-5,000 cps ±3 db, at 3.75 in./sec.
FLUTTER AND WOW........................Negligible
INPUTS........................Two: Microphone—1 megohm impedance
Radio or Phono —.5 megohm impedance
OUTPUTS........................Three: Internal Speaker; External Speaker—8-16 ohm; Voice Coil 500 ohm—to line or external amplifier
AMPLIFIER CONTROLS........................Two: Volume and Tone
PLAYBACK EQUALIZATION........................Automatic for each speed
ERASE AND BIAS........................AC type 60 KC Supersonic Oscillator
SPEAKER........................6" PM Alnico V Heavy Duty 3.2 Ohm Voice Coil
MONITORING JACK............External speaker jack used for headphone monitoring
MONITORING SWITCH........................Switch on tone control can turn monitor speaker on or off when recording
RECORDING LEVEL INDICATOR..............Neon Type—Acts as both pilot light and volume level indicator
RECORDING TIME........................Up to 2 hours
AMPLIFIER TUBES........................1-12AX7, 1-6SL7GT, 1-6SN7GT, 1-6V6GT. 1-6X5GT (Rectifier)
AM TUNER SPECIFICATION............For Models D-37R, LD-37R, and DC-37R. TUBES: 1-6BA6, 1-6BE6, 1-6SF7. Selenium Rectfier. Tuner covers the entire broadcast band from 500 to 1700 kc.
POWER CONSUMPTION:
Models D-37, LD-37, DC-37....................80 watts at 117 volts, 60 cps.
Models D-37R, LD-37R, DC-37R............95 watts at 117 volts, 60 cps.
SELF-POWERED TAKEUP............Absence of mechanical interconnection between motor and take-up reel eliminates a frequent cause of "Wow" and Flutter"
CAPSTAN TURRET DRIVE....................Self-wrapping of tape around capstan and use of a pressure idler eliminates tape slippage
FLYWHEEL........................LARGE, WEIGHTED, DIE-CAST
PUSH-BUTTON SPEED CHANGE............Changes tape speed from 7.50 to 3.75 inches per second and automatically switches amplifier equalization
ANY SIZE REEL........................Up to 7 inches in diameter may be employed
POWER INTERLOCK....................Removal of back or chassis bottom disconnects all power as required for Underwriters' Approval
ADEQUATE VENTILATION PROVIDED.
MOTOR........................Heavy duty, 4-pole, non-overheating. Oil-less bearings and balanced rotor assure added freedom from "wow"
QUIET MECHANICAL OPERATION.
PUSH-BUTTON "RECORD" CONTROL............Eliminates possibility of erasing a recorded program accidentally. Push-button interlocked with control lever.
INPUTS AND OUTPUTS................On back of tape recorder avoids messy, clumsy cables dangling in front (only microphone input on front panel)
SPINDLE SHAFTS........................Threaded for 6-32 screws to allow recording or playback in any position (even upside-down).
STANDBY......................The motor can idle continuously without tape movement
SIMPLICITY OF THREADING........No interwinding—simply drop tape into slot
ALL MAJOR COMPONENTS EASILY ACCESSIBLE.
RECORDINGS made on many other recorders (at 3.75 or 7.50 inches per second) may be played back on a MASCO SOUND-REEL Recorder
COMPLETELY FREE FROM INTERFERENCE BETWEEN TRACKS (no cross-track modulation)
NO LOSS OF QUALITY WHEN DUBBING FROM TAPE TO TAPE, RECORDS TO TAPE, OR TAPE TO RECORDS
DESIGNED TO BE FOOL-PROOF & FOR GREATER SIMPLICITY OF OPERATION
DESIGNED MECHANICALLY TO ASSURE LIFETIME OPERATION.

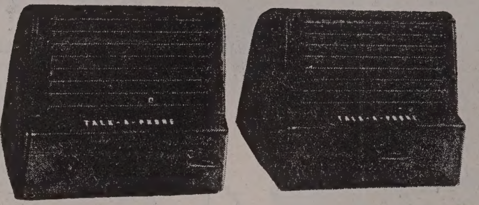
WRITE TO FACTORY FOR COMPLETE CATALOG TR-51

MARK SIMPSON MANUFACTURING CO., Inc. • LONG ISLAND CITY, N. Y.

TALK-A-PHONE

The Worlds Most Complete Line of
INTER-COMMUNICATION
Has Everything

"*Elsie*"
(LC-2)
"*Has Everything*"
TWO-STATION INTER-COMMUNICATION SYSTEM



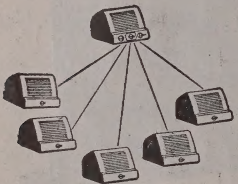
Complete with tubes, easy to follow instructions and 50 ft of cable.

List Price each system complete

$51.00

"Take It Easy—Tell It to '*Elsie*'"

Perfect for the home, office, farm, store, etc.—wherever two-way communication is needed between two points. Consists of one Master unit and one Sub-Station. System can be used either **"Privately"** or **"Non-Privately."** If "Non-Privately," the Talk-Listen control is not required to be used by persons at Sub-Station, and they are permitted to answer from distances even up to forty feet. Ideal for the nursery—you can keep tuned to baby's slighest move—no more getting up to see if baby is all right. Smartly styled matching cabinets of molded walnut Bakelite. Operates **universally** on 110-115 volts, AC or DC. The Sub-Station does not consume current and can be installed most anywhere. Cabinets measure 8¼" x 6¼" x 7½". Weight packed, 12 lbs.



LM-5; LM-10 MASTER SELECTIVE SYSTEMS

Consists of one Master Unit which can be connected with one or more (up to ten) Sub-Stations. The Master Station can talk to any one of the Sub-Stations or to all at one time. Sub-Stations can be connected "privately" or "non-privately". Has the TALK-A-PHONE "Silent Feature". Sub-Stations, whether connected "privately" or "non-privately", can originate calls to the Master Station. The Sub-Stations can be at considerable distances from the Master unit. Once a conversation has been initiated, with a "non-private" system, persons at Sub-Station locations need operate no controls and can reply from a distance. The Sub-Stations do not consume electric current and can be installed most anywhere. Cabinets measure 8¼" x 6¼" x 7½". Weight packed — Master, 8 lbs., Sub-Stations, 5 lbs. Master Station operates universally on 110-115 volts, AC-DC.

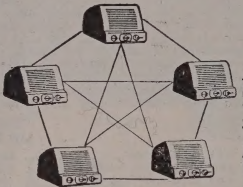
Ordering LM-5; LM-10 Master Selective Systems

MODEL LM-5 Master Selective Station for five Sub-Stations, complete with tubes and easy-to-follow instructions........**List Price ea. $45.00**

MODEL LM-10 Master Selective Station for ten Sub-Stations, complete with tubes and easy-to-follow instructions........**List Price ea. $58.00**

MODEL LR-3 Sub-Station unit for LM-5 or LM-10 Master Station. **List Price ea. $15.95**

No. 5303 (three-conductor) Cable. For use between each LR-3 Sub-Station and the LM-5 or LM-10 Master unit........**List Price per foot 7½c**



LS-5; LS-10 SUPER SELECTIVE SYSTEMS

Consists of all Master units. Extreme flexibility of inter-communication whereby any station in the system can call any other and carry on a two-way conversation. You can begin with two Masters and add up to a total of five in the case of the LS-5 units, or up to a total of ten in the case of the LS-10 units. As many as five private two-way conversations can be held at the same time with ten LS-10 Masters. Two private two-way conversations can be accommodated at the same time with the LS-5 system. All Master Stations are private. Stations cannot listen in on each other, nor can a third unit listen in on a conversation of two others. Variable volume, adjustable at each unit, provides for the incoming voice to be adjusted from a bare whisper to full volume that can be heard easily at a considerable distance. Stations can be located even 1000 or 2000 feet apart. Six-conductor cable providing for a total of five units is used with the LS-5 system and is run from the first unit to the second only, from the second to the third only, etc., until the last unit in the system is reached. Similarly, an eleven-conductor cable, providing for a total of ten units, is used for inter-connecting the LS-10 system. It is not necessary to run cable between the first and last units in the system. Cabinets measure 8¼" x 6¼" x 7½". Weight packed, 8 lbs. Operates Universally on 110-115 volts, AC-DC.

Ordering LS-5; LS-10 Super Selective Systems

MODEL LS-5 Super Selective unit for five stations, complete with tubes and easy-to-follow instructions........**List Price ea. $45.00**

MODEL LS-10 Super Selective unit for ten stations, complete with tubes and easy-to-follow instructions........**List Price ea. $58.00**

No. 5506 (six-conductor) Cable. For inter-connecting LS-5 units as outlined above........**List Price per foot 17c**

No. 9911 (eleven-conductor) Cable. For inter-connecting LS-10 units as outlined above........**List Price per foot 34c**

ABOVE UNITS ALSO AVAILABLE IN GRAY CABINETS
For LC-2 System—add to *List Price* ea. $5.00
For Other Stations Shown Above—add to *List Price* ea. $2.50

HOW TO DETERMINE CABLE NEEDS: (A) For Master Selective Systems: Measure from Master to each Sub-Station to determine total cable needed. (B) For Super Selective Systems: Measure from first Master to second, to third, etc. Six-conductor cable is required for five-station system and eleven conductor cable for ten station system. (C) For two-station (LC-2) system use three-conductor cable.

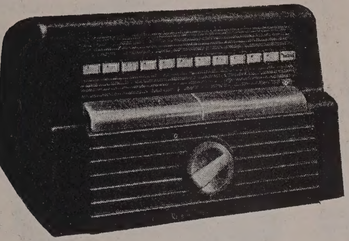
Prices and Specifications Subject to Change Without Notice
All prices 5% higher west of Rocky Mountains

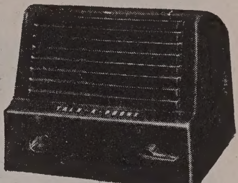
CHICAGO *TALK-A-PHONE CO.* ILLINOIS

TALK-A-PHONE "*Chief Forty Niner*"

DOES EVERYTHING—HAS EVERYTHING THE FINEST IN INTER-COMMUNICATION

Known wherever inter-communication is used as the World's finest system, TALK-A-PHONE is designed, developed, and precision-engineered by the leader in its field, with more than a quarter-century experience in electronics. TALK-A-PHONE stations are designed to withstand continuous day and night use; and are built to give you years of dependable service. The Armed Forces; Governmental Agencies; America's giant industrial firms, with highly complex and elaborate intercom needs depend on TALK-A-PHONE.





ONE MODEL DOES EVERYTHING

TALK-A-PHONE's patented, exclusive **"DYNASONIC"** features gives you one model that "Does Everything." The same unit can be used for every type of application, whether it be as all Master Stations, or a Master and Staff Stations, or a number of Masters inter-mixed with Staff Stations. The Master Stations may talk with any other Master in the system as well as with all Staff Stations. Six, twelve, twenty and thirty capacity Master Stations can be used within the same system. The Staff Station may answer Master Stations and originate calls to one, two or six Master Stations, depending on its capacity. Staff Stations converse with Master Stations only. Staff Stations are not connected to electrical outlet.

Through its **"DIFFERENTIAL STAFF"** feature, TALK-A-PHONE permits any Staff Station to be used as either "Private" or "Non-Private", and also permits some Staff Stations to be "Private" and others "Non-Private" in the same system. "Private" Staff Stations have complete privacy, and no other station can "listen-in". Persons at "Non-Private" Staff Stations can answer from a distance up to 50 feet from the unit without leaving work. All Master and Staff Stations are assured of privacy, except where by choice, Staff Stations are designated as "Non-Private", in which case the Master Station can "listen-in" on the "Non-Private" Staff Stations.

Now . . . Talk-A-Phone brings you REDI-POWER, The Master Station that automatically supplies the right amount of power needed (up to a full 10 watts) at any time, for any Station in the system. This prevents any volume weakness where a number of Stations are being called simultaneously, or where a high noise level exists. REDI-POWER, which does away with the need for special boosters in many cases, is available in 12 and 20 Station capacity.

BEAUTIFULLY STYLED: The Bakelite walnut cabinet of the "CHIEF FORTY-NINER" is unsurpassed in simplicity of design and appearance.

TRANSLUCENT LIGHTING further enhances its beauty as well as indicating whether the unit is "on" or "off."

MULTI-MAGIC SELECTOR: A patented exclusive TALK-A-PHONE feature. Twelve, twenty, thirty station capacity in SAME BEAUTIFUL CABINET with only TWELVE PUSH BUTTONS. Six-station Master has six push buttons.

HOLD-A-MATIC CONFERENCE CONTROL: TALK-A-PHONE "HOLD-A-MATIC" feature ALLOWS CONFERENCE between THREE or a GROUP OF STATIONS by merely selecting desired buttons.

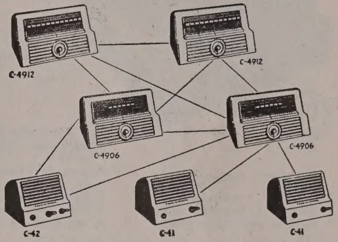
UNI-TRANS: Gives you "DICTATION CONTROL."

VOICE RANGE POWER: The powerful, rugged amplifier gives you amazing, brilliant "voice range" power. Stations may be up to 3000 feet apart.

DEPENDABILITY: PROVED IN BILLIONS OF HOURS OF ACTUAL USE.

PRIVACY EARPHONE: Optional equipment on Master Stations. Provides listening privacy; and conversation with other Masters without continuous operation of touch bar.

CRADLE PHONE: Optional equipment to provide completely private conversations.



All Master Stations and C-46 Staff Stations — 12" W x 9" D x 7" H.

C-41 and C-42 Staff Stations — 8¼" W x 7½" D x 6¼" H.

C-4906 Push button Master for six-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. $89.50**

6212 CABLE — For inter-connecting C-4906. **List Price per foot 30c**

C-4912 Push button Master for twelve-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. $106.00**

C-5912 REDI-POWER push button master for 12 Station capacity, complete with tubes, junction box, and easy-to-follow instructions. **List Price ea. $160.00**

6224 CABLE — For inter-connecting C-4912; C-4920; and C-4930.................. **List Price per foot 60c**

C-41 Staff Station for origination of call to one Master. Wt. 5 lbs.............. **List Price ea. $22.00**

C-42 Staff Station for origination of calls to two Masters. Wt. 5 lbs.............. **List Price ea. $29.00**

C-46 Push button Staff Station for origination of calls to six Masters. Wt. 9 lbs. **List Price ea. $65.00**

6204 CABLE — For connecting C-41, C-42 and C-46 Staff Stations.................. **List Price per foot 12½c**

Master Stations also available in capacities up to 60 Stations. For cradle phone models add $45.00 to list price of unit. For earphone models add $20.00 to list price of unit. All models available in Executive Gray Cabinets at slightly additional cost. Write for full details.

HOW TO DETERMINE CABLE REQUIREMENTS: To interconnect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., and total. For **C-4920** use two lengths of **6224** Cable, and for **C-4930** use three lengths of **6224** Cable. To connect **C-41** Staff Station, measure from Staff Station to the one Master to which Staff Station originates calls. To connect **C-42** and **C-46** Staff Stations, measure a separate length of cable from Staff Station to each Master Station to which Staff Station originates calls (for each **C-42** or **C-46**, follow same procedure).

Manufactured under exclusive **TALK-A-PHONE** *Patents. Licensed under U. S. Patents of A. T. & T. Co. and Western Electric Co. Inc.*

Prices and Specifications Subject to Change Without Notice

All prices 5% higher west of Rocky Mountains

CHICAGO *TALK-A-PHONE CO.* **ILLINOIS**

AIM QUALITY PRODUCTS

"PERFECT HITS" ON YOUR PROFIT TARGET

"Buy The Best For Less"

PROMOTIONAL MDSE. ALWAYS IN DEMAND

A Sales Stimulator For You

Featured by

Leading Dept. Stores, Chains, Dealers, Exporters and Jobbers.

Our Attractive Low Prices, High Quality and Good Service Means Extra Profit For You.

FREE!

Write for our 24 page illustrative Catalog and price list showing 31 of our Beautifully Designed Phonographs.

"SUPREME" MODEL No. 716

- 3 Speed UL amplified vanity style
- Complete underwriters approval
- 3 tubes, powerful amplifier
- 5" PM speaker Alnico No. 5 magnet
- Continuous Volume control and switch
- Latest type lightweight pick-up
- All purpose needle, Plays 3 speeds
- Colors: Brown or Maroon
- Size: 11½ x 9½ x 5"
- Weight: 8 lbs. gross

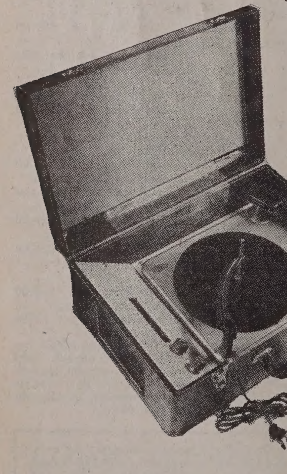
K-716 — Same as above except Kiddy Decaled. Same list price as above.

W-716 — Same as above except covered with Western Designs.

No. 715 Same as No. 716. (No Fire Underwriters' Approval) and only 2 tubes.

"SUPREME" MODEL No. 790

- 3 Speed DeLuxe large portable style
- Plays all records with lid closed
- General Electric Variable reluctance, 2 sapphire styles, reversible cartridge
- Special designed arm to track at 8 grams on both standard and micro-groove records for longer record and stylus life
- 5 tubes, 4 stage AC amplifier, 6 watt output
- Wide range 40 to 15,000 cycles
- 6½" by 9", 3.16 oz. Permanent magnet, Alnico No. 5 speaker
- Truly the finest quality tone electric phonograph made
- Ideal for schools, students, stores
- Another Supreme Original
- Colors: 2 tone jumbo brown alligator simulated leather
- Size: 17¾ x 12½ x 7½"
- Weight: 15½ lbs. gross weight.



"SUPREME" MODEL No. 741

- Automatic 3 speed phonograph
- 3 tubes, 2 watt, high gain amp.
- 5" speaker, Alnico No. 5 magnet
- Continuous Volume control and switch
- Simple foolproof automatic changer
- Turnover crystal cartridge with 2 needles.
- Plays all records with with lid closed
- Colors: 2 tone brown and tan
- Size: 19½" x 13½" x 8¾"
- Weight: 22 gross weight

"SUPREME" (IMPROVED) MODEL No. 747

- 3 speed all electric phonograph
- Top padded and stitched
- Plays all speed records and sizes
- Cartridge with 2 needles
- 5" PM speaker, Alnico No. 5
- Powerful Amplifier
- Continuous Volume control and switch
- Colors: Two Tone Brown and Tan
- Size: 12¾" by 10½" by 5½"
- Weight (Gross): 8 lbs.

748 UL — Same as No. 747 except it is "Fire Underwriters Approved".

AIM INDUSTRIES, INC.

41 UNION SQUARE
NEW YORK 3, N. Y. AL 5-9590

"Once Seen and Heard You Will Know It Must Be Yours To Sell"

Manufacturers Since 1912
A proud tradition for over 39 years.

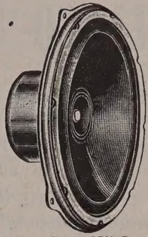
RCA ELECTRONIC COMPONENTS

SPEAKERS — PICKUPS

PM LOUDSPEAKERS

QUALITY ENGINEERED TO INSURE DEPENDABLE PERFORMANCE

- Mounting Designed to RMA Standards.
- Dustproof, Rust-Resistant.
- Universal Transformer Mounting Bracket on All 4", 4" x 6" and 5" PM's.
- Felted Cone Gives Uniform Strength, Dependability and Smooth "Flutter-Free" Response.
- Rugged Mechanical Construction with Welded Housing Assembly.
- Exclusive RCA Magnet Clamping Spring Securely Locks Magnet in Position, except Types 423S1 and 304S2.
- Moisture-Resistant Voice-Coil Suspension Assures High Efficiency and Dependability.


RCA Duo-Cone 15" Speaker

SPECIFICATIONS

Permanent Magnet Types

SIZE	TYPE No.	RESONANT FREQUENCY	MAGNET WEIGHT	VOICE COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE*
2" x 3"	423S1	250-365	1.5 oz.	11.8 ohms at 1000 cycles	0.125	$ 4.75
4" (shallow pot type)	304S2	175-225	1.0 oz.	3.2 ohms at 400 cycles	3	4.00
4"	404S2	170-225	1.47 oz.	3.2 ohms at 400 cycles	3	4.35
4" x 6"	246S2	150-200	0.68 oz.	3.2 ohms at 400 cycles	3	4.35
4" x 6"	446S2	150-200	1.47 oz.	3.2 ohms at 400 cycles	3	5.00
5"	405S2	150-200	1.47 oz.	3.2 ohms at 400 cycles	3	4.60
5" x 7"	257S1	120-140	1.47 oz.	3.2 ohms at 400 cycles	6	5.75
6"	306S1	100-140	1.47 oz.	3.2 ohms at 400 cycles	4	6.25
8"	208S2	75-95	2.15 oz.	6-8 ohms at 400 cycles	8	7.50
8"	208S4	75-95	2.15 oz.	3.2 ohms at 400 cycles	8	7.50
10"	410S1	75-125	6.8 oz.	6-8 ohms at 400 cycles	10	13.50
12"	112S1	65-90	2.15 oz.	3.2 ohms at 400 cycles	10	10.50
12"	412S6	65-90	6.8 oz.	3.2 ohms at 400 cycles	10	14.00
12"	412S7	65-90	6.8 oz.	6-8 ohms at 400 cycles	10	15.00
12"	201S1	65-90	.97 oz.	3.2 ohms at 400 cycles	10	9.60
12"	202S1	65-90	.97 oz.	6-8 ohms at 400 cycles	10	10.30

Field Coil Types

SIZE	TYPE No.	RESONANT FREQUENCY	FIELD	VOICE COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE
4" x 6"	746S1	150-200	450 ohms at 65 ma.	3.2 ohms at 400 cycles	3	$ 6.00
5"	705S1	150-200	450 ohms at 65 ma.	3.2 ohms at 400 cycles	3	6.00
6" x 9"	869S1	95-120	6 ohms at 1000 ma.	3.2 ohms at 400 cycles	8	8.25
12"	712S2	70-85	1000 ohms at 70 ma.	3.2 ohms at 400 cycles	12	14.00

*Federal Excise Tax included.

CRYSTAL PICKUPS

MAGIC TONE CELL

Replaces crystals in RCA Victor radio-phonographs and record players (1938 and later). Permanent-type jewel point stylus. At 400 cycles, it has approximate impedance of 200,000 ohms and an output of approximately 1½ volts.

SILENT SAPPHIRE

Interchangeable with 70 different phonograph crystals. Similar to Magic Tone Cell in design and characteristics, but smaller in size. Comes complete with crystal, mounting plate, screws, and complete electrical and mechanical installation data. (For additional information see RCA Crystal Pickup Data sheet, Form No. SP-1010.)

CRYSTAL PICK-UPS

Stock No.	Suggested List Price*	Stock No.	Suggested List Price*
9890	$ 7.00	70339	$ 7.00
14820	11.00	72551	7.75
31050	4.20	74067	6.00
31156	4.75	74625	6.00
34307	4.20	74984	7.40
37158	4.75	75044	10.75
38598	7.25	75475	9.75
38610	5.55	75575	6.00
39686	4.75	75976	6.75
39919	7.25	76257	6.75
70338	6.75	76297	7.40
70338A	7.00		

SAPPHIRES

Stock No.	Suggested List Price*
39564	$ 1.40
70915	3.95
72345	3.95
74068	1.60
74818	1.60
74985	1.80
75045	1.50
75046	1.50
75496	2.00
75497	1.50
75770	2.50
76374	1.45

NOTE: Stock No. 72898 Adapter Kit (package quantity 10) List Price $.25 each can be used with Stock No. 70338 Crystal to replace Stock No. 71173 used in models 55U and 55AU.

*Suggested Prices are subject to Government Ceiling Price Regulations.

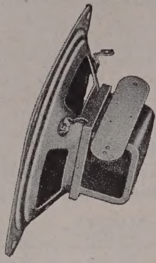
A complete line of Service Parts is available for all RCA apparatus.

All prices in effect 3/1/51.

GENERAL ELECTRIC

ALNICO 5 PM LOUDSPEAKERS

All component parts of the new Alnico 5 Loudspeakers are made to the rigid specifications of G-E quality control. This feature, in addition to highly efficient manufacturing skill, combined with the "know-how" of G-E engineers, has made these new superb speakers possible — unsurpassed in fidelity, dependability and durability.

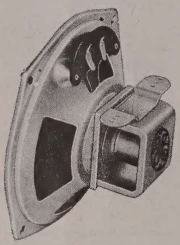


4"

GENERAL ELECTRIC'S new 4-inch speakers are the result of years of intensive engineering research to produce units of reduced size with maximum efficiency for use in small portable and table model receivers. In addition to having the "stay-bright" finish and the aluminum foil base voice coil, the new 4-inch speakers are considerably lighter in weight and more compact. This reduction in weight and space has been accomplished through the use of Alnico 5 magnet material, all-weld construction, and smaller yoke assembly.

5¼"

GENERAL ELECTRIC'S 5¼-IN. PM speakers have all been designed and developed to provide full, true, low notes and excellent high frequency definition for voice or music reproduction. Skillful designing has been applied to all details to assure the best possible results.



6½"

GENERAL ELECTRIC 6½-inch loudspeakers are the result of years of persistent development to improve performance. Never were ideas introduced and combined with better quality materials. Greater sensitivity and power capacity in more compact space was achieved by these methods.

8"

The NEW ALNICO 5 PERMANENT MAGNET material was chiefly responsible for maintaining the excellent performance of the G-E 8-inch speakers and still keeping the overall size smaller. The speakers are capable of handling full audio power with very little distortion. These speakers are recommended for quality in design and faithful reproducing characteristics.

GENERAL ELECTRIC ALNICO 5 LOUDSPEAKERS

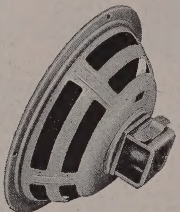
EFFECTIVE DECEMBER 15, 1950

Speaker Size Inches	Catalog Number	Watts Output	Alnico 5 Mag. Wt. Oz.	VC Imp. Ohms	List Price
4	403D	4	.68	3.2	$ 4.30
4	402D	4	1.0	3.2	4.60
4	400D	4	1.3	3.2	4.90
5	503D*	4	.68	3.2	4.55
5	500D*	4	1.3	3.2	5.20
5¼	527D	4	.68	3.2	4.60
5¼	526D	4	1.0	3.2	5.00
5¼	525D	4	1.3	3.2	5.45
6½	626D	4	1.0	3.2	5.75
6½	625D	4	1.3	3.2	6.35
6½	650D	8	2.98	3.2	7.75
6x9	703D	8	1.47	3.2	8.65
8	800D	8	2.98	3.2	10.30
8	810D	12	6.8	3.2	13.80
8	818D	12	6.8	8.0	14.40
10	1012D*	12	3.16	3.2	11.80
10	1000D*	12	6.8	3.2	17.55
10	1018D*	12	6.8	8.0	18.10
10	1003D*	25	9.0	8.0	21.30
10	1001D*	25	14.5	8.0	28.45
12	1212D*	12	3.16	3.2	12.95
12	1200D*	12	6.8	3.2	19.00
12	1218D*	12	6.8	8.0	19.55
12	1203D*	25	9.0	8.0	23.60
12	1201D*	25	14.5	8.0	33.95
Special Construction for Drive-in Theatre Application					
4	400C22	4	1.3	3.2	4.30
5¼	525C18	4	1.3	3.2	4.60

NOTE: The above prices include the 10% Federal Excise Tax which is being absorbed by the General Electric Co.

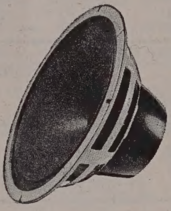
Chassis mounting brackets—at no additional cost—with all 4", 5", and 5¼" G-E speakers.

*Round speakers.



10"

GENERAL ELECTRIC'S new 10-inch P.M. speakers are the result of application of latest developments in scientific laboratory tone reproduction. Especially designed for brilliant reproduction of voice and music. They represent a perfect balance in relative factors of performance ability, cost, and appearance.

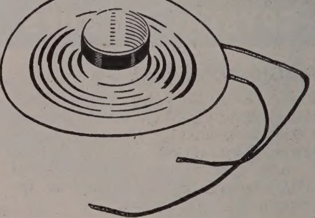


12"

GENERAL ELECTRIC'S powerful 12-inch permanent magnet loudspeakers are designed to provide faithful tone reproduction at high levels. They equal or surpass the performance of electro-dynamic speakers of the same size. All weld construction has minimized distortion at maximum operation levels by eliminating vibration.

G-E LOUDSPEAKER FEATURES

ALNICO 5 MAGNET MATERIAL is one of the great wartime engineering developments. Its energy per unit volume — approximately three times as great as other magnets—has enabled G-E engineers to design a new line of smaller speakers with better performance characteristics.



ALL WELD CONSTRUCTION of the newly designed G-E Alnico 5 Loudspeakers not only reduces the weight and size but also increases the rigidity necessary for perfect alignment of all parts. It also eliminates the possibility of dust and moisture accumulation and simplifies the replacement of damaged cones.

ALUMINUM FOIL BASE VOICE COILS only are used in all G-E permanent magnet speakers. Exact concentric location with the collar of the spider assembly insures excellent alignment. Humidity or excessive temperature variations do not affect the aluminum foil voice coils, making this type of speaker ideal for receivers designed for use in export markets.

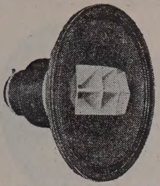
PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

speakers, cabinets multicellular horns

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.



604B DUPLEX SPEAKER

604B, with its associated dividing network (N-1000B) is the finest single loudspeaker on the market. Meets critical requirements of broadcast and recording monitoring, public address and music distribution systems. Separate units for high and low frequencies. Voice coils made of edge-wound ribbon. Multicellular horn provides uniform sound distribution (60° hor., 40° vert.). 1,000 cycle crossover. V. C. and network impedance 16 ohms. Speaker handles 30 watts. Frequency response from 30 to 16,000 cps. Wt. including network, 40 lbs. Dimensions: 15⅜" dia.; 11½" deep.
Net Price: $140.00

N-1000B Network must be ordered as separate item.
Net Price: $19.00

CABINETS

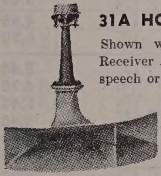
Engineered for high quality sound reproduction. Cabinets are made of heavy plywood. All joints are screwed and glued. Interiors padded to eliminate spurious rattles and reflections. Code letters show speaker size: A-15"; B-12"; C-8".

605-A—Furniture Finish Walnut or Mahogany.
Height 38", Width 30", Depth 16".
Net Price: $150.00

612-A, B—Blue Gray.
Height 29½", Width 25½", Depth 17¾".
Net Price $56.00

614-A, B, C—Portable, Blue Gray.
Height 24¾", Width 18¾", Depth 14¼".
Net Price: $47.50

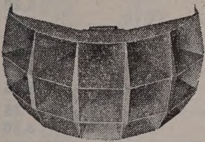
618-B, C—Portable, Slanting Front, Blue Gray.
Height 22", Width 17", Depth 13¼".
Net Price: $38.00



31A HORN*

Shown with 720A Receiver and 27A Receiver Attachment. Handles 30 watts, speech or music. Width 23", Height 9", Depth 15". Weight, 9½ lbs. Gray finish.
List Price: $54.00

*Distributed by
Graybar Electric Co.

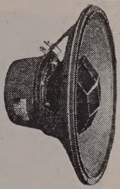


(SEE TABLE BELOW)

MULTICELLULAR HORNS

Altec Lansing multicellular horns are constructed from true exponential horn cells grouped in configurations to meet various sound distribution needs. The large multicellular horn is the best way to cover great distances and areas with high levels of acoustic power above 200-300 cps, and to direct this energy for maximum acoustic efficiency. Chart shows horns available. Throats must be ordered separately to type required.

(See Table Below)

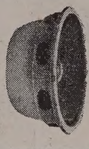


603B MULTICELL DIA-CONE SPEAKER

Offers high efficiency, broad distribution, wide frequency response, freedom from distortion. Dia-Cone principle provides extended frequency response. Multicellular horn loads high frequency diaphragm and distributes sound over 60° hor., 40° vert.: 15" cone insures full bass reproduction and 25 watt power-handling capacity. Voice coil: 8 ohms. Weight: 18 lbs. Diameter: 15 3/16". Depth 7". **Net Price: $75.00**

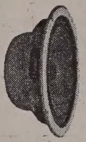
600B DIA-CONE SPEAKER

Efficiency, small space requirements, light weight and superior quality of reproduction, make the 600B an ideal unit in the lower priced speaker field. Utilizes Dia-Cone principle. Similar in construction to the 603B. V. C. 8 ohms. Power rating: 20 watts. Weight: 12 lbs. Diameter: 12¼". Depth: 5¼". **Net Price: $46.50**



400B DIA-CONE SPEAKER

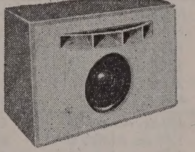
Designed for use where the benefits of large-speaker performance cannot be utilized because of space and weight limitations. An extremely efficient, high quality unit, it is ideal for use in portable devices, airplanes, busses, etc. V. C. imp. 8 ohms. Power rating: 12 watts. Weight: 4 lbs. Diameter: 8¼". Depth: 3⅝". **Net Price: $22.50**



755A SPEAKER*

Exceptional frequency response, small size and moderate power handling capacity provide an ideal combination for low level distribution systems where multiple speakers are used. Its small size makes wall installations practical and easy. 70-13,000 cps. Impedance, 4 ohms. 8 watts. Dimensions: 8⅜" dia. x 3⅛" deep. Weight: 4¾ lbs.
List Price: $24.60

*Distributed by Graybar Electric Co.

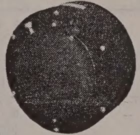


757A SPEAKER*

Ideal for recording studios, program distribution systems, and other applications where highest quality sound reproduction is required. High frequency speaker and horn, low frequency speaker and network are housed in utility cabinet which may be finished to taste or mounted in walls or furniture. 60-15,000 cps. Impedance, 4 ohms. 30 watts. Dimensions: Height 20"; Width 30½"; Depth 13¾". Wt. 82 lbs.
List Price: $280.70

*Distributed by Graybar Electric Co.

290 SPEAKER

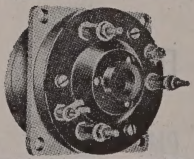


Designed to fit on throats of Altec Lansing multicellular horns. So used, 290 speaker will produce sound level of 98 db (ref, 10^{16} watts/cm^2) at 5' with input of 0.1 watt at 1 kc. Mounted in cast bakelite ring, entire diaphragm and v.c. assembly is field replaceable. When used for all-range reproduction, attenuate frequencies below 300 cps. 30 watt capacity above 300 cps. 24 ohm v.c. under normal horn loading conditions. 6⅛" dia. x 4⅞" deep. Wt. 21 lbs.
Net Price: $159.00

720A RECEIVER*

500-6500 cps. 30 watts. 8 ohms. 4 1/16" x 4 1/16" x 3¼". Weight, 4 lbs.
List Price: $73.20

*Distributed by Graybar Electric Co.



Horn Code #	Cell Configuration	Sound Distribution Horizontal	Sound Distribution Vertical	Dimensions †L-W-H	Net Weight (Less Speakers)	NET PRICE	Code No. Throat Required 1 Unit	Code No. Throat Required 2 Units	Code No. Throat Required 4 Units	Throat Code No.	NET PRICE
H-803	2 x 4	70°	35°	36 x 32 x 18	86	$132.00	30162			30162	$18.00
H-1003	2 x 5	90°	35°	35 x 40 x 18	131	177.00	30210	30170		30166	21.00
										30210	21.00
H-1504	3 x 5	105°	60°	34 x 40 x 24	160	249.00	No.	No.	(2)30170	30170	36.00
H-1803	3 x 6	105°	53°	35 x 43 x 25	184	249.00	30166	30172		30172	42.00

† Overall length of horn including throat and 288 unit (s).

ADJUST-A-CONE
Quam
A radio sounds only as good as it's loudspeaker

SPEAKERS

These speakers are engineered and manufactured solely for the replacement field for use in home receivers, auto sets, television sets and intercommunication systems. RMA standard dimensions. Fully dust-proofed. Baked aluminum enamel finish. RMA service guarantee. QUAM UNIVERSAL MOUNTING BRACKET comes with all 3½" to 6½" speakers and may be attached to any two of the FOUR mounting holes in the U shaped pot.

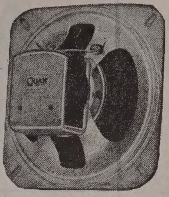
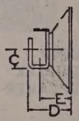


Figure A



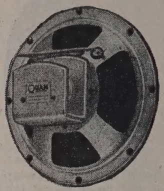


Figure B

ED — *Electro Dynamic Speakers* **PM** — *Permanent Magnet Speakers*

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES C	D	E	SHIP. WT., LBS.	LIST PRICE
ED	3E45	3½"	A	450 Ohms	2.5	1¼	1⅞	1¼	¾	$ 4.40
PM	3A07*	3½"	A	.68 oz. Alnico 5	2.5	¾	1 19/32	1 3/16	½	4.00
ED	4E45	4"	A	450 Ohms	3	1¼	2	1 7/16	1	4.40
	4E10	4"	A	1000 Ohms	3	1¼	2	1 7/16	1	4.40
	4E27	4"	A	2700 Ohms	3	1¼	2	1 7/16	1	4.40
PM	4A07*	4"	A	.68 oz. Alnico 5	3	¾	1 23/32	1 5/16	½	4.00
	4A1	4"	A	1.0 oz. Alnico 5	3	1	2 3/16	1 9/16	¾	4.25
	4A15	4"	A	1.47 oz. Alnico 5	3	1	2 3/16	1 9/16	¾	4.70
ED	5EV6	5"	B	6 Volt	3.5	1¼	2⅛	1 19/32	1¼	4.60
	5E45	5"	B	450 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
	5E10	5"	B	1000 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
	5E18	5"	B	1800 Ohms	3.5	1¼	2⅛	1 19/32	1¼	4.60
	5E27	5"	B	2700 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
PM	5A07*	5"	B	.68 oz. Alnico 5	3.5	¾	1⅞	1 7/16	¾	4.20
	5A1	5"	B	1.0 oz. Alnico 5	3.5	1	2 5/16	1 11/16	1	4.45
	5A15	5"	B	1.47 oz. Alnico 5	3.5	1	2 5/16	1 11/16	1	4.85
ED	52EV6	5¼"	A	6 Volt	4	1¼	2½	1 13/16	1½	5.00
	52E10	5¼"	A	1000 Ohms	4	1¼	2½	1 13/16	1¼	5.00
PM	52A1	5¼"	A	1.0 oz. Alnico 5	4	1	2 23/64	1¾	1	4.65
	52A21	5¼"	A	2.15 oz. Alnico 5	4	1⅛	2⅝	1⅞	1¼	5.70
ED	6EV6	6½"	D	6 Volt	5	1¼	2 23/32	2 1/32	1½	5.40
	6EHV6	6½"	D	6 Volt	6	1 31/64	2 25/32	2 1/16	1¾	6.10
	6E10	6½"	D	1000 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E18	6½"	D	1800 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E25	6½"	D	2500 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E45	6½"	D	450 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
PM	6A1	6½"	D	1.0 oz. Alnico 5	5	1	2⅝	2	1	4.80
	6A15	6½"	D	1.47 oz. Alnico 5	5	1	2⅝	2	1	5.20
	6A21	6½"	D	2.15 oz. Alnico 5	5	1⅛	2⅞	2⅛	1¼	5.85
	6A31	6½"	D	3.16 oz. Alnico 5	6	1⅜	3 11/64	2 9/32	1½	6.75
ED	7EV6	7"	D	6 Volt	7	1 9/32	2¾	—	2	6.75
	7EV6A	7"	D	6 Volt	7	1 9/32	2¾	—	2	6.75
PM	7A21*	7"	D	2.15 oz. Alnico 5	6	⅞	2 21/32	—	1	7.25
	7A31	7"	D	3.16 oz. Alnico 5	9	1¼	3 1/32	—	2	8.50
ED	8EV6	8"	D	6 Volt	7	1¼	3 9/32	—	1¾	6.75
	8E10	8"	D	1000 Ohms	7	1¼	3 9/32	—	1½	6.75
	8EH10	8"	D	1000 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
	8E18	8"	D	1800 Ohms	7	1¼	3 9/32	—	1¾	6.75
	8EH18	8"	D	1800 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
	8E25	8"	D	2500 Ohms	7	1¼	3 9/32	—	1¾	6.75
	8EH25	8"	D	2500 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
PM	8A21	8"	D	2.15 oz. Alnico 5	7	1⅛	3 13/32	—	1½	7.20
	8A31	8"	D	3.16 oz. Alnico 5	9	1⅜	3 21/32	—	2¼	8.50

**Very shallow construction.*

3½" speakers — without Adjust-a-Cone suspension.

Voice coil impedance of above speakers is 3.2 ohms ± 10%.

TELEVISION SPEAKERS. The resistances of television speakers are too varied to provide stock replacements. Order the exact field resistance required in these special cases. Such speakers are shipped 48 hours from receipt of order. INTERCOMMUNICATION SPEAKERS requiring special voice coil impedances are supplied within 48 hours from receipt of order at an increase of 25¢ list price.

ADJUST-A-CONE
QUAM
A radio sounds only as good as its loudspeaker

SPEAKERS

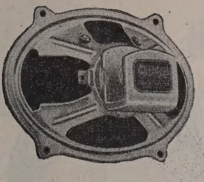
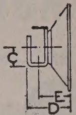


Figure C



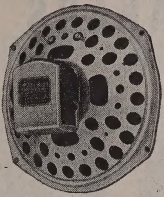


Figure D

QUAM speakers have been produced under the same management since 1923 and are used by leading set and sound equipment manufacturers throughout the world. They are nationally advertised, fully protected by patents—their use insures customer satisfaction. QUAM WEATHERPROOFED SPEAKERS are especially designed for OUTDOOR THEATRE installation. Quotations on request.

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES C	D	E	SHIP. WT., LBS.	LIST PRICE
ED	10E60	10"	B	600 Ohms	10	1¾	5 1/16	—	4	$10.50
	10E10	10"	B	1000 Ohms	10	1¾	5 1/16	—	4	10.50
	10E15	10"	B	1500 Ohms	10	1¾	5 1/16	—	4	10.50
	10E25	10"	B	2500 Ohms	10	1¾	5 1/16	—	4	10.50
PM	10A31	10"	B	3.16 oz. Alnico 5	9	1⅜	4½	—	2¾	10.50
	10A4A	10"	B	4.64 oz Alnico 5	10	1⅜	4½	—	3¼	11.70
	10A6A	10"	B	6.8 oz Alnico 5	12	1 7/16	4⅝	—	3½	13.60
ED	12E60	12"	B	600 Ohms	12	1¾	5⅝	—	5	12.65
	12E10	12"	B	1000 Ohms	12	1¾	5⅝	—	5	12.65
	12E15	12"	B	1500 Ohms	12	1¾	5⅝	—	5	12.65
	12E25	12"	B	2500 Ohms	12	1¾	5⅝	—	5¼	12.65
PM	12A31A	12"	B	3.2 oz. Alnico 5	10	1¼	4 19/32	—	3¾	11.35
	12A4A	12"	B	4.64 oz. Alnico 5	12	1⅜	5⅛	—	4	12.65
	12A6A	12"	B	6.8 oz. Alnico 5	14	1 7/16	5¼	—	4¾	14.50
ED	46E45	4" x 6"	C	450 Ohms	3.5	1 5/64	2 15/64	1⅝	1¼	5.30
	46E10	4" x 6"	C	1000 Ohms	3.5	1 5/64	2 15/64	1⅝	1¼	5.30
	46E15	4" x 6"	C	1500 Ohms	3.5	1 5/64	2 15/64	1⅝	1¼	5.30
PM	46A07*	4" x 6"	C	.68 oz. Alnico 5	3.5	¾	1 15/16	1 27/64	¾	4.45
	46A1	4" x 6"	C	1.0 oz. Alnico 5	3.5	1	2¼	1 9/16	1	4.75
	46A15	4" x 6"	C	1.47 oz. Alnico 5	3.5	1	2¼	1 9/16	1	5.15
ED	57E45	5" x 7"	C	450 Ohms	5	1¼	3 1/64	2 11/32	1½	6.00
	57E10	5" x 7"	C	1000 Ohms	5	1¼	3 1/64	2 11/32	1½	6.00
PM	57A1	5" x 7"	C	1.0 oz. Alnico 5	5	1	2 57/64	2 9/32	1	5.40
	57A15	5" x 7"	C	1.47 oz. Alnico 5	5	1	2 57/64	2 9/32	1	5.80
	57A21	5" x 7"	C	2.15 oz. Alnico 5	5	1⅛	3 9/64	2 13/32	1¼	6.45
ED	69EV6	6" x 9"	C	6 Volt	8	1	3 13/16	—	2	7.50
	69E10	6" x 9"	C	1000 Ohms	8	1	3 13/16	—	2	7.50
PM	69A2*	6" x 9"	C	1.4 oz. Alnico 5	8	⅞	2 15/16	—	1½	7.50
	69A3	6" x 9"	C	3.2 oz. Alnico 5	10	1¼	3 5/16	—	1¾	8.95

**Very shallow construction.*

Voice coil impedance of above speakers is 3.2 ohms ± 10%.

PUBLIC ADDRESS SPEAKERS

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	8A4	8"	B	4.64 oz. Alnico 5	12	1⅜	3¾	—	2½	$10.20
	8A6	8"	B	6.8 oz. Alnico 5	12	1 7/16	3⅞	—	3	12.10
PM	10A4	10"	B	4.64 oz. Alnico 5	14	1⅜	4½	—	3¼	11.70
	10A6	10"	B	6.8 oz. Alnico 5	14	1 7/16	4⅝	—	3½	13.60
	10A10	10"	B	10 oz. Alnico 5	20	1⅜	4 21/64	—	3½	18.00
PM	12A4	12"	B	4.64 oz. Alnico 5	15	1⅜	5⅛	—	4	12.65
	12A6	12"	B	6.8 oz. Alnico 5	15	1 7/16	5¼	—	4¾	14.50
	12A10	12"	B	10 oz. Alnico 5	25	1⅜	4 15/16	—	4¾	19.00
PM	12A6CO	12" Co	B	6.8 oz. Alnico 5	14.0	2¼	6 1/16	—	10	30.00
	15A10CO	15" Co	B	10 oz. Alnico 5	20.0	2 5/16	8⅜	—	15	47.50

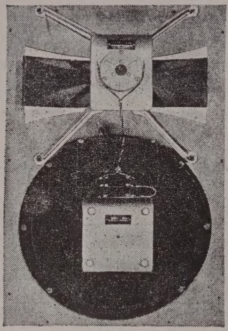
Voice coil impedance of above speakers is 6-8 ohms.

QUAM ADJUST-A-CONE SUSPENSION	QUAM U SHAPED COIL POT
While in other speakers, the spider is cemented in place with no means of accurate final adjustment, the QUAM method permits precision centering of the voice coil in a final production operation.	A patented feature used throughout the QUAM replacement line, provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field.

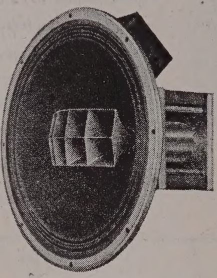
TRU SONIC

Speaker Systems for Theater and Home

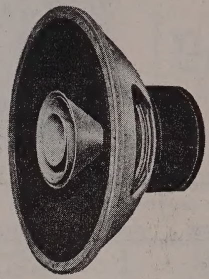
SPEAKERS



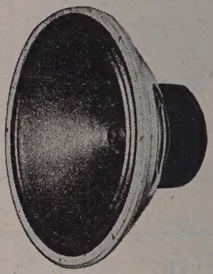
MODEL 409



MODEL 106AX



MODEL 102FR



MODEL 103LX

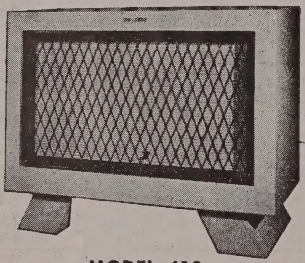
MODEL 409 800 CYCLE TWO-WAY SYSTEM. Model 814H 1x4 horn, Model 800X-2 high pass filter network, Model P-52LX low-frequency driver and Model P-15 high-frequency driver. Mounted on flat board baffle........**List Price, $212.00**

MODEL 106AX 15″ TWO-WAY COAXIAL SPEAKER. Two voice coils. 6 lb. Alnico V permanent magnet. 16 ohms........**List Price, $166.00**

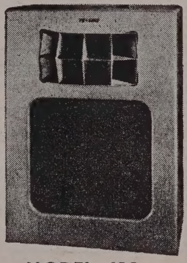
MODEL 102FR 15″ CO-SPIRAL FULL RANGE SPEAKER. One voice coil. 4 lb. Alnico V permanent magnet, 8 to 16 ohms. **List Price, $94.00**

MODEL 103LX 15″ LOW-FREQUENCY DRIVER. 4.2 lb. Alnico V permanent magnet. 41 cycle cone. 8 or 16 ohms (please specify)........**List Price, $90.00**

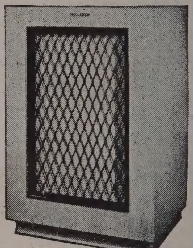
CABINETS



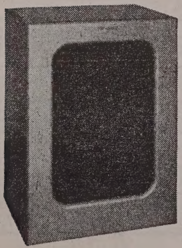
MODEL 410



MODEL 411



MODEL 412



MODEL 52

MODEL 410 800 CYCLE TWO-WAY SYSTEM. Model 814H 1x4 horn. Model 800X-2 high pass filter network, Model P-52LX low-frequency driver, and Model P-15 high-frequency driver, mounted in low-boy blonde or mahogany cabinet........**List Price, $372.00**

MODEL 411 800 CYCLE TWO-WAY SYSTEM. Model 824H 2x4 horn, Model 800X crossover, Model P-52LX low-frequency driver and Model P-15 high-frequency driver. Silver hammertone finish or unfinished hardwood cabinet........**List Price, $342.00**

MODEL 417 Same as Model 411, except with Model 103LX low-frequency driver and Model 108 high-frequency driver........**List Price, $374.00**

MODEL 412 800 CYCLE TWO-WAY SYSTEM. Contains Model 409 System as described above. Blonde or mahogany cabinet........**List Price, $346.00**

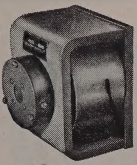
MODEL 52 CABINET—Silver hammertone finish or unfinished with wine flocked grille. ¾″ hardwood plywood. 6 cu. ft., 42 cycles, 15″ baffle standard. Please specify if 12″ required. ....**List Price, $69.00**

MODEL 52-P PORTABLE CABINET—In black leatherette, with chromium hardware. 15″ baffle standard. Please specify if 12″ required........**List Price, $69.00**

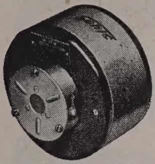
STEPHENS MANUFACTURING CORPORATION

TRU SONIC

Speaker Systems for Theater and Home



MODEL P-15



MODEL 108
MODEL P-30
MODEL P-40

HIGH-FREQUENCY DRIVERS

MODEL 107 HY-SON SUPER HIGH-FREQUENCY REPRODUCER SYSTEM for the 3500-20,000 c.p.s. range. 16 ohms. Complete with high pass filter network.......**List Price, $56.00**

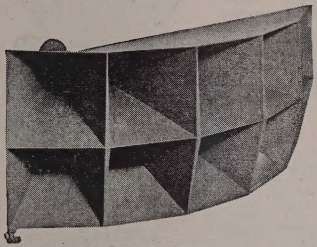
MODEL P-15 HIGH-FREQUENCY DRIVER. Full 20 watts above 800 c.p.s. 1½ lb. Alnico V permanent magnet. 16 ohms.......**List Price, $62.00**

MODEL 108 HIGH-FREQUENCY DRIVER. Full 20 watts above 800 c.p.s. 1½ lb. Alnico V permanent magnet. 16 ohms. Dimensions: 3¾″ deep x 5″ diameter. Weight: 9 lbs..**List Price, $80.00**

MODEL P-30 HIGH-FREQUENCY DRIVER. Full 30 watts above 400 c.p.s. 2½ lb. Alnico V permanent magnet. 16 ohms. Dimensions: 6¼″ deep x 4″ diameter. Weight: 15½ lbs.

MODEL P-40 HIGH-FREQUENCY DRIVER. Full 40 watts above 400 c.p.s. 4½ lb. Alnico V per-
List Price, $118.00
manent magnet. 16 ohms. Dimensions: 4⅝″ deep x 7″ diameter. Weight: 20 lbs.
List Price, $160.00

STANDARD HORNS



MODEL 625-H

MODEL 814H 1x4 HORN. 800 c.p.s. cutoff. Takes Model P-15 or 108 high-frequency driver.......**List Price, $28.00**

MODEL 824H 2x4 HORN. 800 c.p.s. cutoff. Takes Model P-15 or 108 high-frequency driver.......**List Price, $49.00**

MODEL 825H 2x5 HORN. 800 c.p.s. cutoff. Takes Model P-15 or 108 high-frequency driver.......**List Price, $62.00**

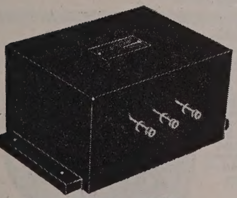
MODEL 826H 2x6 HORN. 800 c.p.s. cutoff. Takes Model P-15 or 108 high-frequency driver.......**List Price, $68.00**

MODEL 625H 2x5 HORN. 600 c.p.s. cutoff. Takes Model P-30 or P-40 high-frequency driver.......**List Price, $101.00**

MODEL 425H 2x5 HORN. 400 c.p.s. cutoff. Takes Model P-30 or P-40 high-frequency driver.......**List Price, $182.00**

MODEL 436H 3x6 HORN. 400 c.p.s. cutoff. Y throat to accommodate two Model P-30 or P-40 high-frequency drivers.
List Price, $308.00

CROSSOVER NETWORKS



MODEL 400X

MODEL 800X CROSSOVER. 800 c.p.s. 16 ohms input and output.
List Price, $40.00

MODEL 600X CROSSOVER. 600 c.p.s. 16 ohms input and output.
List Price, $60.00

MODEL 400X CROSSOVER. 400 c.p.s. 16 ohms input and output.
List Price, $84.00

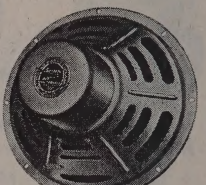
MODEL 800X-2 HIGH PASS FILTER NETWORK. 800 c.p.s. 16 ohms input and output.
List Price, $28.00

These and additional items in the STEPHENS TRU SONIC line are more completely illustrated and described in company catalog, free on request.

STEPHENS MANUFACTURING CORPORATION

Jensen

Standard Series speakers, although moderately priced, are exceptionally good in performance and are highly recommended for use in radio and television receivers, recorders, public address equipment, intercommunication systems and similar applications. Models listed on this page have been completely redesigned in every detail. Magnetic structures have been designed to achieve maximum gap energy, cones selected for uniformity of response, and all speakers are completely dust-proof. Models listed are standard fidelity response only. Standard Series speakers are finished in aluminum.

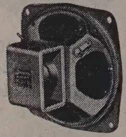


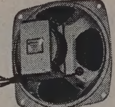
ALNICO 5 PM MODELS

These PM speakers embody the highly efficient Alnico 5 magnets which insure long life and highest efficiency. Because Alnico 5 magnets are many times more powerful, ounce for ounce, than their predecessors, speakers so equipped offer obvious advantages: lighter weight, for savings in shipping costs; and smaller size, for savings in space in cabinet installations.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Openg.	VOICE COIL Diam., In.	Imped., Ohms	Power Watts	*Transformer Size	List Price
12"	P12-S	ST-102	1.5	12⅛	$6\frac{1}{16}$	10½	1	6-8	10.0	⅞x⅞"	$18.85
	P12-T	ST-101	1.1	12⅛	$6\frac{1}{16}$	10½	1	6-8	9.0	¾x¾"	14.50
10"	P10-S	ST-120	1.5	10⅛	5¼	8¾	1	6-8	9.0	¾x¾"	16.30
	P10-T	ST-119	1.1	10⅛	5¼	8¾	1	6-8	8.0	¾x¾"	12.75
6x9"	P69-S	ST-812	1.5	6⅜x9¼	$3\frac{11}{16}$	5⅜x8⅛	1	3-4	8.0	¾x¾"§	14.00
	P69-T	ST-811	1.1	6⅜x9¼	$3\frac{11}{16}$	5⅜x8⅛	1	3-4	7.5	¾x¾"§	11.85
	P69-V	ST-810	.51	6⅜x9¼	3¼	5⅜x8⅛	¾	3-4	5.0	⅝x⅝"§	9.75
8"	P8-S	ST-104	1.5	8⅛	$3\frac{13}{16}$	6¾	1	6-8	8.0	¾x¾"	13.70
	P8-T	ST-117	1.1	8⅛	3⅝	6¾	¾	3-4	7.0	¾x¾"	11.50
	P8-U	ST-116	.74	8⅛	3½	6¾	¾	3-4	6.0	⅝x⅝"	10.20
	P8-V	ST-115	.51	8⅛	3⅜	6¾	¾	3-4	5.0	⅝x⅝"	8.70
7"	P7-T	ST-807	1.1	7⅝	3¼	6	¾	3-4	6.5	¾x¾"§	9.85
	P7-U	ST-806	.74	7⅝	3¼	6	¾	3-4	5.5	⅝x⅝"§	8.65
6"	P6-T	ST-112	1.1	$6\frac{11}{16}$	$3\frac{3}{16}$	5¼	¾	3-4	6.0	⅝x⅝"	9.65
	P6-V	ST-110	.51	$6\frac{11}{16}$	$2\frac{15}{16}$	5¼	$\frac{9}{16}$	3-4	4.0	⅝x⅝"	7.40
	P6-W	ST-109	.36	$6\frac{11}{16}$	2⅞	5¼	$\frac{9}{16}$	3-4	3.5	½x½"	6.40
	P6-X	ST-108	.25	$6\frac{11}{16}$	2¾	5¼	$\frac{9}{16}$	3-4	3.0	½x½"	5.70
5¼"	P525-V	ST-803	.51	5¼	2½	4½	$\frac{9}{16}$	3-4	4.0	⅝x⅝"§	6.65
5"	P5-V	ST-107	.51	5	$2\frac{7}{16}$	4	$\frac{9}{16}$	3-4	3.5	½x½"	6.70
	P5-X	ST-105	.25	5	2¼	4	$\frac{9}{16}$	3-4	2.5	½x½"	5.30
	P5-X	ST-740	.25	5	2¼	4	$\frac{9}{16}$	45-50	2.5	½x½"	5.55
4"	P4-X	ST-113	.25	5	2	3½	$\frac{9}{16}$	3-4	2.0	½x½"	5.00
	P4-X	ST-739	.25	5	2	3½	$\frac{9}{16}$	45-50	2.0	½x½"	5.40

*Size recommended. See Transformer listing. †Millions of ergs. §No transformer mounting facilities.



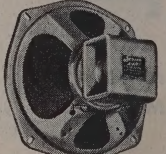


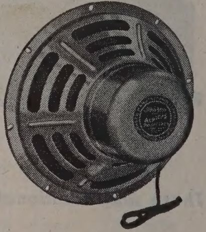
FIELD COIL MODELS

Like their PM counterparts, Standard Series field coil models have been completely redesigned and are equipped with hum neutralizing coils. Finish is aluminum. Models listed on this page are standard fidelity.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	FIELD Resist., Ohms	Power Watts	*Transformer Size	List Price
12"	F12-S	ST-744	1.5	12⅛	$6\frac{7}{16}$	10½	1	3-4	10.0	1000	8.5	⅞x⅞"	$18.52
	F12-S	ST-173	1.5	12⅛	$6\frac{7}{16}$	10½	1	3-4	10.0	1500	8.5	⅞x⅞"	18.46
10"	F10-S	ST-745	1.5	10⅛	5⅝	8¾	1	3-4	9.0	750	8.5	¾x¾"	15.53
	F10-S	ST-175	1.5	10⅛	5⅝	8¾	1	3-4	9.0	1500	8.5	¾x¾"	16.04
6x9"	F69-T	ST-814	1.1	6⅜x9¼	$4\frac{1}{16}$	5⅜x8⅛	1	3-4	7.5	4	6-volt	¾x¾"§	11.73
	F69-U	ST-813	.74	6⅜x9¼	3½	5⅜x8⅛	¾	3-4	6.0	4	6-volt	⅝x⅝"§	10.06
8"	F8-S	ST-746	1.5	8⅛	$4\frac{9}{16}$	6¾	1	3-4	8.0	750	8.5	¾x¾"	13.46
	F8-S	ST-177	1.5	8⅛	$4\frac{9}{16}$	6¾	1	3-4	8.0	1500	8.5	¾x¾"	14.03
	F8-T	ST-179	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	1000	7.0	¾x¾"	11.21
	F8-T	ST-180	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	‡1800	7.0	¾x¾"	11.33
	F8-W	ST-736	.36	8⅛	3⅜	6¾	¾	3-4	4.0	1000	5.0	⅝x⅝"	8.40
	F8-W	ST-737	.36	8⅛	3⅜	6¾	¾	3-4	4.0	‡1800	5.0	⅝x⅝"	8.86
7"	F7-T	ST-809	1.1	7⅝	$3\frac{3}{16}$	6	1	3-4	7.0	4	6-volt	¾x¾"§	10.93
	F7-U	ST-808	.74	7⅝	3¼	6	¾	3-4	5.5	4	6-volt	⅝x⅝"§	9.43
6"	F6-U	ST-186	.74	$6\frac{11}{16}$	3⅜	5¼	¾	3-4	5.0	1000	6.0	⅝x⅝"	8.57
	F6-U	ST-187	.74	$6\frac{11}{16}$	3⅜	5¼	¾	3-4	5.0	‡1800	6.0	⅝x⅝"	8.57
	F6-X	ST-189	.25	$6\frac{11}{16}$	$2\frac{15}{16}$	5¼	$\frac{9}{16}$	3-4	3.0	450	4.5	½x½"	7.02
	F6-X	ST-166	.25	$6\frac{11}{16}$	$2\frac{15}{16}$	5¼	$\frac{9}{16}$	3-4	3.0	1000	4.5	½x½"	7.13
	F6-X	ST-168	.25	$6\frac{11}{16}$	$2\frac{15}{16}$	5¼	$\frac{9}{16}$	3-4	3.0	‡1800	4.5	½x½"	7.48
5"	F5-X	ST-194	.25	5	$2\frac{7}{16}$	4	$\frac{9}{16}$	3-4	2.5	450	4.5	½x½"	6.79
	F5-X	ST-165	.25	5	$2\frac{7}{16}$	4	$\frac{9}{16}$	3-4	2.5	1000	4.5	½x½"	6.84
	F5-X	ST-167	.25	5	$2\frac{7}{16}$	4	$\frac{9}{16}$	3-4	2.5	‡1800	4.5	½x½"	7.13
4"	F4-X	ST-196	.25	5	2¼	3½	$\frac{9}{16}$	3-4	2.0	450	4.5	½x½"	6.50
	F4-X	ST-164	.25	5	2¼	3½	$\frac{9}{16}$	3-4	2.0	1000	4.5	½x½"	6.56
	F4-X	ST-198	.25	5	2¼	3½	$\frac{9}{16}$	3-4	2.0	2800	4.5	½x½"	6.84

*Size recommended. See Transformer listing. †Millions of ergs. ‡Tapped at 300 ohms. 1500-ohm section can be used at full power excitation. Field resistance for full excitation will rise approximately 20%. §No transformer mounting facilities.





VOLUME AND RANGE CONTROLS

These "L Pad" type volume controls are highly satisfactory for use in voice coil circuits. Complete with pointer knob and escutcheons.

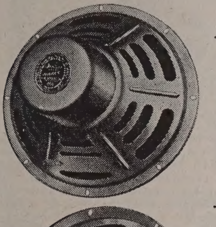
ST-276—Level Control, 6-8 ohms, 5 watts	$2.50
ST-411—Level Control, 6-8 ohms, 15 watts	3.30
ST-606—Range Control, 16 ohms, 15 watts	3.80
ST-760—Level Control, 3-4 ohms, 5 watts	2.75
ST-761—Level Control, 500-600 ohms, 15 watts	4.60

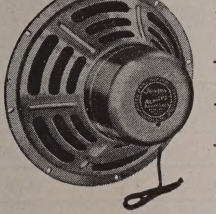
Jensen

Concert SPEAKERS

JENSEN Concert Series speakers have long been known and acclaimed by the trade and by users for their **plus** performance. From the earliest days, Concert speakers have been recognized by such familiar designations as A12-PM, PM8-C and others and have been known as the finest speakers anywhere available for heavy-duty applications. Now, in greatly improved design, they are highly recommended for any purpose where exceptional power handling ability and high-quality performance are essential. Standard fidelity models are listed on this page.

Concert speakers are attractively finished in blue-gray lacquer and completely dustproofed. Field coil models are equipped with hum neutralizing coils.





ALNICO 5 PM MODELS

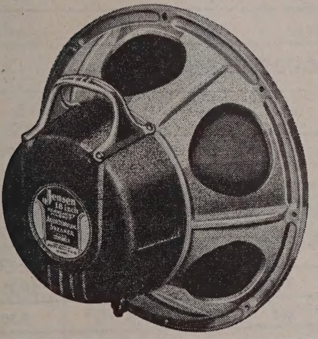
Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Power Watts	*Transformer Size	List Price
15″	P15-N	ST-654	6.6	15⅛	8	13¼	1½	8	20.0	1x1″	$70.50
	P15-P	ST-655	4.6	15⅛	8	13¼	1½	8	18.0	1x1″	54.75
	P15-Q	ST-678	3.2	15⅛	8	13¼	1¼	8	16.0	⅞ x ⅞″	44.25
12″	P12-N	ST-656	6.6	12 1/16	7	10½	1½	8	18.0	1x1″	56.50
	P12-P	ST-657	4.6	12⅛	6 7/16	10½	1½	8	16.0	⅞ x ⅞″	39.20
	P12-Q	ST-673	3.2	12⅛	6 1/16	10½	1¼	8	14.0	⅞ x ⅞″	32.90
	P12-R	ST-103	2.2	12⅛	6 1/16	10½	1	6-8	12.0	⅞ x ⅞″	21.20
10″	P10-Q	ST-676	3.2	10⅛	5¼	8¾	1¼	8	12.0	⅞ x ⅞″	29.00
	P10-R	ST-121	2.2	10⅛	5¼	8¾	1	6-8	10.0	⅞ x ⅞″	18.70
8″	P8-Q	ST-677	3.2	8⅛	4 15/16	6¾	1¼	8	10.0	⅞ x ⅞″	28.40
	P8-R	ST-169	2.2	8⅛	4	6¾	1	6-8	9.0	¾ x ¾″	16.40

Model P8-Q weatherproof design. No transformer mounting facilities.

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	FIELD Resist., Ohms	Power Watts	*Transformer Size	List Price
15″	F15-N	ST-661	6.6	15⅛	8⅜	12⅛	1½	8	20.0	4000	17.5	1x1″	$55.66
	F15-N	ST-662	6.6	15⅛	8⅜	12⅛	1½	8	20.0	5300	17.5	1x1″	55.66
	F15-Q	ST-663	3.2	15⅛	8⅜	12⅛	1¼	8	16.0	1000	12.0	⅞ x ⅞″	36.05
12″	F12-N	ST-666	6.6	12 1/16	7 13/16	10½	1½	8	18.0	4000	17.5	1x1″	46.17
	F12-N	ST-667	6.6	12 1/16	7 13/16	10½	1½	8	18.0	5300	17.5	1x1″	46.17
	F12-Q	ST-668	3.2	12⅛	7 13/16	10½	1¼	8	14.0	1000	12.0	⅞ x ⅞″	26.57

*Size recommended. See Transformer listing. †Millions of ergs. Field resistance for full excitation will rise approximately 20%.



AUDITORIUM SPEAKERS

The first highly-efficient large-size speaker was designed and produced by JENSEN in 1928. It was named the "Auditorium" and never were critics more consistent in its endorsement as the utmost in heavy-duty speakers. For more than 20 years JENSEN Auditorium speakers have set the highest standards for efficiency, response characteristics and faithful performance. Today, the Auditorium line has been completely redesigned and comprises undeniably the best known and most highly respected speakers available, second only to JENSEN Coaxials. They are recommended for theatres, public address systems, fine electronic musical instruments, where the utmost in quality reproduction and power handling ability are required.

Nominal Size	Model No.	Stock No.	†Gap Energy Levels	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	*Transformer Size	List Price
18″	PMJ-18	ST-541	28.1	18	9¾	15¾	2½	8	30	1x1¼″	$340.00
15″	P15-L	ST-758	13.6	15⅛	8	13¼	2	8	25	1x1¼″	122.50

*Size recommended. See Tranformer listing. †Millions of ergs.

VIKING LOUDSPEAKERS

MOST PERFORMANCE AT LOWEST COST FOR RADIO AND TV REPLACEMENTS & UTILITY APPLICATIONS

JENSEN has designed these VIKING loudspeakers to give you the most performance at low cost for radio and TV replacements and utility applications. A complete range of sizes from 3½ inch to 12 inch, with three oval types—all with Alnico 5 magnets. Designs are especially compact, an evident advantage in the servicing of compact and portable sets. CTM Bracket Set available separately contains parts and hardware for mounting speaker on chassis and ½ x ½ transformer on speaker if necessary.

Nominal Size	Model No.	DIMENSIONS Overall	Depth	V. C. Imped. Ohms	Price**
3½"	35J4	3 7/16	1⅜	3-4	$1.89
4"	4J4	4⅛	1 9/16	3-4	1.87
5"	5J4	5 1/16	1¾	3-4	2.05
5¼"	525J4	5 5/16	1⅞	3-4	2.12
6"	6J4	6 1/16	2⅛	3-4	2.26
7"	7J9	6⅞	2 13/16	3-4	3.04
8"	8J9	7 11/16	2 15/16	3-4	3.25
10"	10J12‡	10⅛	3 11/16	3-4	5.00
12"	12J12‡	12 3/16	4 7/16	3-4	5.79
4x6"	46J6	6 3/16 x4⅛	1 11/16	3-4	2.49
5x7"	57J9	7¼ x5	2⅝	3-4	3.17
6x9"	69J9	9¼ x6⅜	3	3-4	3.51

‡10J11 and 12J11 alternative designs may be substituted.

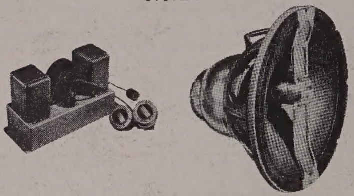
CTM Bracket Set contains necessary parts and hardware for mounting ½″ x ½″ transformer on speaker and speaker on receiver chassis. Fits 3½″, 4″, 5″, 5¼″ and 6″ speakers. **Dealer Net $0.25****

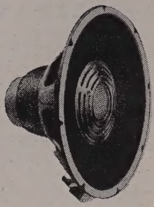
**Net

Jensen

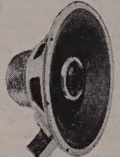
FINE ACOUSTIC EQUIPMENT

G-610 TRIAXIAL
3-WAY LOUDSPEAKER
SYSTEM



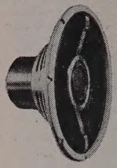


H-510
COAXIAL



K-310
COAXIAL

GENUINE Jensen WIDE RANGE



K-210
COAXIAL

GENUINE JENSEN WIDE RANGE is the designation given to a distinguished series of loudspeakers, each designed to give the finest possible reproduction for the particular type and size. A selection of a high fidelity loudspeaker from this series thus insures a maximum of reproduction quality at any cost level. Particular attention has been given to the 7 Performance Points essential to thrilling, realistic reproduction: (1) Wide Frequency Range, (2) Balanced Frequency Response, (3) Smooth Response, (4) Wide Angle Distribution, (5) Low Distortion, (6) Good Efficiency, and (7) Adequate Power-Handling Capacity.

The new G-610, world's finest loudspeaker, is the first integral three-way system. It is furnished complete with 3-Channel Cross-over and Control Network. The G-610 for the first time reproduces everything the ear can hear and provides true transport to the original. Data Sheet 160 gives complete details. Model H-510 with Acoustic Lens is an outstanding 2-way coaxial reproducer, unsurpassed as to "clearness" and "presence" for this type of speaker. Data Sheet 152 and booklet "Let Music Come to Life" describe Jensen Coaxial and other Genuine Wide-Range loudspeakers. Ask for them.

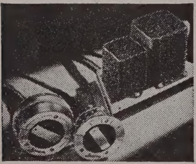
TRIAXIAL AND COAXIAL SPEAKERS

Nominal Size	Model No.	Type	Stock No.	Input Imped. Ohms	Power Watts	Freq. Range Rating‡	Baffle Opening In.	O.D. In.	Depth In.	List Price
15″	G-610	Triaxial	ST-900	16	35	†8 LIM	13¼	15⅜	10¾	$382.50
15″	H-510	Coaxial	ST-828	16	25	†7 LIM	13¼	15⅛	9 9/16	154.50
15″	K-310	Coaxial	ST-830	16	16	†7 LIM	13¼	15⅛	8⅛	65.50
12″	K-210	Coaxial	ST-831	8	12	†7 LIM	10½	12⅛	6 5/16	39.50

EXTENDED-RANGE SINGLE-UNIT DIRECT-RADIATOR LOUDSPEAKERS (+6 LIM)‡

Nominal Size	Model No.	Stock No.	*Gap Energy Level	Dimensions, Inches O.D.	Depth	Baffle Open	Voice Coil Diam. In.	Imped. Ohms	Pwr. Watts	Transformer Size†	List Price
15″	P15-NX	ST-817	6.6	15⅛	8	13¼	1½	8	18.0	1″x1″	$76.75
12″	P12-NX	ST-819	6.6	12 1/16	7	10½	1½	8	16.0	1″x1″	61.50
	P12-RX	ST-885	2.2	12⅛	6 1/16	10½	1	6-8	11.0	⅞″x⅞″	23.80
	P12-SX	ST-821	1.5	12⅛	6 1/16	10½	1	6-8	9.0	⅞″x⅞″	21.20
10″	P10-RX	ST-886	2.2	10⅛	5¼	8¾	1	6-8	9.0	⅞ x ⅞	21.00
	P10-SX	ST-823	1.5	10⅛	5¼	8¾	1	6-8	8.0	¾″x¾″	18.55
8″	P8-RX	ST-887	2.2	8⅛	4	6¾	1	6-8	8.0	¾″x¾″	18.20
	P8-SX	ST-825	1.5	8⅛	3 13/16	6¾	1	6-8	7.0	¾″x¾″	15.20
6″	P6-TX	ST-826	1.1	6 11/16	3 3/16	5¼	¾	3-4	5.0	⅝″x⅝″	10.35
5″	P5-TX	ST-827	1.1	5 1/16	2⅝	4 5/16	¾	3-4	4.0	½″x½″	9.50

*Millions of ergs. †Size recommended. ‡See page C-11 for explanation.



CONTROL NETWORK

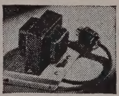
Adjustable level and high-frequency range controls for Models H-510, K-410 and K-310 Coaxial speakers. Mounts directly on speaker housing. Plug-in connections. Input impedance 16 ohms. May be used with Impedance-Adjusting Transformers. Chassis complete with network, speaker connection cord and plug, Level Control and H-F Range Control on individual 30″ cables for remote mounting on cabinet, satin brass flush-type escutcheons, bar knobs and mounting screws.

A-110 Control Network, ST-832. **List Price $31.50**

H-F CONTROL

"L"-type variable control for "shelving" high-frequency response of Model K-210 Coaxial. Impedance 16 ohms. Complete with flush-type satin brass escutcheon and bar knob.

ST-836 Control **List Price $5.25**



IMPEDANCE-ADJUSTING TRANSFORMERS

Designed to provide alternative input impedances for Models H-510 and K-310 Coaxial speakers. High fidelity. Switch on chassis gives choice of two impedance values. No wiring necessary, connecting plug inserted in socket on speaker terminal panel. May be used with Model A-110 Control Network.

Model T-101. ST-833—Impedances 4 and 8 ohms...**List Price $13.25**

Model T-102. ST-834—Impedances 500-600 and 250 ohms. **List Price $13.25**

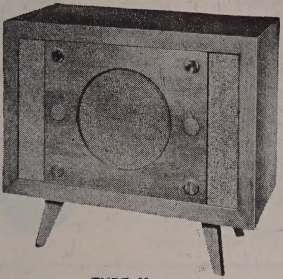
The following transformers are high fidelity encased units especially designed for use with the G-610 Triaxial and mount directly on the Network Chassis. Connections are made by removing shorting plug and inserting transformer plug.

Model T-201. ST-846—Impedances of 4 or 8 ohms....**List Price $20.60**

Model T-202. ST-847—Impedance 500-600 ohms....**List Price $20.60**

Jensen

BASS REFLEX CABINETS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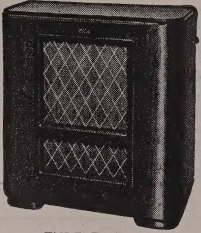
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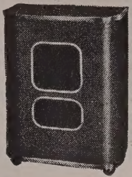
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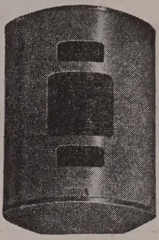
TYPE H

Type M CUSTOMODE IMPERIAL CABINET is an outstanding example of fine modern design with the outstanding performance of JENSEN Bass Reflex. Accommodates any 15" speaker. May be placed on side or end as desired. Front panel easily quickly removed for installation or replacement by unscrewing four brass discs. Speaker is held in place by means of machine screws and anchor nuts set into back of panel. Concealed cut-outs for H-F Range and Level Controls. Furnished complete with removable grille cloth-screen and two wedge foot rails. (Note· Leg Assembly illustrated not furnished and must be ordered separately. See below) Complete description in Data Sheet 161

LEG ASSEMBLY for M Cabinet. Modern leg assembly for "low-boy" effect with Type M cabinet as illustrated above. Raises cabinet 8" above floor. Not furnished with cabinet; must be ordered separately. Shipping wt., 15 lbs. Specify ST-843 for Blonde; ST-863 for Cordovan.
List Price **$15.75**

Type B UTILITY CABINET is designed for those who desire inexpensive but durably built enclosures. They are well constructed of impregnated composition board and finished in hammered brown lacquer. Three sizes are available: for 15-inch, 12-inch and 8-inch speakers. Feet, unmounted are furnished.

Type D IMPERIAL CABINET is handsomely styled, suitable for any environment, and is well constructed of beautifully striped satin finish veneered walnut, with interlaced bronze strip grille over matching fabric. They are available in two sizes: for 15-inch and for 12-inch speakers. For those requiring the modern touch in home decoration, the Imperial Type B cabinet is also offered in an attractive blonde finish.

Type H SECTOR CABINET for 8-inch speakers, is especially designed for installations where multiple speakers are required for public entertainment or paging. With front curved to a 14¼" radius, they fit anywhere—in corners, on walls, at intersection of ceiling and wall, or on posts. They may be mounted in pairs or clusters for wide-angle sound distribution. They are perfectly adapted to all interior sound installations because of their reasonable price, small size and high-quality performance due to their Bass Reflex design. They are built around a frame of solid wood, with wood composition replacing the usual plywood panels. Finished in brown lacquer, covering colors may be applied to match the locale of the installation. Brackets and screws are furnished for mounting.

Jensen No.	Stock No.	Speaker Size	Finish	DIMENSIONS, Inches Height	Width	Depth	Shipping Weight, Lbs.	List Price
M-253	ST-838	15"	Blonde Mahogany	36	24	18	80	$164.27
M-353	ST-858	15"	Cordovan Mahogany	36	24	18	80	164.27
D-151	ST-157	15"	Regular Walnut	31	27¾	13⅜	50	77.50
D-251	ST-763	15"	Blonde Walnut	31	27¾	13⅜	50	79.50
B-151	ST-743	15"	Brown Lacquer	30¾	27¼	12¼	43	58.00
D-121	ST-156	12"	Regular Walnut	31	27¾	13⅜	50	77.50
D-221	ST-762	12"	Blonde Walnut	31	27¾	13⅜	50	79.50
B-121	ST-742	12"	Brown Lacquer	28½	23¾	11⅞	34	48.95
B-81	ST-741	8"	Brown Lacquer	22¾	18	9	24	34.65
H-81	ST-141	8"	Brown Lacquer	22¾	17¾	8½	14	24.75

NEW JENSEN FREQUENCY RANGE RATING SYSTEM

	JENSEN F.R. RATING			HEARING REFERENCES	TYPICAL USES
20,000 CYCLES	+8 LIM	ULTRA HIGH	FIDELITY	AUDIBILITY LIMIT (BEST EARS—TONE TEST)	BROADCAST MONITORING
	+7			NOISE SOUND EFFECTS PERCUSSION INSTRUMENTS	
	+6	HIGH		BEST EARS } MUSIC MAXIMUM AUDIBLE RANGE (Average Home Conditions)	CUSTOM RADIO-PHONOGRAPH INSTALLATIONS
	+5			AVG. EARS }	
	+4	MEDIUM			INDUSTRIAL SOUND
	+3				
	+2				AUTO RADIO
3,000 CYCLES	+1 LIM	LOW		MINIMUM ACCEPTABLE RANGE FOR MUSIC	COMPACT RADIOS (LIMITED BY CIRCUITS)

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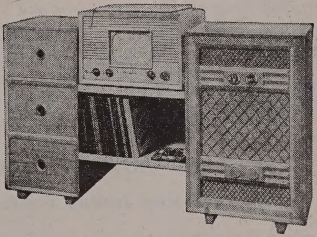
JENSEN *Customode*



CUSTOMODE is the JENSEN "building-block" solution for the problem of housing the custom home entertainment system. Shown is only one of countless combinations which may be assembled from a few basic units. Ask for descriptive folder.

Instead of the former practice of stating frequency limits of loudspeakers in cycles, the r-f region between the minimum useful limit for music and maximum limit for hearing has been divided into eight steps, each of which is just distinguishable from the next as an audible difference for music. The rating of a speaker is determined from the highest interval in which loudness is maintained at a significantly high percentage of normal. The table at left relates the ratings to hearing and typical applications.

Jensen

JENSEN HYPEX PROJECTORS

VH-24
VH-20
VH-15

Because of the Hypex formula (Patent 2,338,262) giving wider sound distribution and greatly improved acoustical performance, JENSEN Hypex projectors are superior to the usual "exponential" type horns. The Alnico 5 unit is entirely enclosed within the one-piece rigid horn yet easily removed and replaced. Stainless steel and other corrosion-resistant materials and specially treated steel parts insure against weather exposure. **Models VH-24, VH-20** and **VH-15** have mounting brackets with clutch-type heavy "U" trunnions which afford complete flexibility of adjustment with positive locking into desired position. Weatherproof terminal boxes provide easy, solderless connections with no exposed terminals. **Model VH-91** has a universal mounting bracket which permits pointing in any direction and secure locking by a single wing nut.

VH-91

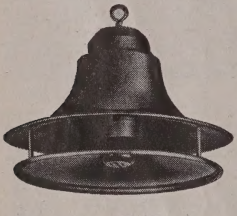
V-21

SPECIFICATIONS

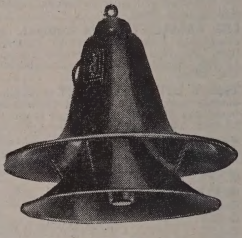
Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VH-24	**ST-685**	110	58	75	25	16	25	22⅜	1x1¼	**$89.50**
VH-20	**ST-684**	140	52	80	25	16	21	20¼	1x1¼	**76.00**
VH-15	**ST-757**	180	36	90	15	8	16	15	¾x¾	**56.50**
VH-91	**ST-171**	300	16	100	15	8	8⅞	7⅝	⅝x⅝	**35.80**

*Not included.

HYPEX *"Three-sixty"* PROJECTORS


VR-11

Designed for the reproduction of speech and music signals at high efficiency where high noise levels exist. The Hypex formula, made famous by JENSEN Hypex projectors, is incorporated in their design giving greatly improved acoustical performance. With the sound distributed over a circle, they are especially suitable for installations where coverage of relatively large areas and suspension from the ceiling are desired. **Model VR-11** is recommended for speech reproduction while **Model VR-241,** of larger size, is intended for speech and music reinforcement. Driver unit has phenolic diaphragm; **VR-241** uses same diaphragm as VH-24 and VH-20; **VR-11** uses same diaphragm as VH-15 and VH-91. **VR-241** is equipped with weatherproof terminal box with connecting cable passing through rubber grommet and leads attached to screw terminals provided. VR-11 has two-conductor rubber-covered cable for connections. Both equipped with heavy eyebolt at top for suspension.


VR-241

SPECIFICATIONS

Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VR-241	**ST-789**	140	54	360	25	16	25	22	1x1¼	**$98.50**
VR-11	**ST-791**	280	18	360	15	8	11	10⅜	¾x¾	**46.50**

*Not included.

MODEL V-21 DRIVER UNIT

This driver unit incorporates the driver element used in the new Hypex projectors and is electrically and mechanically interchangeable with the former U-20 ST-630 and U-201 ST-732 Driver units. It is designed for replacement service on former Models H-20 ST-726, H-201 ST-733 and H-24 ST-727 Hypex horns. Unit is PM type and equipped with internal screw terminals. Flange is deisgned for ¼″ bolt attachment, with three $\frac{17}{64}$″ holes spaced 120 degrees apart on a radius of 2¾″. Voice coil input 16 ohms and power rating 25 watts.

Model V-21 Driver Unit, ST-787.....................................List Price $36.25

THE "HYPEX" HORN FORMULA

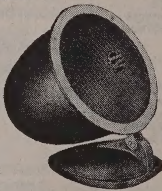
— *An Exclusive Jensen Feature*

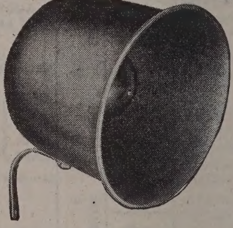
"Hypex" comes from the mathematical term "hyperbolic exponential," which describes the important difference between Jensen projectors and those based on the simple exponential theory. Jensen research discovered a better, more efficient horn formula which maintains effective acoustic loading right down to acoustic cut-off and all Jensen Hypex* Projectors have this exclusive feature for better performance. For the facts on this development and a complete description of horn behavior, write for Technical Monograph No. 5, "Horn-Type Loudspeakers."

Price 25c.

SPEECH MASTER PROJECTORS

Sturdy construction, overall mechanical protection, double dust-proofing, streamline design and exceptional acoustical performance recommend these projectors for paging and intercommunication. PM design. Good talk-back performance in PA systems. Hammered gray finsh; chrome trim. RC 36″ cord. Space within case for ½″ x ½″ transformer.


AP-10


AR-10

Model No.	Stock No.	V.C. Imped. Ohms	Power Watts	Diam. In.	Depth In.	List Price
AP-10	**ST-590**	3-4	5	5	4½	**$19.30**
AP-10	**ST-591**	45-50	5	5	4½	**20.30**
AP-11	**ST-592**	3-4	5	5	4½	**15.75**
AP-11	**ST-593**	45-50	5	5	4½	**16.75**
AR-10	**ST-643**	3-4	6	10	8	**23.50**
AR-10	**ST-644**	45-50	6	10	8	**24.50**

Jensen
FINE ACOUSTIC EQUIPMENT

Jensen

IMPEDANCE MATCHING TRANSFORMERS

Loudspeakers are relatively low-impedance devices with voice coil impedance values ranging from 3 to 50 ohms. Vacuum tube power output stages on the other hand, are high-impedance devices with impedance load rated anywhere from 1,000 to 14,000 ohms. To reconcile these widely differing impedances, output or impedance matching transformers must be inserted between the signal output and the loudspeaker voice coil. To determine which transformer is to be used in any given case, first of all find out the impedance of the loudspeaker in question and then locate for that speaker the transformer which will match nearest the impedance of the signal source. Differences of the order of 10% are usually of no importance but if a close match cannot be obtained, it is best to select an impedance value which will present a higher rather than lower-than-rated impedance to the output tubes. Thus where a 5,000-to-16 ohm transformer is needed, it would be better to select a 6,000-to-16 ohm unit than a 4,000-to-16 ohm unit. For full and complete treatise on impedance matching, consult Jensen Technical Monograph No. 2. (Price 25c).

ADJUSTABLE IMPEDANCE

Type "ZX" For matching conventional "plate" impedance values. Adjustments are easily made with flexible lead and pin-tip jack. Impedance values: voice coil, 4,500, 7,000, 10,000 and 14,000 ohms. All except voice coil are center-taped for push-pull tubes.

Cased Type. Pin-Tip Adjustment. Not Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZX-3000	1x1¼"	8	1 11/16x3 15/16	35.0	PLJ-18, PMJ-18, P15-L, P15-LL	$20.58
ZX-3001	1x1¼"	16	1 11/16x3 15/16	35.0	VH-20, VH-24, VR-241, H-510	20.58
					Uncased Type. Pin-Tip Adjustment. Mountable on Speaker.	
ZX-1002	¾x¾"	6-8	2 13/16	10.0	P12-T, P10-S, P10-SX, P10-T, P8-R, P8-S, P8-SX, P8-RX, VH-15, VR-11	6.00
ZX-1005	⅞x⅞"	6-8	3⅛	16.0	P15-Q, P12-P, P12-Q, P12-R, P12-RX, P12-S, P12-SX, P10-Q, P10-R, P10-RX, P8-P, P8-Q, P8-RX, K-210	8.64
ZX-1007	1x1"	8	3⅛	25.0	P15-N, P15-NX, P15-P, P12-N, P12-NX	11.70

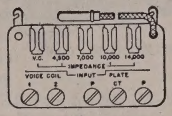
Type "ZY" Same as Type "ZX" except for matching "line" impedance values. Impedances: 500, 1,000, 1,500, 2,000 and voice coil. No center tap available.

Cased Type. Pin-Tip Adjustment. Not Mounted on Speaker.

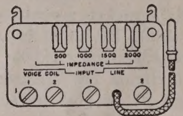
Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZY-4000	1x1¼"	8	1 11/16x3 15/16	35.0	PLJ-18, PMJ-18, P15-L, P15-LL	20.58
ZY-4001	1x1¼"	16	1 11/16x3 15/16	35.0	VH-20, VH-24, VR-241, H-510	20.58

Type "ZY" **Pin-Tip Adjustment. Mountable on Specker.**

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZY-2005	1x1"	8	3⅛	25.0	P15-N, P15-NX, P15-P, P12-N, P12-NX	11.70
ZY-2003	⅞x⅞"	6-8	3⅛	16.0	P15-Q, P12-P, P12-Q, P12-R, P12-S, P12-SX, P10-Q, P10-R, P8-P, P8-Q, K-210	8.64
ZY-4004	¾x¾"	3-4	2 13/16	10.0	P8-T	6.00
ZY-2002	¾x¾"	6-8	2 13/16	10.0	P12-T, P10-S, P10-SX, P10-T, P8-R, P8-S, P8-SX, VH-15, VR-11	6.00
ZY-4002	⅝x⅝"	3-4	2⅜	6.5	P8-U, P8-V, P6-T, P6-X, P6-V	4.02
ZY-4005	⅝x⅝"	6-8	2⅜	6.5	VH-91	4.02



TYPE "ZX"

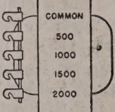


TYPE "ZY"

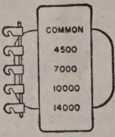
Types "ZP" and "ZL" Lower priced than "ZX" or "ZY" Types but perfectly satisfactory when used in proper application. Soldering iron required for making adjustments on terminal block. "ZP" for "plate," "ZL" for line.

Solder Lug Terminals. Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZP-1023	½x½"	4500/3-4 7000/3-4 10000/3-4 14000/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
ZP-1025	½x½"	1500/3-4 2000/3-4 2500/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
ZL-2021	½x½"	500/3-4 1000/3-4 1500/3-4 2000/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
***ZP-1024**	⅝x⅝"	4500/3-4 7000/3-4 10000/3-4 14000/3-4	2⅜	6.5	P8-U, P8-V, P6-T, P6-TX, P6-V	3.00
***ZP-1026**	⅝x⅝"	4500/6-8 7000/6-8 10000/6-8 14000/6-8	2⅜	6.5	VH-91	3.00
ZL-2022	⅝x⅝"	500/6-8 1000/6-8 1500/6-8 2000/6-8	2⅜	6.5	VH-91	3.00



TYPE "ZL"



TYPE "ZP"

FIXED IMPEDANCE

Type "Z"

Cased Type, Screw Terminals. Not Mountable on Speaker.

Stock No.	Impedance	For Use With:	List Price
Z-2731	500/16 or 8	PLJ-18, PMJ-18, P15-L, P15-LL, P15-NL, VH-20, VH-24	$25.68
Z-2732	16/8	PLJ-18, PMJ-18, P15-L, P15-NL, VH-20, VH-24	24.30
Z-2733	16/8	XP-101	14.40

Uncased, Pig-tail Leads. Mountable on Speaker.

Stock No.	Impedance	For Use With:	List Price
Z-1888	500/6-8	P15-N, P15-NX, P15-P, P12-N, P12-NX, F15-N, F12-N	7.20
Z-2386	*3000/6-8		
Z-2387	*5000/6-8		
Z-3341	*6000/6-8		
Z-1891	*10000/6-8		
Z-2241	*14000/6-8		
Z-3346	500/16	VH-20, VH-24, VR-241	7.20
Z-3319	500/6-8	P15-QX, P12-P, P12-SX, P12-R, P12-S, P12-SX, P10-Q, P10-R, P10-RX, P8-Q, P8-RX, F15-Q, F12-Q, P12-R, P12-RX, K-210	4.80
Z-3320	*3000/6-8		
Z-3321	*5000/6-8		
Z-3318	*6000/6-8		
Z-3322	*10000/6-8		
Z-3323	*14000/6-8		
Z-3329	500/3-4	F12-S	4.80
Z-3330	*3000/3-4		
Z-3331	*5000/3-4		
Z-3332	*6000/3-4		
Z-3333	*10000/3-4		
Z-3334	*14000/3-4		
Z-3324	500/6-8	P12-T, P10-S, P10-SX, P10-RX, P10-T, P8-R, P8-S, P8-SX, VH-15, VR-11	3.30
Z-3325	*3000/6-8		
Z-3326	*4500/6-8		
Z-3309	*7000/6-8		
Z-3327	*10000/6-8		
Z-3328	*14000/6-8		

Cased Type, Solder Lug Terminals. Not Mountable on Speaker.

Stock No.	Impedance	For Use With.	List Price
Z-3344	500/8 or 4	PMJ-18, P15-L, P15-N, P15-NX	$16.20
Z-3342	500/16 or 8	P15-N, P15-NX, P15-P, P12-N,	12.30
Z-3343	500/8 or 4	P12-NX, VH-20, VH-24, VR-241	12.30

Mountable on Speaker.

Stock No.	Impedance	For Use With.	List Price
Z-3335	500/3-4	P8-T, F10-S, F8-S, F8-T	3.30
Z-3336	*3000/3-4		
Z-3337	*4500/3-4		
Z-3338	*7000/3-4		
Z-3339	*10000/3-4		
Z-3340	*14000/3-4		
Z-3310	500/3-4	P8-U, P8-V, P6-T, P6-TX, P6-V, F8-W, F6-U	2.28
Z-3311	1500/3-4		
Z-3312	2000/3-4		
Z-3313	2500/3-4		
Z-3314	*4500/3-4		
Z-3315	*7000/3-4		
Z-3316	*10000/3-4		
Z-3317	*14000/3-4		
Z-3345	45-50/6-8	VH-91, VR-11	2.52
Z-3300	500/3-4	AP-10, AP-11, AR-10, P6-X, P5-TX, P5-V, P5-X, P4-X, F6-X, F6-W, F5-W, F5-X, F4-X, RK-51	1.80
Z-3301	1500/3-4		
Z-3302	2000/3-4		
Z-3303	2500/3-4		
Z-3304	4500/3-4		
Z-3305	*7500/3-4		
Z-3306	*10000/3-4		
Z-3307	*12000/3-4		
Z-3308	3-4 grid	All 3-4 ohm V.C. speakers	2.04

*Center-tapped

SINCE 1922 **RACON** ACOUSTICAL EXCELLENCE

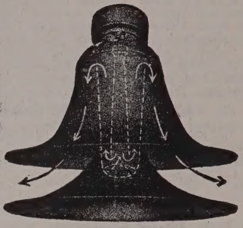
RE-ENTRANT TRUMPETS
RADIAL HORNS and SPEAKERS
PM DRIVER UNITS

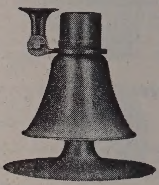
Re-Entrant Trumpets, Radial Horns and Speakers

RE-35 RE-50 RE-60

RACON re-entrant horns and speakers are designed to deliver highly concentrated sound with great efficiency over long distances. This is due to true exponential design throughout and the elimination of all vibratory members and sound dissipating devices. The base and inside tone arms are husky aluminum castings and bell is a heavy gauge aluminum spinning. The RE-35, RE-50 and RE-60 incorporate reflectors made of patented **RACON ACOUSTIC MATERIAL** to prevent resonant effects. All models are supplied with "U"-bracket mounting (ratchet swivel type on request). Finish is in weatherproof hard baked gray hammertone. RE-60 & RE-50 recommended for maximum low frequency music reproduction. RE-35 and RE-25 best suited for incidental music and high speech intelligibility.

The SR-35R and SR-60R are weatherproof radial reentrant horns designed to project sound over an area of 360 degrees. The centre reflectors are of patented **RACON ACOUSTIC MATERIAL** and the deflectors are aluminum spinnings covered with this same nonvibratory material. Standard "U" bracket supplied. Thread size is 1⅜"-18, permitting the use of any driver unit listed below. The SR-60R is ideal for church tower sound installations and the SR-35 for incidental music and speech.


SR-35R SR-60R


SR-15R SR-12R

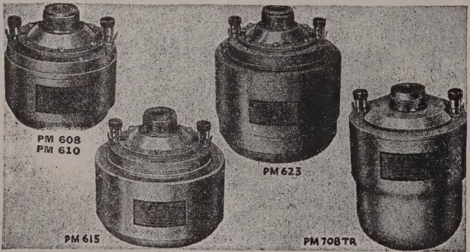
The SR-15R and SR-12R are rated at 20 and 10 watts respectively and are supplied complete with built-in 15 ohm* driver units. These models are intended primarily for speech in paging and "talk back" systems and are completely weatherproof. Supplied with cast swivel ratchet and wall bracket.

Model No.	Acoustic Length	Bell Diam.	Over-all Length	Cut-off (cycles)	Distrib. Angle	Ship. Wt. lb.	Code	List Price
RE-60	6′	26″	28″	112	45°	21	REMOL	$70.00
RE-50	4½′	25¼″	23½″	140	50°	19	REMOY	49.50
RE-35	3½′	19″	16¼″	175	55°	12½	REMOX	35.50
RE-25	2½′	13½″	11″	225	60°	9	REMOD	26.50
**SR-60R	6½′	36″	34½″	115	360°	47	RADAL	90.00
**SR-35R	4′	17″	16″	175	360°	16	RADAK	47.50
SR-15R	20″	9″	12″	350	360°	7	RADAS	39.25
SR-12R	15″	7″	9″	450	360°	4	RADAB	29.50

* 8 or 45 ohms on request at same price.
** horn only

Waterproof Permanent Magnet Driver Units

The driver unit is the most important single element in a successful public address system. In these five new driver units, primary emphasis is on: high continuous power handling capacity with ample reserve for overload peaks up to 100%, maximum conversion efficiency, response ranges suitable for every type sound system, and waterproof construction.



These five units employ Alnico V magnets and Armco magnetic iron throughout. All soft steel parts are doubly plated to prevent corrosion. An automatic electromagnetic cut-out switch is used in the magnetizing process, assuring maximum flux density in the gap and high uniformity. Units are individually measured for flux density. Each unit is tested with special equipment for power handling capacity as well as a 350-volt ground test.

Long life plastic diaphragms and formers are supplied with aluminum wound voice coils to increase efficiency. Voice coil leads are non-fatiguing beryllium copper, insuring lifetime performance. All units are completely waterproof. yet permit ready replacement of diaphragm where needed.

NEW SUPER X UNITS USING LATEST ALNICO V MAGNETS

Model No.	Weight		Flux Density per sq. cm.	Frequency Range	Imp.	Diam.	Ht.	Thread	Capacity (watts)		Code	List Price
	Net	Ship.							Peak	Oper.		
PM-623	8½ lbs.	9½ lbs.	15,500 gausses	80-7000	15	5¼″	4½″	1⅜″-18	65	35	RETIX	$52.50
PM-615	8 lbs.	9 lbs.	13,500 gausses	90-7000	15	4¼″	4½″	1⅜″-18	60	30	RETIN	38.50
PM-610	3.5 lbs.	4 lbs.	12,000 gausses	90-7000	15	4⅛″	3½″	1⅜″-18	60	30	REPIX	34.00
PM-608	5 lbs.	5½ lbs.	11,000 gausses	90-6500	15	4″	3¼″	1⅜″-18	50	25	RETIP	29.00
PM-708TR*	6 lbs.	6½ lbs.	11,000 gausses	90-6500	15	4½″	5½″	1⅜″-18	50	25	RETIR	42.75

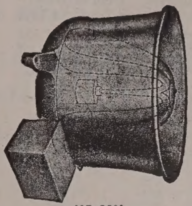
*NOTE: Contains built-in 25-watt line matching transformer, primary tapped at 500, 1000, 1500, 2000; secondary 15 ohms.

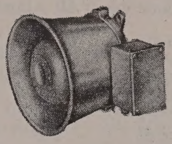
SINCE 1922 **RACON** **ACOUSTICAL EXCELLENCE**

DOUBLE RE-ENTRANT MARINE SPEAKERS
RE-ENTRANT PAGING SPEAKERS
CONE SPEAKER ENCLOSURES

DOUBLE RE-ENTRANT MARINE SPEAKERS

The regular (model MR-30M), midget (model MG-21J), and miniature (model MN-15B) marine speakers are approved by the U. S. Coast Guard for all Emergency Loudspeaker Systems on ships.
The driver unit and connecting leads are all enclosed, resulting in a completely waterproof speaker. Heavy aluminum spinnings are used throughout and back base is a husky, non-corrosive aluminum casting. A baked chromatic undercoat plus an outside lacquer finish is assurance of lasting service under severe conditions of humidity and temperature. Designed for three legged flush rear mounting. All models provided with cast aluminum transformer housing. Model MN-15B supplied with "U" bracket; "U" bracket for other models on request at slight additional cost.


MR-30M

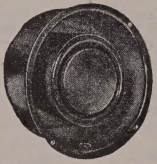

MG-21J

Model No.	Frequency Range	Distribution Angle	Bell Diam.	Capacity (watts) Oper.	Peak	Imp.	No. Driver Units	Over-all Length	Ship. Wt. lb.	Code	List Price
MR-30-M	250-6000	50°	14″	30	60	15	1	10″	29¼	REDIX	$150.00
MR-32M	250-6000	50°	14″	60	120	8	2	18½″	43	REDIT	208.50
MG-21J	350-6000	55°	9½″	25	50	15	1	6¾″	14	RASOM	61.00
MG-21-B	350-6000	55°	9½″	20	35	15	1	6¾″	9½	RASOB	49.75
MN-15B	450-6000	65°	6¼″	20	35	15*	1	4¾″	6¼	REDUP	39.35
MN-15C	(same as MN-15B, but less "U" bracket)									REDUT	38.50
MN-15D	(same as MN-15B, but less "U" bracket and less transformer box)									REDUZ	36.75

*** 8 or 45 ohms on request at same price.**

RE-ENTRANT PAGING SPEAKERS

RE-15 RE-12


DW-9R

These weatherproof re-entrant paging speakers are capable of high intelligibility in locations where high noise levels prevail. Construction is non-vibratory throughout and consists of heavy aluminum spinnings and castings. Voice coils are wound with aluminum wire to provide a high degree of efficiency when these speakers are also used as microphones in "talk-back" systems. Ideal for replacing conventional cone speakers. RE-12 and RE-15 provided with heavy cast aluminum ratchet bracket. DW-9R is supplied with flange for flush mounting.

Model No	Frequency Range	Distribution Angle	Operating Capacity	Imp.	Bell Diam.	Over-all Length	Ship. Wt. lb.	Code	List Price
RE-15	350-8,500	60°	20 watts	*15 ohms	9″	9¾″	6	REMAC	$36.00
RE-12	450-10,000	65°	10 watts	*15 ohms	7″	6½″	3¼	REMAB	27.80
DW-9R	750-10,000	70°	8 watts	*15 ohms	5″	2½″	2	REDOX	29.00

*** 8 or 45 ohms on request at same price.**

CONE SPEAKER ENCLOSURES

These housings are strongly constructed, practically abuse-proof. Back spinnings are steel and incorporate a watertight overlap seal which eliminates rain leakage at the juncture of front bell and rear housing. Two offset mounting hooks are provided for easy installation.

Model No.	CP-12AW	CP-12A	CP-8AW	CP-8A
Cone Size	12″	12″	8″	8″
Bell Diameter	17″	17″	15″	15″
Length	20″	20″	15″	15″
Shipping Wt.	8 lbs.	8 lbs.	6 lbs.	6 lbs.
Description	Aluminum Bell; Steel back acoustically damped—cone opening protected by wire screening and silk gauze.	Alum. Bell; Steel Back	Same as CP-12AW	Alum. Bell; Steel Back
Code	ROBOT	RUMID	RIFLE	RUMIX
List Price	$17.50	$16.25	$14.70	$13.35

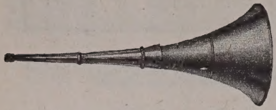
CP-12A

RACON ACOUSTICAL EXCELLENCE

SINCE 1922

STRAIGHT EXPONENTIAL TRUMPETS • COBRA-TYPE HORN
CELLULAR HORN TWEETERS • CROSSOVER NETWORKS

STRAIGHT EXPONENTIAL TRUMPETS



Output from any straight trumpet is approximately 2 DB higher than corresponding re-entrant type because it lacks the attenuation inherent in all re-entrant horns. **"Stormproof"** Trumpets are made of non-vibratory **RACON ACOUSTIC CLOTH.** Weather-treated for indoor or outdoor use. **"All Aluminum"** Trumpets are made of heavy gauge aluminum spinnings with rolled beaded edge and cast aluminum throat sections. **"Unbreakable"** Trumpets are made of heavy gauge aluminum spinnings reinforced and damped with Patented **RACON ACOUSTIC MATERIAL.** Large sizes are useful for church chime systems, C-D systems, airports and stadiums, parks, playgrounds, music festivals, for both speech and music. Smaller sizes for railroad and bus terminals, waiting rooms, factories.

Model No.	Air Column (length)	Units Required	Cut-off (cycles)	Distribution Angle	Bell Diam.	Material	Ship. Weight	Code	List Price
*ST-415A	6′	1	115	45°	30″	Unbreakable	37 lb.	REGON	$135.00
**ST-414A	6′	1	115	45°	30″	Stormproof	39 lb.	RIDER	100.00
*ST-417A	6′	1	115	45°	30″	All Aluminum	35 lb.	RHINO	99.00
**ST-412A	4½′	1	145	50°	25″	Stormproof	34 lb.	RACEY	76.00
*ST-413A	4½′	1	145	50°	25″	All Aluminum	27 lb.	RIANT	73.50
**ST-411A	3½′	1	195	50°	22″	Stormproof	28 lb.	RENEW	52.50
*ST-410A	3½′	1	195	50°	22″	All Aluminum	23 lb.	REPEX	36.75
**ST-251A	2′	1	250	55°	12″	Stormproof	6 lb.	RISAT	18.35
**ST-251B	2′	1	250	55°	12″	All Aluminum	5 lb.	RIMAD	17.50

* Delivery, 4 weeks. ** Delivery, 1-2 weeks.

NOTE: Models with 2, 4 and 8 unit throats available. Prices on request.

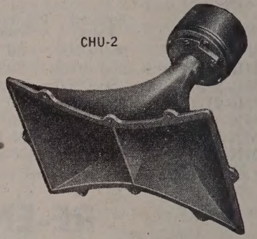
CELLULAR HORN TWEETERS

Response is essentially flat to 12,000 cycles, with excellent usable output to 15,000 cycles. Cellular horn design permits wide angle distribution. Designed for a 1000-cycle crossover to assure optimum cone response. The CHU-2 must be used with a crossover network. The networks listed below are recommended and when employed, tweeter model CHU-2 may be used with amplifiers having an output rating to 25-30 watts.

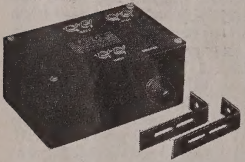
NOTE: Instructions are packed with each tweeter, providing an easy method of home building a professional type 1000-cycle crossover network.

Model No.	Impedance	Freq. Range	Dispersion Angle Horiz.	Dispersion Angle Vert.	Material	Ship. Wt.	Code	List Price
CHU-2	15 Ohms	750-15000	100°	50°	Alum. Cast.	6 lbs.	RALUX	$40.25

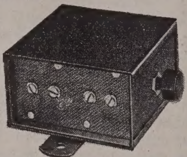
CHU-2



CON-20



CON-15R



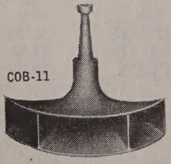
CROSSOVER NETWORKS

Both models CON-20 and CON-15R have a crossover of 1000 cycles. The CON-20 is an L/C network and the CON-15R is of the high pass filter type. Cone speaker impedance may vary from 4-15 ohms.

Model No.	CON-15R	CON-20
Description	Var. Audio Taper R-C Network	Var. Audio Taper R-C-L Network
Ship. Wt.	2½ lbs.	3½ lbs.
Code	RAFIR	RADUX
List Price	$11.80	$24.00

COBRA TYPE HORN

COB-11



The RACON COB-11 "cobra" type horn is designed for public address systems requiring high clarity reproduction with maximum concentration of sound in a horizontal plane. It is of "straight" horn design and exponentially flared for maximum transfer of energy. The low cutoff of 250 cycles results in crisp, highly articulate quality without a trace of boominess. The horn consists of a heavy two-piece non-vibratory aluminum casting and is provided with a two-section serrated mounting bracket. Finish is baked gray hammertone over a zinc chromate primer.

Cut-off	250 cycles
Dispersion	120° H, 40° V
***Thread**	1⅜″—18
Dimensions	17⅝″ H, 22¼″ W, 13⅜″ D
Net Wt.	12 lbs.
Shipping Wt.	17 lbs.
Code	ROBON
List Price	$72.50

* 1-7/16″-16 on request at same price.

ACCESSORIES

DC-302A

DC-2U

RB-150A

TB-150

Steel Swivel Brackets for Cone Projectors

For wall or truck mounting. Has tooth ratchet swivel and pipe connection to give 180° angular movement. Can be used on any Racon Cone Projector.

Model No.	Description	Cone Size	Code	List Price
RB-150	Without Base	8″ or 12″	RAMIS	$3.90
RB-150A	With Base	8″ or 12″	RAMIT	5.50

Bronze Swivel Bracket for Re-entrant Trumpets

A cast bronze three-legged base and ratchet connection. May be used when specifying ratchet mounted trumpets. Over-all height 9″.

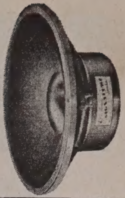
Model No.	Code	List Price
TB-150	RAMUG	$6.50

Multiple Horn and Unit Connectors

Model No.	Description	Material	Code	List
DC-302A	2 St. Trumpet Connector 75° Dispersion Angle	Bronze	RADIX	$18.35
DC-2U	Dual Unit Connector for all standard thread horns to permit the use of two driver units on one horn	Bronze	RADAX	15.75

JIM LANSING SIGNATURE SPEAKERS

JAMES B. LANSING SOUND, Inc.



JIM LANSING SIGNATURE SPEAKERS are engineered and precision fabricated to supply without compromise the finest loud speaker performance possible.

GENERAL PURPOSE SPEAKER SPECIFICATIONS

D-130 — 15 INCH

Power Input	25 Watts
Impedance (nominal)	16 Ohms
Resonant Frequency	40 Cycles
Outside Diameter	$15\frac{3}{16}$ ins.
Depth	5⅝ ins.
Field	Perm. Mag.
Voice Coil Diameter	4 ins.
Mounting Dimen.	R.M.A. Std.
Net Weight	23 pounds

LIST PRICE $110.00

D-131 — 12 INCH

Power Input	20 Watts
Impedance (nominal)	16 Ohms
Resonant Frequency	55 Cycles
Outside Diameter	12⅛ ins.
Depth	5 ins.
Field	Perm. Mag.
Voice Coil Diameter	4 ins.
Mounting Dimen.	R.M.A. Std.
Net Weight	20 pounds

LIST PRICE $105.00

208 — 8 INCH

Power Input	12 Watts
Impedance (nominal)	8 Ohms
Resonant Frequency	80 Cycles
Outside Diameter	8½ ins.
Depth	2⅞ ins.
Field	Perm. Mag.
Voice Coil Diameter	2 ins.
Mounting Dimen.	R.M.A. Std.
Net Weight	5 pounds

LIST PRICE $38.00

All Jim Lansing general purpose speakers utilize exceedingly large Alnico V Permanent Magnets, edge wound aluminum ribbon voice coils, aluminum high frequency center diaphragm vented to the rear to eliminate non-linear compression effects, and heavy, extremely rigid, cast aluminum frames.

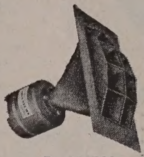
TWO-WAY SYSTEMS, COMPONENTS AND SPECIFICATIONS

D-130A

15 INCH LOW FREQUENCY UNIT

Power Input	25 Watts
Impedance (nominal)	16 Ohms
Resonant Frequency	22 Cycles
Outside Diameter	$15\frac{3}{16}$ ins.
Depth	5⅝ ins.
Field	Perm. Mag.
Voice Coil Diameter	4 ins.
Mounting Dimen.	R.M.A. Std.
Net Weight	23 pounds

LIST PRICE $112.50

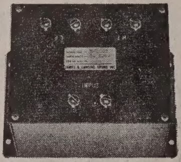


D-175H

HIGH FREQUENCY UNIT AND HORN

Power Input	25 Watts above 1200 C.P.S.
Impedance (nominal)	16 Ohms
Field	Perm. Mag.
Outside Diameter	4½ ins.
Weight	19 pounds

LIST PRICE $190.00



N-1200

DIVIDING NETWORK

Input Impedance	16 Ohms
Output Impedance	16 Ohms (each section)
Net Weight	6 pounds

LIST PRICE $55.00

D-1001 TWO-WAY KIT INCLUDES:

ONE D-130A, ONE D-175H AND ONE N-1200

List Price $357.50

The D-1001 Kit provides the basic Jim Lansing Two-Way system for use where critical listeners demand flawless reproduction of the entire frequency range.

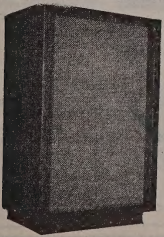
D-1050 TWO-WAY KIT INCLUDES:

TWO D-130B, ONE D-175H AND ONE N-1200

List Price $470.00

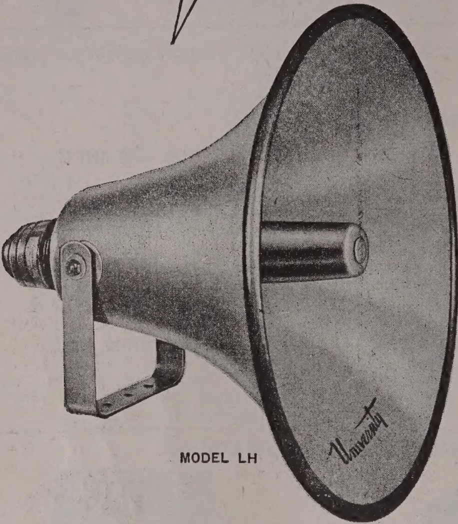
The D-1050 Kit is the finest system available.

CABINETS



D-2000	Gray utility cabinet with D-1001 components installed	List Price	$492.50
D-2002	Dark Mahogany furniture cabinet with D-1001 components installed	List Price	507.50
D-2003	Blond furniture cabinet with D-1001 components installed	List Price	517.50
D-1004	Corner cabinet, dark Mahogany, two D-130B, one D-175H and N-1200 installed	List Price	650.00
D-1005	Corner cabinet, blond, two D-130B, one D-175H and N-1200 installed	List Price	660.00
C-502	Dark Mahogany furniture cabinet for D-130 speaker	List Price	150.00
C-503	Dark Mahogany furniture cabinet for D-131 speaker	List Price	150.00
C-504	Blond furniture cabinet for D-130 speaker	List Price	160.00
C-505	Blond furniture cabinet for D-131 speaker	List Price	160.00

University SPEAKERS


MODEL LH

REFLEX LOUDSPEAKERS

The reflex horns pioneered by University represent the most efficient method of converting electrical power into acoustic energy. When used with University driver units, they are capable of conversion efficiencies up to 50% and in addition, provide compactness and weather protection without any sacrifice in performance.

Heavy gauge metal and corrosion resistant finishes on horn and hardware are assurance of trouble-free performance regardless of changes in temperature and humidity. Adjustable UNIVERSITY "U" bracket mounting simplifies installation and holds the speaker firmly locked in any position.

Four models cover every public address requirement. Model GH has the longest air column and is ideal for the reproduction of symphonic music. The model LH with a higher cutoff is designed as a general purpose speaker and is recommended for music transmission where economy without sacrifice of quality is essential. In installations where a smaller horn is required, the Model PH will render excellent service for both speech and music. The Model SMH will find its widest application in the reproduction of speech where clarity and a high degree of intelligibility are necessary. **Accessories include Model PMA adapter and 2YC connector.**

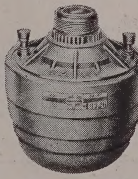
MODEL	SMH	PH	LH	GH
LOW FREQUENCY CUTOFF	200 CPS	150 CPS	120 CPS	85 CPS
AIR COLUMN	2½ FEET	3½ FEET	4½ FEET	6½ FEET
DISPERSION	95°	85°	75°	65°
DIAMETER	16¼ INCHES	20¼ INCHES	25⅝ INCHES	30⅞ INCHES
LENGTH	12 INCHES	15¾ INCHES	19 INCHES	27⅞ INCHES
WEIGHT (net)	6 LBS.	10 LBS.	15 LBS.	22 LBS.
LIST PRICE (Horn only)	$24.50	$29.00	$44.50	$60.00

BREAKDOWN PROOF DRIVER UNITS

University driver units are breakdown proof and **guaranteed** for one year. Ratings are conservative and operation over long periods is assured. They are of the PM dynamic type, incorporate highest quality Alnico magnets and one-piece molded phenolic diaphragms. Unique "rim centering" construction eliminates aligning pins and permanently centers the voice coil and head assembly in a much closer magnetic gap. This results in a higher conversion efficiency and misalignment due to shock or vibration is virtually eliminated. Hermetically sealed housings provide complete protection from outdoor exposure and corrosive fumes.

The PA-30 has a 30-watt built-in line matching transformer. Transformer terminals provide 16, 165, 250, 500, 1000, 2000-ohm taps for constant impedance systems and 2½, 5, 10, 20 and 30-watt taps for 70-volt constant voltage systems. Use the PA-30 or SA-HF for high power installations or where occasional overload is a problem. Model MA-25 represents the best "watts per dollar" value of any driver unit made. It combines efficiency, waterproof construction and economy.

MODEL PA-30


MODEL SA-HF

MODEL MA-25

MODEL	PA-30	SA-HF	MA-25
CONTINUOUS POWER	30 WATTS	25 WATTS	25 WATTS
IMPEDANCE	ADJUSTABLE*	16 OHMS	16 OHMS
FREQUENCY	80 to 10,000 CPS	90 to 10,000 CPS	90 to 6000 CPS
DIAMETER	6¾ INCHES	4½ INCHES	4⅛ INCHES
HEIGHT	6¾ INCHES	5 INCHES	3¾ INCHES
WEIGHT	6 LBS.	4 LBS.	3 LBS.
THREAD SIZE	1⅜"—18	1⅜"—18	1⅜"—18
LIST PRICE	$50.00	$37.00	$25.00

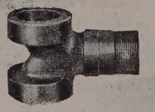
*16-Ohm Voice Coil—165, 250, 500, 1000, 2000 Ohms — All Readily Accessible on Molded Terminal Block at Base of Unit.

ACCESSORIES

Model PMA Adapter

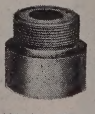
For mounting any UNIVERSITY "U" bracket speaker on standard ½" pipe.

LIST PRICE
$1.50


Model 2YC Connector

Use with two driver units to provide up to 60 watts for any UNIVERSITY trumpet or projector.

LIST PRICE
$10.00


Model WEA Unit Adapter

For adapting Western Electric and RCA horns for use with any UNIVERSITY driver unit.

LIST PRICE
$2.50

University SPEAKERS

PAGING AND INTERCOM SPEAKERS

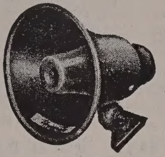
These speakers are reflex air column horns with built-in hermetically sealed driver units. Models CR, 1B8, and MIL are directional and model IBR has a radial deflector for uniform 360° dispersion. They are capable of continuous use for intercommunication and paging on shipboard, docks, loading platforms, terminals and industrial plants.

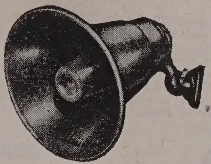
Model CR can handle 18 watts of input power continuously, making it useful for high power alarm or announcing systems. Models IB8 and IBR have a continuous power handling capacity of 12 watts, which recommends them for paging or announcing in noisy industrial areas. The models MIL and MIS with a 3 watt continuous power capacity are efficient intercommunication speakers. The model MIS is a small unit designed for flush panel mounting.

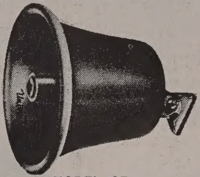
Though capable of producing adequate volume with low power, these speakers can handle more power than any other speaker of comparable size and weight. Modernization of old sound systems is easily accomplished by replacement of obsolete speakers with any of these models. Standard voice coil impedances permit installation without changes in the existing line or amplifier.

DIRECTIONAL AND RADIAL TYPE SPEAKERS

MODEL MIS


MODEL MIL

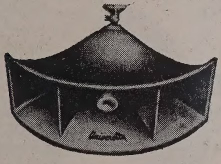

MODEL IB8


MODEL CR

MODEL IBR

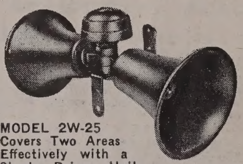
MODEL	MIS	MIL	IB8	CR	IBR
CONT. POWER	3 WATTS	3 WATTS	12 WATTS	18 WATTS	12 WATTS
IMPEDANCE .	8 OHMS 45 OHMS (On Order)	8 OHMS 45 OHMS (On Order)	8 OHMS	16 OHMS	8 OHMS
DISPERSION .	150°	120°	90°	90°	360°
FREQUENCY.	500-9000	400-9000	300-10,000	250-6000	300-10,000
DIMENSIONS .	3⅞" Deep, 5½" O.D. 4⅞" Mounting Dia.	6⅜ INCHES DIA. 7 INCHES HIGH	8½ INCHES DIA. 9 INCHES HIGH	11½ INCHES DIA. 11½ INCHES HIGH	9¾ INCHES DIA. 11 INCHES HIGH
WEIGHT. .	2⅛ LBS.	3½ LBS.	5 LBS.	9 LBS.	5 LBS.
LIST PRICE .	8 OHM, $20.00 45 OHM, $21.25	8 OHM, $25.00 45 OHM, $26.25	$32.50	$42.00	$39.00

WIDE ANGLE SPEAKERS


COBRA-12
Eliminates Power Waste.
Concentrates Power in
Horizontal Plane.

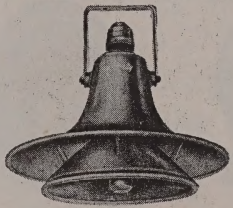
University Wide Angle paging speakers are available in two models as illustrated. While both provide excellent performance in continuous service, each has certain advantages under particular conditions as described below.

MODEL	COBRA-12	2W-25
CONT. POWER	12 WATTS	25 WATTS
IMPEDANCE.	8 OHMS	16 OHMS
DISPERSION.	120° x 60°	120° EACH HORN
FREQUENCY .	250-10,000	350-6000
DIMENSIONS.	14½" LG - BELL MOUTH: 20" x 9"	20½" LG - BELL MOUTH: 8" DIA.
WEIGHT .	9 LBS.	9 LBS.
LIST PRICE .	$45.00	$48.00


MODEL 2W-25
Covers Two Areas
Effectively with a
Single Driver Unit.

RADIAL REFLEX PROJECTORS

Re-entrant horns with radial deflectors for uniform 360° sound distribution cover large areas and override high noise-levels, without blasting. The long air column of the RHL and its low frequency cutoff make it well suited for music and general applications. The smaller model RPH, with a somewhat higher cutoff, will serve for both music and speech. The RSH finds wide application for high clarity reproduction of speech. Shipped complete with hardware but less driver unit.



MODEL.	RLH	RPH	RSH
LOW CUTOFF	110 CPS	140 CPS	180 CPS
AIR COLUMN	5 FT.	4 FT.	3 FT.
DIAMETER	28⅛"	25 3/16"	18⅞"
HEIGHT	18½"	14"	11"
WEIGHT	21½ LBS.	18 LBS.	12 LBS.
LIST PRICE (Horn only)	$59.00	$45.00	$38.50

RADIAL CONE-SPEAKER PROJECTORS

MODEL	RBP-12	RBP-8
FREQUENCY	UNIFORM DOWN TO 50 CYCLES	UNIFORM DOWN TO 80 CYCLES
DIAMETER	26 INCHES	16¾ INCHES
HEIGHT	13¾ INCHES	10⅛ INCHES
WEIGHT	19 LBS.	9 LBS.
LIST PRICE	$35.00	$19.60

University

These compact projectors consist of an acoustic chamber for housing a cone speaker and a radial deflector for uniform 360° dispersion. Of all metal, rubber cushioned construction, the model RBP-12, designed for a 12" cone speaker, provides uniform response down to 50 cycles and model RBP-8, designed for an 8" speaker, has a low frequency limit of 80 cycles. Any standard make of 8" or 12" cone speaker can be installed in these baffles. Both models are watershedding and may be used indoors or out. They are shipped complete with hardware but less cone speaker.

University SPEAKERS

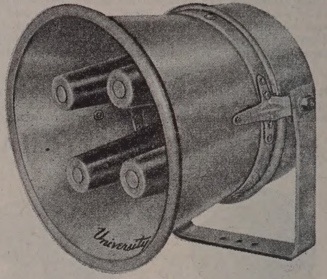
SUPER POWER SPEAKERS

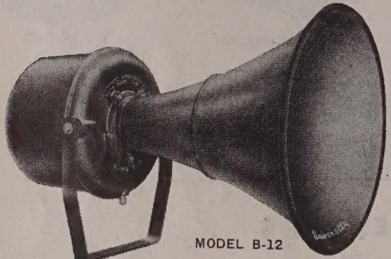
UNIVERSITY super power speakers are the answer to every public address installation where tremendous amounts of concentrated power must be transmitted over long distances.

The Model 4A4 incorporates 4 PM driver units mounted on the back of a heavy cast mounting plate. Each driver opens into a reflexed air column on the front of the mounting plate. The four air columns feed into a common bell. Compactness makes them ideally suited for aeroplane broadcasting and use in Church towers, stadiums, etc.

In the Models B-6 and B-12, the PM driver units are mounted circumferentially on a rugged "tone chamber" casting which provides individual acoustic paths from each driver unit to a mixing chamber at the center of the casting. The patented design of the mixing chamber and the acoustic paths minimizes high frequency cancellation.

All speakers are completely waterproof and characterized by their ruggedness. Power ratings are conservative and projection ranges are often exceded in actual operation. **Speakers of this type were recently heard 15 miles in a carillon installation at the Empire State Building in New York City.** "U" brackets permit a vertical swing of approximately 120° and locking in any position. Models B-6 and B-12 are supplied with horns suitable for voice reproduction essentially as standard equipment. For music, order substitute TYPE C HORN capable of response down to 100 cps. **NOTE:** Model 4A4 is sold and shipped less driver units. Standard driver units Model SA-HF or MA-25 may be used.


MODEL 4A4


MODEL B-12

	MODEL 4A4	MODEL B-6	MODEL B-12
CONT. POWER	100 WATTS	150 WATTS	300 WATTS
IMPEDANCE	4, 16, 60 OHMS	90 OHMS	DOUBLE INPUT 90 OHMS EACH
DRIVERS	4 UNITS	6 UNITS	12 UNITS
DISPERSION	80°	90°	90°
FREQUENCY	200-10,000 CPS.	200-10,000 CPS.	200-10,000 CPS.
DIAMETER	17"	16½" (Housing only)	18" (Housing only)
LENGTH	20"	23" (Housing only)	15" (Housing only)
WEIGHT	23 LBS.	60 LBS.	80 LBS.
LIST PRICE*	$93.00 (less units)	$505.00 (with units)	$935.00 (with units)

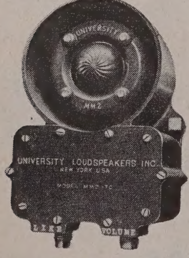
*TYPE C HORN $37.50 EXTRA.

RAILROAD AND MARINE TYPES

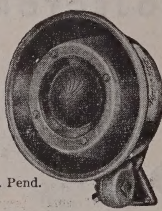
UNIVERSITY marine and railroad type speakers are submergence, shock and vibration proof and are unaffected by live steam. Their reflex air columns are built of rugged castings and are equipped with Alnico V PM dynamic units. Speakers may be made blastproof on order.

Models MSR, MM-2TC, MM-2 and MM-2F have **hermetically sealed** housings and built-in driver units. Models MSR and MM-2TC have space for volume control and line matching transformer. Tapped holes provide access to volume control and for receiving a conduit. Both are designed for bulkhead or wall mounting — the Model MM-2F may be flush mounted and the MM-2 has a swivel mounting bracket.

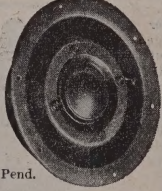
These speakers will operate efficiently under the most arduous conditions — on ships, docks, in railroad yards or locomotive cabs, — in mines, laundries and mills — wherever dirt, salt spray, humidity, fungus, dusts and vapors constitute a hazard.



MODEL MM-2TC


Pat. Pend.

MODEL MM-2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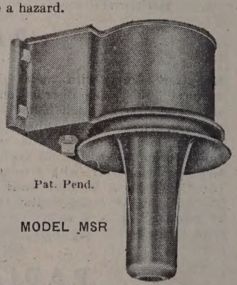
MODEL MM-2F


Pat. Pend.

MODEL MSR

	MODEL MM-2TC	MODEL MM-2	MODEL MM-2F	MODEL MSR
CONTINUOUS POWER	15 WATTS	15 WATTS	15 WATTS	15 WATTS
TYPE MOUNTING	WALL	SWIVEL BRACKET	FLUSH PANEL	WALL
IMPEDANCE	16 OHMS	16 OHMS	16 OHMS	16 OHMS
DISPERSION	120°	150°	150°	360°
FREQUENCY	300-6000 CYCLES	300-6000 CYCLES	300-6000 CYCLES	250-6000 CYCLES
HEIGHT	10"			10¾"
DEPTH	4⅛"	4¾" DEEP, 6" O.D.	3¾" DEEP. 7¼" O.D. 6⅝" MOUNTING HOLE DIA.	8¼"
WIDTH	6¼"			7¾"
WEIGHT	10¼ LBS.	5½ LBS.	4 LBS.	8¾ LBS.
LIST PRICE	$65.00	$42.00	$40.00	$65.00

University SPEAKERS

UL APPROVED EXPLOSION-PROOF SPEAKERS

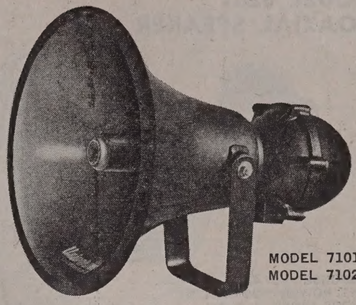
*** MODEL 7101 APPROVED FOR CLASS I, GROUPS C, D**
MODEL 7102 APPROVED FOR CLASS II, GROUPS E, F, G

Introduction of Models 7101 and 7102 Explosion-Proof Speakers now makes it possible to install loudspeaker systems in locations where flammable liquids, gases, dust and other combustibles are present. Approved by Underwriters' Laboratories for Class I and II locations, Models 7101 and 7102 permit industries heretofore denied the advantages of sound, paging and intercom facilities, to proceed immediately with 100% safe installations. In addition to approved explosion-proof construction, these speakers represent the last word in rugged design.

Features of this speaker include a 2½-ft. air column, re-entrant type trumpet, a heavy duty driver unit with "W" shaped Alnico V magnet, response to 10,000 cps and continuous power capacity of 25 watts integrated program material. Voice coil impedance is 16 ohms, and a husky line matching transformer is included and built into the driver unit housing, tapped for 45, 500, 1000, 1500 and 2000-ohm inputs. Dispersion angle is 95°. Cable entrance is threaded for ½" conduit. "U" type mounting bracket permits over 180° variation of mounting angle.

*Refers to classes of service as described by Underwriters' Laboratories for which this speaker is approved. For complete data write for free bulletin.

NOTE: For Architects and Engineers Specifications covering explosion-proof installations, see University Bulletin 71N15.



MODEL 7101
MODEL 7102

MODEL	**7101 AND 7102**
MAX. POWER INPUT*	25 WATTS
FREQUENCY	200-10,000 CPS.
VOICE COIL IMPEDANCE	16 OHMS
TRANSFORMER INPUT	45, 500, 1000, 1500, 2000 OHMS
DISPERSION	95°
DIMENSIONS	19" LG., 15¾" HIGH
NET WEIGHT	21 LBS.
CABLE ENTRANCE	½" CONDUIT TAP
MOUNTING	"U" BRACKET, 180° SWING
LIST PRICE — 7101	$125.00
LIST PRICE — 7102	150.00

*CONTINUOUS, INTEGRATED PROGRAM MATERIAL

UNIVERSITY POWRMIKE SOUND SYSTEM

University
UNIVERSITY POWRMIKE

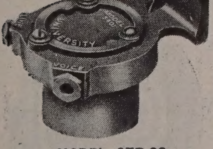
MODEL PC 66

COMPLETE • PORTABLE • NO TUBES • NO AMPLIFIER • NO A.C.

UNIVERSITY Powrmike features a microphone of completely new design that makes possible an effective, voice-amplified system without vacuum tube amplifier. It operates from any 6-volt D.C. source, wet or dry cell type batteries or vehicle ignition systems. Powrmike is completely portable, low in cost and requires no service or installation. Instant operation by depressing the switch bar on the microphone. Articulation and intelligibility are excellent. Sound output is ample to cover small crowds and provides good sound projection to over 100 feet. Under favorable conditions, this range is increased considerably. Powrmike is not intended to supplant conventional tube amplifying systems where higher power or music distribution is desired. But for applications needing only small area coverage and efficient voice reproduction, Powrmike is ideal. Powrmike is unconditionally guaranteed for one year.

MODEL	DESCRIPTION		LIST PRICE
PC 66	"Hot Shot" battery adapter plate with volume control, Powrmike, PS-4 speaker	Completely wired and assembled	$66.00 Less Battery
PC-2	Powrmike only, with 12 ft. cable		$30.00
PS-4	Speaker only, 4 ohms voice coil		32.50

WEATHERPROOF AND INDOOR LINE MATCHING TRANSFORMERS



MODEL CTR-20

The new UNIVERSITY line of matching transformers is designed for use with UNIVERSITY loudspeakers in indoor and outdoor installations.

Since most UNIVERSITY loudspeakers are capable of frequency response to 10,000 cps. and beyond, these transformers have been designed to assure perfect performance throughout the range of the speakers with which they are used. Only the highest grade metal is employed, Grade A fine gauge silicon laminations. Insulation withstands 1000-volt breakdown tests between windings and case. Efficiency is exceptionally high.

Model CTR-20 houses the Model 5420 transformer in a heavy DIE CAST case. Mounting may be made to a wall or other flat surface by means of screws using the bracket which is an integral part of the one-piece casting. A strap bar is also supplied for mounting the CTR-20 to trumpet "U" brackets; and for the UNIVERSITY Paging Speakers the CTR-20 cover plate accommodates the three mounting holes of the triangular mounting bracket. This makes the case a combination mounting support for both the transformer itself and the speaker. Gland nut cable entrances assure watertight protection against corrosive agents.

Model 5414 is a heavy duty transformer with taps especially selected for use on both constant impedance and constant voltage systems without need for further calculations. Frequency response characteristics are exceptionally good, making it ideal for use with High Fidelity equipment capable of response to beyond 15,000 cps. Heavy core enables very low frequencies to be handled with high efficiency.

No matter what the application or the impendance required, one of these new versatile UNIVERSITY line matching transformers can be used to do a dependable job.

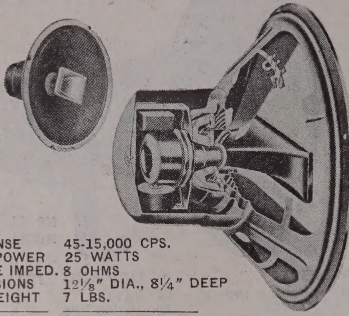
MODEL No.	DESCRIPTION	IMPEDANCE - OHMS		LIST PRICE
		PRIMARY	SECONDARY	
CTR-20	25 Watt, waterproof case	45, 500, 1000 1500, 2000	4, 8, 16	$15.00
5420	25 Watt, uncased	45, 500, 1000, 1500, 2000	4, 8, 16	5.00
5414	30 Watt, uncased	1000, 2000 165, 250, 500,	16	6.00

NOTE: Connecting a speaker of twice the impedance across a given secondary will double all primary values. Conversely, a speaker whose impedance is half the secondary value, will halve all primary values.

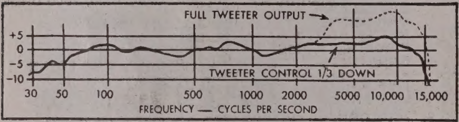
University SPEAKERS

HIGH FIDELITY LOUDSPEAKERS

MODEL 6201
COAXIAL SPEAKER



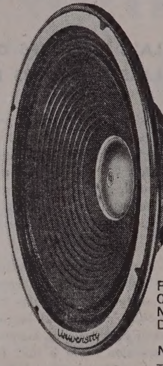
RESPONSE	45-15,000 CPS.
CONT. POWER	25 WATTS
SOURCE IMPED.	8 OHMS
DIMENSIONS	12⅛" DIA., 8¼" DEEP
NET WEIGHT	7 LBS.
LIST PRICE	$75.00



The exciting realism and tingling sense of "presence" when listening to the University Model 6201 is due, in part, to use of the same dual range principle employed in expensive theatre systems. Program material is divided into two bands. The low notes are handled by the large one-piece molded cone of the "woofer" section, and the treble tones by the highly efficient "tweeter" driver unit and horn. The result is uniform, balanced response and full range reproduction, free from distortion.

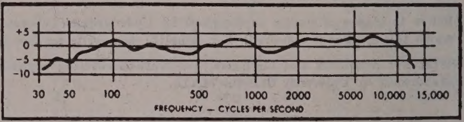
A built-in inductance-capacitance-resistance 2000-cycle crossover network assures optimum operation of the woofer and tweeter. The high frequency control, supplied completely wired to the speaker, permits variable adjustment of the "balance" between high and low frequency acoustic output. Another important feature is the coaxially mounted University "Cobra" shaped tweeter horn which provides a high frequency arc that blends with the low frequency output of the cone to form a uniform area of sound 80 wide, without the customary loss of "highs" when listening at angles considerably off speaker axis. Model 6201 can be installed quickly and easily. The mounting bolt circle is RMA standard for complete interchangeability with other 12" speakers. Tweeter horn is flush with woofer rim and entirely self-supporting. Capable of handling 25 watts of integrated program material continuously, Model 6201 is perfect for public address—monitoring—general sound reinforcement in theatres, churches, auditoriums, concert halls—and anywhere else a rugged, high power, weather resistant high fidelity speaker is required.

MODEL 6200
WIDE RANGE SPEAKER



DESIGNED FOR THE DISCRIMINATING LISTENER TO PROVIDE SUPERB REPRODUCTION AT LOWEST POSSIBLE COST

RESPONSE	45-10,000 CPS.
CONT. POWER	30 WATTS
NOMINAL IMPED.	8 OHMS
DIMENSIONS	12⅛" DIA., 4 15/64" DEEP, RMA Standard 12" MTG.
NET WEIGHT	5 LBS.
LIST PRICE	$35.00



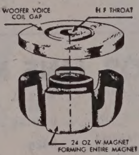
Model 6200 answers the need for a top quality but moderately priced high fidelity speaker. A 3" dia. duralumin dome at the apex of a specially curved one-piece molded cone reinforces the high frequency response, extending it to well beyond 10,000 cps. Like the 6201 Coaxial speaker, the model 6200 cone is also given a special rim treatment which minimizes the possibility of diaphragm distortion and serves to add to the life of the cone by preserving its flexible member.

The rugged University W Magnet assembly, an oversized voice coil wound on dural form, and a unique method of dissipating heat generated within the speaker mechanism by utilizing filtered air circulated by the back pressure of the speaker diaphragm are factors contributing to the high efficiency of model 6200. Construction of this speaker is typical of University high standards. The Hi Freq. dome is especially treated against fungus and corrosive agents, all close tolerance parts and hardware are both cadmium-plated and irridited, and the speaker finished with the finest hard-baked enamel on two coats of anti-rust and corrosion treatments.

Model 6200 is a versatile 30-watt powerhouse suitable for both high and low level applications where price is an important factor but quality of construction and reproduction must not be compromised.

EXCLUSIVE UNIVERSITY W SHAPED PERMANENT MAGNETS

W SHAPED MAGNET of gold dot Alnico V is another engineering feat responsible for the exceptional performance of these speakers. Heretofore, in ring and slug type magnets, field structures were heavy assemblies requiring "keeper" cups or "U" forms which were also a part of the magnetic return path and which had to be secured in place by bolts, cement, or welded joints. The powerful University W shaped alnico magnet eliminates the necessity for a return keeper and there are no welded or cemented joints in the magnetic path, since the complete magnet structure is the magnet itself.



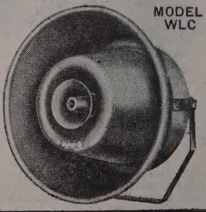
The W principle avoids reluctance which is present at the joints of other types, and results in a considerable reduction of stray magnetic fields and surface leakage. Greater concentration of the magnetic energy in the voice coil gap results, and flux density is thus considerably higher than in conventionally designed units. The oversized voice coil is wound on a 2-inch duralumin support for greater power handling capacity and efficiency, and set in an air gap which is independent of the actual magnet position, due to the unique design of the top plate and magnet assemblies. This assures permanent voice coil concentricity with the gap inner and outer circumferences.

WIDE RANGE WEATHERPROOF COAXIAL SPEAKERS

The Model WLC is a HIGH FIDELITY co-axial speaker with a response range essentially "at from 50-15,000 cycles. It includes a weatherproof 12" Cone speaker, a unit-driven tweeter and a built-in crossover network. Corrosion-resistant, all metal construction permits constant exposure regardless of temperature and humidity. Ideally suited for concert bandshells, drive-in theatres and all indoor or outdoor installations where high quality reproduction of music and voice are essential. A sturdy mounting bracket facilitates installation and permits tilting and locking the speaker in any desired position.

CONT. POWER	30 WATTS
IMPEDANCE	8 OHMS
RESPONSE	50-15,000 CPS.
DISPERSION	90°
DIAMETER	33½"
DEPTH	20"
CROSSOVER FREQUENCY	1000 CYCLES
WEIGHT	60 LBS.
LIST PRICE	$200.00

MODEL WLC



University SPEAKERS

HIGH FREQUENCY TWEETER SPEAKERS

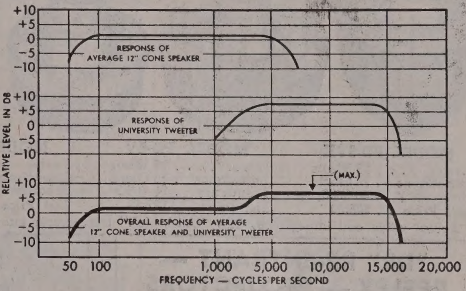
UNIVERSITY Tweeter are designed for use with any cone speaker to provide a dual-speaker combination having extended frequency response up to the limits of audibility. Since the average cone speaker seldom reproduces effectively above 6500 cycles, while even low priced amplifiers far exceed this range, these tweeters offer great opportunity to attain quality reproduction at very low cost. They can be connected to the voice coil of any PM or field excited cone speaker through a simple, economical, high-pass filter network. The various models shown offer ample diversity to meet the requirements of **any** installation.

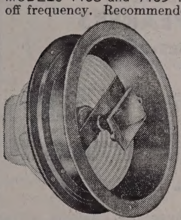
MODEL 4407 COAXIAL TWEETER ADAPTER fits any standard 12" cone speaker. It can be installed with minimum effort. Response is essentially flat from 2000 to 15,000 cycles which adds the brilliant "highs' so frequently carried through all stages of amplification only to be lost in the bottleneck of a single element reproducer. It is a perfect answer in every wide range application where performance, ease of installation and economy are important factors.

MODEL 4401 SINGLE TWEETER mounts readily in any cabinet and is recommended for use with 8" to 15" cone speakers with amplifiers rated up to 15-20 watts. Cone speaker acts as woofer reproducing low frequencies, tweeter takes over at 2000 cycles and above. Features unusually wide horizontal dispersion.

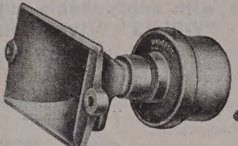
MODEL 4402 DUAL TWEETER is generally similar to Model 4401 except horizontal angle of dispersion is greater. The dual driver units permit variation of impedance (2-6 ohms in parallel; 14-18 ohms in series) and provide double power capacity—with woofer, 40 to 50 watts.

MODELS 4408 and 4409 TWEETERS are new models with lower cut-off frequency. Recommended for use with larger diameter cone speakers for a crossover frequency down to as much as 600 cycles. Their ability to handle reproduction of a greater portion of the audio range is advantageous because of the superior efficiency of the University driver unit and horn transducer, which avoids operating the woofer in the range of cone break-up. The exclusive University "Cobra" formula horn shape combines unusually wide hori ontal dispersion with optimum vertical projection.

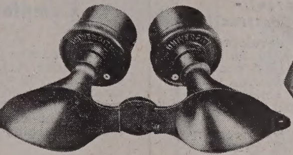




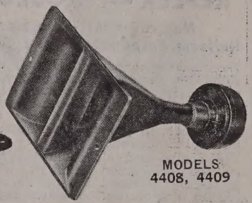
MODEL 4407



MODEL 4401



MODEL 4402

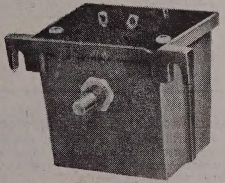


MODELS 4408, 4409

MODEL	4407	4401	4402	4408	4409
RESPONSE	2,000-15,000 CPS	2,000-15,000 CPS	2,000-15,000 CPS	600-15,000 CPS	600-15,000 CPS
IMPEDANCE	8 OHMS	8 OHMS	16 OHMS (Units in series)	8 OHMS	8 OHMS
CONTINUOUS POWER	6 WATTS H.F.	6 WATTS H.F.	12 WATTS H.F.	6 WATTS H.F.	25 WATTS H.F.
HORIZONTAL DISTRIBTN.	90°	90°	120°	120°	120°
VERTICAL DISTRIBUTN.	45°	45°	60°	60°	60°
DIMENSIONS	12" DIA., 3" D	4½" W x 2⅝" H x 5" D	9½" W x 2⅝" H x 5" D	5¾" H x 7⅜" W x 11⅛" D	5¾" H x 7⅜" W x 10½" D
LIST PRICE	$25.00	$20.00	$40.00	$27.50	$40.00

NOTE: Models 4408 and 4409 tweeters permit easy assembly of 2 and 3-way speaker systems at crossovers as low as 600 cycles. Construction is sturdy cast aluminum throughout. New horn design allows wider distribution pattern. Available in 6 and 25-watt capacities.

UNIVERSITY CROSSOVER NETWORKS



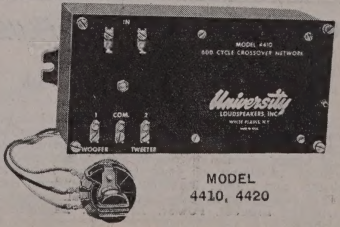
MODEL 4405

- **Choice of Capacitor or LC Type Networks — only paper dielectric capacitors used.**
- **Complete with Variable Attenuator to balance high and low frequencies.**

MODEL 4405 HIGH PASS FILTER — affords an **economical** means of prevening low frequencies from entering the tweeter circuit. All frequencies above 2000 cycles are routed to the tweeter. Frequencies below 2000 cycles are shunted to the cone speaker. This inexpensive filter or its equivalent is recommended for use with 2000 cycle tweeters. Case is die-cast aluminum.

MODELS 4410 and 4420 FILTERS — Crossover frequency of 4410 is 600 cycles, 4420 is 2000 cycles. Genuine L/C filter effectively blocks "highs" from entering the woofer — results in cleaner reproduction. The 4410 or equivalent must be used with 4408 and 4409 tweeters and the 4420 or equivalent may be used with 4407, 4401 and 4402 tweeters to prevent damage from low frequency entry.

MODEL	4405	4410	4420
CROSSOVER	2000 CPS.	600 CPS.	2000 CPS.
INPUT IMPEDANCE	6-12 OHMS	6-12 OHMS	6-12 OHMS
HEIGHT	2 23/32"	4⅛"	3⅜"
WIDTH	3½"	9¼"	7 7/16"
DEPTH	2¼"	3 5/16"	2 13/16"
LIST PRICE	$10.00	$35.00	$20.00



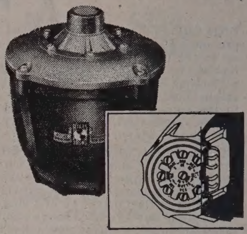
MODEL 4410, 4420

ATLAS SOUND CORPORATION

NEW ATLAS "ALNICO-V-PLUS" DRIVER UNITS

Standards and DeLuxe Models with Built-in Uni-Match Transformers

All models include the new Atlas "Alnico-V-Plus" super efficient magnetic circuit. Magnetically Shielded . . . Hermetically Sealed . . . One piece unbreakable, high temperature and fatigue proof full phenolic diaphragm. All models 1⅜"-18 thread size. The new DeLuxe models PD-8VT and PD-5VT include a built-in "Uni-Match" transformer offering facilities for universal matching to both constant impedance and constant voltage systems. All transformer taps, as well as direct voice coil connections, are brought out to a water proof "terminal window" conveniently located on the rear of the phenolic unit housing.



	MODEL PD-5VH	MODEL PD-4V	MODEL PD-3V	MODEL PD-8VT	MODEL PD-5VT
Power	25 Watts	25 Watts	12 Watts	30 Watts	25 Watts
Impedance	16 Ohms	16 Ohms	8 Ohms	16 Ohms*	16 Ohms*
Frequency	80-9000	90-6000	100-7000	80-1000	80-9000
List Price	**$35.50**	**$27.50**	**$24.75**	**$50.00**	**$45.00**

* Actual voice coil impedance. The "Uni-Match" transformer offers 150, 250, 1000, 2000 ohms and variable 70 volt line connections.

"DR" RE-ENTRANT — REFLEX — PROJECTORS

Non-resonant - Stormproof - Uniform Response-Rugged Construction

The modified exponential taper developed in Atlas DR projectors has proven to be most efficient for overall performance. All acoustical sound paths are smooth and flowing without steps or pockets to create conditions of turbulence, frequency cancellation and resultant signal distortion.

The costly and elaborate tooling necessary for the production of Atlas DR projectors is clearly reflected in superior performance, lasting service and consistent results.

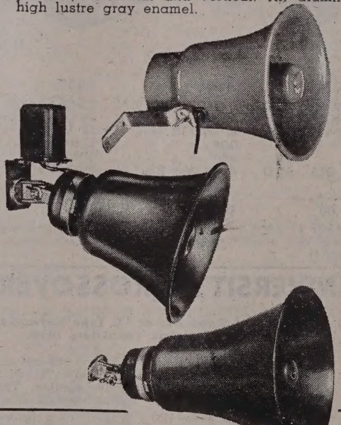
Heavy "U" bracket is securely fastened to a main body casting which will not fail when subjected to extreme stress, strain and vibration. 1⅜"-18 thread.

Model	Air Column	Low Frequency	Lgth.	Diam.	List Price
DR-32	2½ ft.	175 c.p.s.	12 in.	14 in.	$26.00
DR-42	3½ ft.	135 c.p.s.	15 in.	21 in.	31.00
DR-54	4½ ft.	105 c.p.s.	18 in.	31 in.	43.00
DR-72	6 ft.	85 c.p.s.	25 in.	31 in.	65.00

NEW ATLAS "ALNICO-V-PLUS" PAGING & TALK-BACK SPEAKERS

Complete with unbreakable super-efficient "V-PLUS" Driver Unit

These speakers include the newly developed, unbreakable, hermetically-sealed driver units using the Alnico "V-PLUS" magnetic circuit. They offer a maximum of efficiency as a reproducer, and the utmost in performance as a microphone, in talk-back circuits. The new, improved ball swivel mounting bracket permits quick and simple directional adjustment in every position, horizontal and vertical. All aluminum construction, finished in high lustre gray enamel.



MODEL HU-12

Power	3 watts
Impedance	8 ohms
Frequency	375 to 9000
Length	7½ in.
Diameter	6¼ in.
Air Column	13½ in.
List Price	**$25.00**

MODEL HU-15V

Power	12 watts
Impedance	8 ohms
Frequency	300 to 7000
Length	11 in.
Diameter	8½ in.
Air Column	15 in.
List Price	**$32.50**

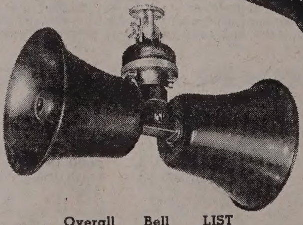
MODEL HU-24V

Power	12 watts
Impedance	8 ohms
Frequency	200 to 7000
Length	15 in.
Diameter	10 in.
Air Column	24 in.
List Price	**$35.75**

NEW ATLAS "ALNICO-V-PLUS" DUAL PROJECTORS

Two-way Projector complete with Driver Unit

This two-way speaker projects sound of equal intensity in a dual manner. Also excellent for talk-back application. Reduces cost of installation and offers installation advantages when used in critical locations of long corridors, industrial plants, and similar locations. All aluminum construction finished in gray lustre enamel. Universal mounting bracket. Power: 12 watts. Impedance: 8 ohms.



MODEL	Overall Length	Bell Diam.	LIST PRICE
TP-15V	15½ in.	8½ in.	$47.50
TP-24V	22 in.	10 in.	52.00

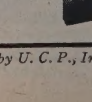
Weather Proof Line Matching Transformer

for use with HU to TP paging speaker

Convenient installation — may be mounted under speaker bracket — power rating 12 watts.

MODEL T-11 — Pri. 500, 1000, 1500, 2,000 ohms. Sec. 4, 8 ohms, for constant voltage or impedance systems.
List Price $8.50

MODEL T-12—Pri. 45 ohms. Sec. 4, 8 ohms for matching 40-60 ohm intercomm line to 8 ohm speaker.
List Price $8.00



ATLAS SOUND CORPORATION

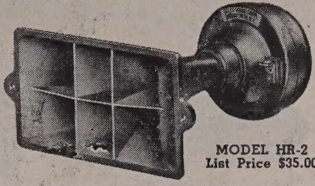
ATLAS "MULTI-CELLULAR" TWEETER

Convenient Installation—Flush Mounting

Two by Three Sectoral Die Cast Horn

Smooth Wide Angle Distribution
Clean and Efficient to 15,000 cycles

The New Atlas HR-2 "Multi-Cellular" Tweeter is the latest development in a versatile high frequency reproducer possessing the most advanced electrical, mechanical and acoustical design. The "Multi-Cellular" design of the heavy die cast horn provides a smooth and uniform sound dispersion pattern, not a "hot" high frequency sound beam on the center axis. The rugged construction and reserve power handling ability permits its use in connection with high powered sound systems in theatres and auditoriums as well as in normal living rooms at low level. Can be used with any cone speaker up to a 15 ohm impedance. **Model HR-2** **List $35.00**



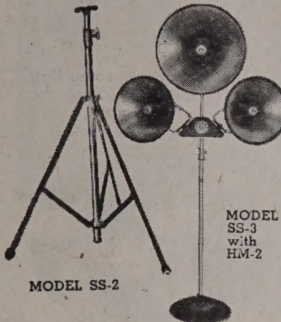
MODEL HR-2
List Price $35.00

MODEL FN-1

Variable filter to limit frequencies below 1000 cycles from actuating tweeter.

List Price $10.00

SPEAKER SUPPORT STANDS



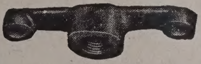
MODEL SS-3 with HM-2

MODEL SS-2

Both models extend from five to ten feet. Heavy steel construction finished in gray enamel and cadmium plating. PS-1 top fitting supplied. The HM-2 permits the use of three "DR" Projectors on a single support stand.

MODEL	LIST PRICE
SS-2	$38.00
SS-3	35.50
HM-2	16.50

PIPE STANCHION FITTING



"DR" re-entrant or "RC" radial "U" brackets adapted to 3/4" pipe fittings. This steel adaptor has holes properly located to match holes in "U" bracket. All mounting bolts supplied. Female 3/4" pipe thread.

MODEL PS-1 **LIST PRICE $1.50**

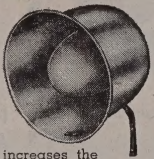
TWO UNIT TO ONE PROJECTOR ADAPTOR

When it is found necessary to obtain the greatest possible power output from a single projector the H-2U is recommended. This device permits the use of two driver units with any type of projector. Construction: Cast aluminum. All threads 1^3/$_8$"-18.

MODEL H-2U
LIST PRICE $11.00

MARINE Midget PROJECTOR
for 5" Cone Speakers

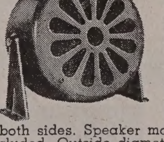
- **Re-entrant.**
- **Weatherproof.**
- **Efficient.**
- **Compact.**



Will accommodate any standard 5" cone speaker. The efficient means of loading the cone diaphragm greatly increases the normal efficiency of any cone speaker. Offers protection against weather and mechanical abuse. Universal steel mounting bracket supplied. Bell diameter 10 inches . . . Overall length 8 inches . . . Finish: Gray enamel. Supplied less cone speaker unit.

MODEL WX-5 **LIST PRICE $14.00**

TWO-WAY ENCLOSURE
for 8" Cone Speakers



The front and back wave of the speaker is utilized to assist in good sound coverage in long corridors and central locations. Adjustable wall or ceiling mounting brackets supplied. All steel finished in gray enamel. Cloth screens on both sides. Speaker mounting screws included. Outside diameter 10", Depth 5".

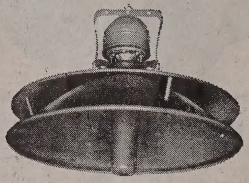
MODEL TW-8 **LIST PRICE $9.00**

SPEAKER POWER VOLUME CONTROL

For adjusting volume of individual speakers. Power handling: 10 watts constant. Complete as illustrated.

MODEL RC-1
LIST PRICE $5.50

RADIAL DRIVER UNIT PROJECTOR

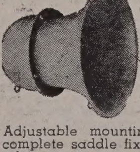


- **Non-resonant.**
- **Dual Rubber Rims.**
- **100% Storm-Proof.**
- **Uniform 360° Coverage.**

The advantage of 360° coverage often permits the use of one speaker where normally a multiple of directional projectors may be required. The radial projectors are of all-aluminum construction finished in a weather-proof gray enamel. Thread size 1^3/$_8$"-18. The use of the H-2U two-unit adaptor will double the power output for single projector high power application.

MODEL	**RC-36**	**RC-48**
Air Column	3 ft.	4 ft.
Bell Diameter	24 in.	28 in.
Overall Height	18 in.	21 in.
LIST PRICE (horn only) .	**$43.00**	**$53.50**

PARABOLIC BAFFLES
for 12" Cone Speaker



All steel construction, waterproof interlock seal between sections. All mounting bolts and hanging loops supplied. Finished in gray enamel.

Model	**SM-12**
Diam. Bell.	20 in.
Length	18 in.
Speaker Size	12 in.
List Price	**$17.00**

Adjustable mounting fixture for above complete saddle fixture and base pedestal.

Model ST-8 **List Price $6.25**

RADIAL CONE SPEAKER PROJECTOR

for 12-inch Cone Speakers . . . 360° Coverage

This radial projector offers an excellent baffle for any standard 12" diameter standard cone speaker and produces smooth and uniform 360° coverage. With a good grade of cone speaker it will adequately load the reproducer down to 60 cycles. The enclosure is designed to shed water and can, therefore, be used indoors and out. Finished in gray enamel . . . Outside diameter 29 inches . . . Overall height 13 inches.

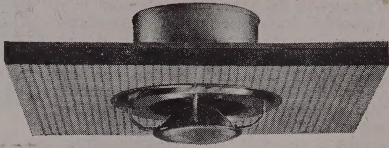
(TEMPORARILY DISCONTINUED) **MODEL L-360 . . . LIST PRICE $37.50**

"Heard Everywhere"

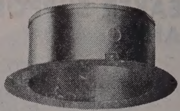
BACK COVER SPEAKER CAN

and Plaster Ring Assembly

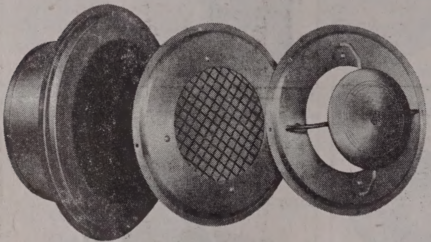
Back Cover Speaker Can and Plastic Ring Assembly



Sectional View of Completed Assembly



Back Cover Speaker Can and Plastic Ring Assembly



Side View of Models as Mounted to Assembly

FOR NEW CONSTRUCTION ONLY

Model No.	List Price	
CP6	$ 6.85	for use with Model AL6 and RS6
CP8	8.50	for use with Model AL8 and RS8
CP8TL	9.50	for use with Model ATL and RGL
CP1012	11.50	for use with Model AL10, AL12, and RS12

FEATURES

Reduces installation time.
Furnished with 3/4" knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

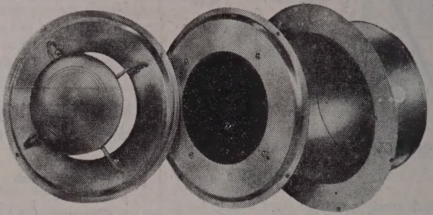
This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and time saving installation, since all mounting hardware to baffle is furnished. Evenly spaced 3/4" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6	7" I.D.	x 4" deep	x 12" O.D.
CP8	8½" I.D.	x 4¼" deep	x 12¾" O.D.
CP8TL	8½" I.D.	x 4¼" deep	x 16" O.D.
CP1012	12½" I.D.	x 7" deep	x 17⅜" O.D.

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of 3/4" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.



Side View of Models as Mounted to Assembly

FOR EXISTING CONSTRUCTION AND REMODELING

Model No.	List Price	
CP6X	$ 6.00	for use with Model AL6 and RS6
CP8X	7.50	for use with Model AL8, CE8L and RS8
CP8TLX	8.00	for use with Model ATL and RGL
CP1012X	10.00	for use with Model AL10, AL12, RS10 and RS12

FEATURES

Self aligning screw clips and positive screw locking.
Reduces installation time.
Furnished with 3/4 in. knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and cost saving installation since all mounting hardware to baffle is furnished. Evenly spaced 3/4" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6X	7" in diameter	x 4" deep
CP8X	8½" in diameter	x 4¼" deep
CP8TLX	15" in diameter	x 4¼" deep
CP1012X	16½" in diameter	x 7" deep

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of 3/4" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.

STEEL PLASTER RINGS

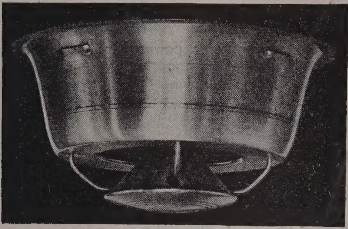
Model No.	List Price	Model No.	List Price
PR6	$2.00	PR8	$2.65

LOWELL MANUFACTURING CO. ST. LOUIS 7, MO. U.S.A.

"Heard Everywhere"

LOWELL FLUSH MOUNTING CEILING BAFFLES

with "floating conical action"



Model Nos.

BL6-A
BL8-A
BL12-A

PATENTED
IN THE U.S.A.
AND CANADA

DIMENSICNS OF VARIOUS MODEL BAFFLES

6" models — 9¾" at top x 4¼" deep.
8" models — 13½" at top x 4⅞" deep.
12" models — 18⅜" at top x 8 " deep.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
BL6 - A	Flush Mounting............	6"	Aluminum	Satin	13.00
BL8 - A	Flush Mounting............	8"	Aluminum	Satin	22.00
BL12-A	Flush Mounting............	12"	Aluminum	Satin	27.00

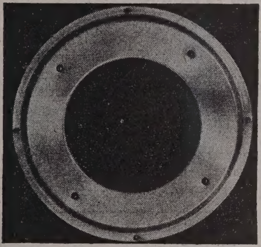
DESCRIPTION OF BAFFLE

The flush mounting ceiling baffle is designed to mount flush to the ceiling quickly by inserting 4 toggle bolts, completely sealing back of housing to the ceiling. This baffle is recommended for normal ceilings. Uniform sound reproduction at 360° giving CONTROLLED SOUND evenly in all directions. Baffle is made of spun metal, of 18 gauge aluminum. Heavy ¾" jute lines interior with louvres on sides for proper pressure relief.

ARCHITECTS' SPECIFICATIONS

This speaker baffle housing contains a half inch flange at top with 4 holes evenly placed for proper mounting to the ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle.

recessed wall type directional speaker baffles



Model Nos.

RS6-A
RS8-A
RS12-A

FEATURES

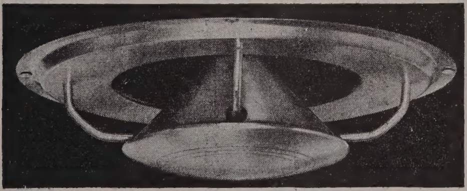
Concealment of speakers.
Easily installed.
Finished to match surroundings.

DESCRIPTION

This speaker trim ring is made of spun metal, 18 gauge aluminum. Flocked metal color grille cloth protects speaker cone — 4 round head screws mounts through housing for mounting speaker. Housing has a depth of ½" and a half inch flange for mounting housing to wall.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
RS6 - A	Recessed Wall............	6"	Aluminum	Satin	**$5.00**
RS8 - A	Recessed Wall............	8"	Aluminum	Satin	**5.55**
RS12-A	Recessed Wall............	12"	Aluminum	Satin	**7.60**

for low ceilings



Model Nos: AL6-A AL8-A AL12-A

DIMENSIONS OF VARIOUS MODEL BAFFLES

The overall diameter at top of housing flange:
6" model — 9⅝" in diameter, depth ½"
8" model — 11¾" in diameter, depth ½"
12" model — 16½" in diameter, depth 1 "

DESCRIPTION

The false ceiling speaker housing is made of 18 gauge aluminum. Housing is spun metal, having a depth of ½" and a half inch flange for mounting housing to ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle. The sound coverage of this baffle is approximately 360°.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	Price
AL6 - A	False Ceiling......	6"	Aluminum	Satin	**$7.50**
AL8 - A	False Ceiling......	8"	Aluminum	Satin	**12.15**
AL12-A	False Ceiling......	12"	Aluminum	Satin	**15.30**

WRITE FOR FURTHER DETAILS ON VARIOUS COLORED LACQUERS AVAILABLE

LOWELL MANUFACTURING CO. ST. LOUIS 7, MO. U.S.A.

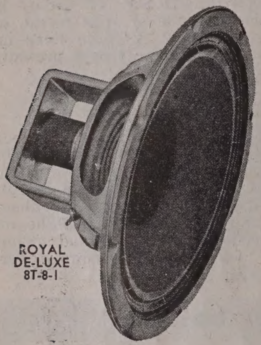
TRADE MARK
PERM-O-FLUX
REG. U. S. PAT. OFF.

PERMANENT MAGNET DYNAMIC SPEAKERS

★ PERMOFLUX ROYAL LINES ★

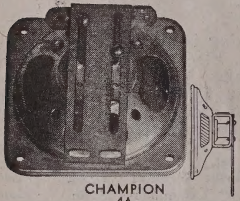
We invite Comparison!

New engineering advances in cone-design, such as slotted edge, curvilinear shape, combined with super soft suspension, all tend to produce in the Royal Series the tonal performance usually found only in much higher priced speakers. Outstanding features are: extra high and low frequency response—high sound level output—greater power handling capacity. The combination of these features together with modest price adds up to the greatest speaker value offered anywhere. Hear a Royal Line Speaker and be convinced.


ROYAL DE-LUXE 8T-8-1

SIZE	MODEL	APPROX. MAGNET WEIGHT	VOICE COIL IMP.	VOICE COIL WATTS	SHIPPING WT. EACH	LIST PRICE
NEW ROYAL LINE — With Royal Blue Cones (Treated, Slotted Cone Edge)						
6"	6L-3-1	3 oz.	8.	5	1# 5 oz.	$10.00
8"	8T-8-1	6 oz.	8.	8.	3#	22.50
12"	12T-8-1	6 oz.	8.	10	4# 3 oz.	27.50
NEW DELUXE ROYAL LINE — With Royal Blue Cone (Treated, Slotted Cone Edge) With Pot Covers						
8"	8UP-8-1	8 oz.	8.	10	4#	$30.00
12"	12UP-8-1	8 oz.	8.	12	5# 1 oz.	35.00

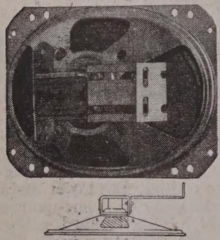
★ PERMOFLUX CHAMPION LINE ★


CHAMPION 4A

Like all Permoflux electronic and acoustical products, Permoflux P.M. Speakers are engineered to the highest performance standards. Their overall sensitivity, wide frequency response and rugged mechanical design make them favorites wherever fidelity of tone is an important consideration. Because of modern and efficient manufacturing methods and quality control systems which establish remarkable uniformity in production, Permoflux speakers assure the finest reproduction in all applications.

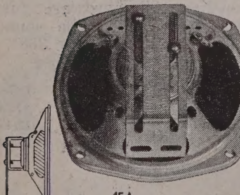
All speakers listed are shown with improved Alnico 5 magnet construction. Due to current material shortages, we reserve the right to supply equivalent speakers having Alnico 3 magnet construction if necessary unless orders specify to the contrary.

SIZE	MODEL NO.	APPROX. MAGNET WT. OZS.	WATTS INPUT	VOICE COIL IMP. OHMS	SHIPPING WT. EACH OZS.	STANDARD PACKAGE	LIST PRICE
2½" Square	25AM	.68	1-2	3.2	7	12*	$ 5.00
4" Square	4AM	.68	2-4	3.2	8	12*	5.00
4 x 6" Ellip.	46AM	.68	2-4	3.2	9	8*	5.50
5" Round	45ARM	.68	2-4	3.2	9	8*	5.00
5" P. C.	45AM	.68	2-4	3.2	9	12*	5.00
5 x 7" Ellip.	57J	1.0	4-6	3.2	17	6*	6.50
6" P. C.	6AM	.68	4-6	3.2	14	8*	6.00
6" Auto	6JM	1.0	4-6	3.2	15	8*	6.75
6 x 9" Auto	69K	1.47	5-7	3.2	27	6*	9.25
7" Auto	7K	1.47	6-8	3.2	21	6*	9.25
8" P. C.	75K	1.47	6-8	3.2	23	6*	9.00
10" Round	10K	1.47	8-10	3.2	44	4*	11.50
12" Round	12R	2.15	9-12	3.2	56	3*	13.00
12" Round	12R8	2.15	9-12	8	56	3*	14.00


46A

NOTE: Letter "M" designates speaker equipped with universal mounting bracket and tapped yoke. All permoflux speakers have R.T.M.A. standard mounting holes, and transformer mountings.

*Ordering in standard package quantities will expedite handling.


45A

Permoflux welcomes the opportunity to work with all interested parties on any special requirements. (All acoustical devices such as Loud Speakers, Ear Phones and Microphones). Contact Permoflux Corporation, 4900 W. Grand Ave., Chicago 39, Ill.

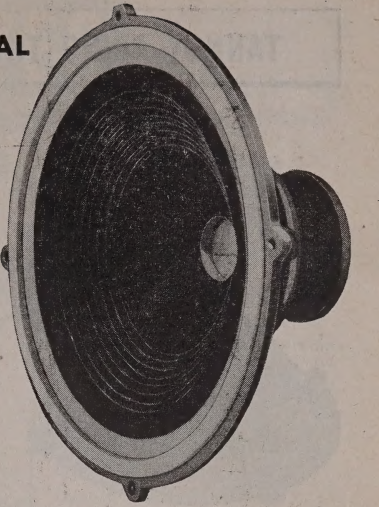
Britain's Finest Loudspeaker

Wharfedale

Built by Wharfedale Wireless Works under the direction of G. A. Briggs, world-renowned sound engineer!

Despite their modest price, all Wharfedale Speakers are fitted with cast chassis resulting in greater rigidity, less resonance and better air loading. All models have cloth suspension cones which improve the transient response by adding dissipation to the edge of the cone, with reduced reflection of the flexural waves. This type of cone suspension also reduces the bass resonances of the speaker unit, resulting in a more level impedance curve and improves the transient or decay element. Such refined quality of reproduction is only available with Wharfedale's cloth suspension.

SUPER 12/C.S./AL



SPECIFICATIONS

RESPONSE: 30/18,000 c.p.s.

IMPEDANCE: 15 ohms

POWER: 12 watts

MOUNTING HOLES: 12⅜"

CONE RESONANCE: 35/45 c.p.s.

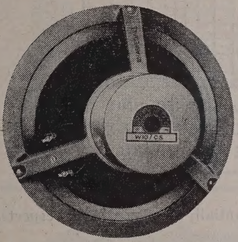
WEIGHT: 18¼ lbs.

FLUX DENSITY: 17,000 lines

Warmly received by quality enthusiasts, the Super 12/CS/AL has a remarkably level response between 30 and 18,000 cycles when adequately baffled. Cloth suspension and low cone resonance reduces transient distortion to an absolute minimum and reduces irritating "boom" associated with stiffly suspended cones. Wharfedale's exclusive cone achieves amazingly clean highs.

The high quality performance of this speaker is uniformly maintained in production since it does not rely on subsidiary diaphragm resonances.

W10/C.S.B.

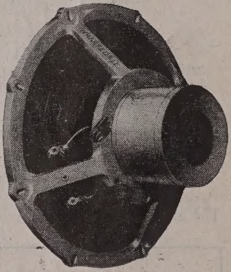


SPECIFICATIONS

RESPONSE: 30/18,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 8 watts
MOUNTING HOLES: 9⅞"
CONE RESONANCE: 50/60 c.p.s.
WEIGHT: 9 lbs.
FLUX DENSITY: 14,000 lines

This speaker has been designed especially for the average sized room where loud volume is often irritating. It requires only 3 to 4 watts to give the refined quality of which it is capable. The cloth suspended cone of the 10/CSB has truly remarkable ability to reach maximum quality at low levels. This speaker makes an excellent tweeter in a two-way speaker system and maintains highs that are clean and brilliant without being penetrating.

SUPER 8/C.S.



SPECIFICATIONS

RESPONSE: 50/12,000 c.p.s.
IMPEDANCE: 10 ohms
POWER: 5 watts
MOUNTING HOLES: 7¾"
WEIGHT: 4¾ lbs.
CONE RESONANCE: 60/65 c.p.s.

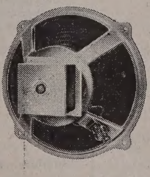
This cloth suspended cone has a bakelized apex for wide response and is suitable for bass reflex cabinets, or for use as a treble unit in a two-way speaker system. The refined quality of this unit would not normally be associated with a speaker of this size.

LOW FREQUENCY DRIVERS

W12/C.S.

Impedance: 15 ohms
Power: 10 watts
Mounting Holes: 12⅜"
Weight: 12 lbs.
Cone Resonance: 40/50 c.p.s.

W15/C.S.

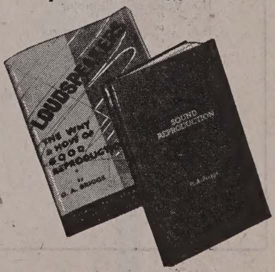


Impedance: 15 ohms
Power: 15 watts
Mounting Holes: 14½"
Weight: 17 lbs.
Cone Resonance: 30/35 c.p.s.

These units give clean bass down to 25/35 cycles without frequency doubling, with reasonable air loading. Ideal speakers for two way systems. Again, low transient distortion and smooth response are made possible only by Wharfedale's exclusive cloth suspension.

TWO BOOKS by G. A. Briggs

Famous Sound Authority and Creator of Wharfedale Speakers



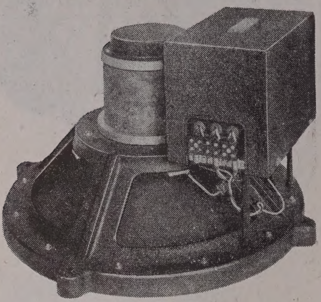
LOUDSPEAKERS
This invaluable book sets forth the "Why" and "How" of good reproduction in simple, non-technical language. 88 pages

SOUND REPRODUCTION
This volume presents additional information and detail on subjects discussed in "Loudspeakers." It considers the size and shape of cabinets, placement, etc., and incorporates a new section covering records, pick-ups and needles. Interesting and valuable to expert and amateur alike. 144 diagrams. 248 pages.

BRITISH INDUSTRIES CORPORATION • New York 13, N. Y.

TANNOY AUDIO THRU BEAM INSTRUMENTS

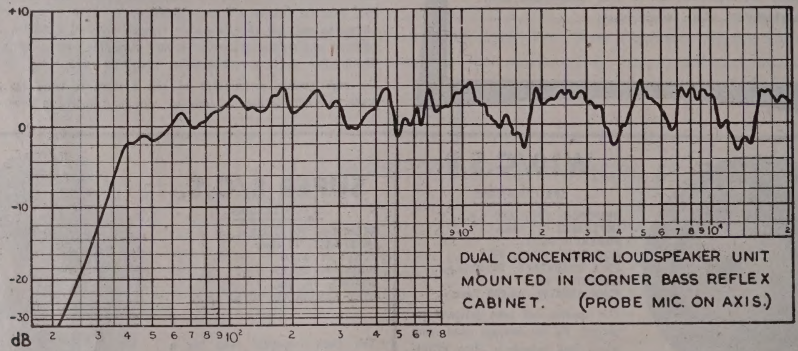
TANNOY DUAL CONCENTRIC LOUDSPEAKER SYSTEM



This twin Loudspeaker system consists of a direct radiator low frequency unit mounted concentrically with a horn-loaded high frequency unit. The voice coils of both Loudspeaker systems are fed through a specially designed cross-over network. The frequency response of both units is intrinsically level and the wide frequency response is not obtained by trick effects, such as cone break-up or diaphragm resonance. The design of the low frequency cone, which forms the final section of the high frequency horn, is such that even distribution of high frequencies is obtained over a wide angle and in order that the low frequency diaphragm shall move as a true piston, the body thickness has been increased and the surround is specially treated to prevent the setting up of subsidiary resonances. In the design of this Loudspeaker, great care has been taken to ensure that the entire system is truly aperiodic which, together with its wide frequency range result in really outstanding reproduction.

This Loudspeaker unit is available in two forms — a 15″ version, capable of handling up to 25 watts which is particularly useful for use with high quality Sound Reinforcement systems and a 12″ version capable of handling up to 15 watts, which finds its main application in high quality Phonograph and Radio reproducing systems. A suitable Cabinet design for these applications is the corner mounting Bass Reflex type of Cabinet.

There is no doubt that where the input source is of sufficiently high quality, the "TANNOY" Dual Concentric Loudspeaker system is well in advance of any type of Loudspeaker hitherto commercially available.



DUAL CONCENTRIC LOUDSPEAKER UNIT MOUNTED IN CORNER BASS REFLEX CABINET. (PROBE MIC. ON AXIS.)

The above response curve relates to a 15″ dual concentric, the response of a 12″ unit is substantially the same in all respects.

TECHNICAL SPECIFICATION

	12″ Dual Concentric Loudspeaker	15″ Dual Concentric Loudspeaker
H.F. Voice coil diameter	2″	2″
L.F. " " "	2″	2″
H.F. " " impedance	14 ohms. at 3000 c.p.s.	12 ohms. at 2000 c.p.s.
L.F. " " "	18 ohms. at 400 c.p.s.	12 ohms. at 400 c.p.s.
Flux density L.F. Gap	10,000 gauss, $B_2 L_2$ 6•3 x 10_{14}	12,000 gauss, $B_2 L_2$ 7•7 x 10_{14}
" " H.F. Gap	15,000 gauss, $B_2 L_2$ 1•1 x 10_{14}	18,000 gauss, $B_2 L_2$ 1•39 x 10_{14}
Power handling capacity	15 watts.	25 watts peak
Impedance via crossover network	18 ohms.	15 ohms
Polar distribution—	3dB at 10,000 c.p.s. for 60° inc. angle	4dB at 10,000 c.p.s. for 60° inc. angle
Intermodulation produces	less than 2 per cent.	less than 2 per cent
Bass resonance	35 c.p.s.	40 c.p.s.
Crossover frequency	1,700 c.p.s.	1000 c.p.s.
Overall Diameter of Frame	12⅜″	15¼″
Overall Depth	7½″	11″
Fixing Holes p.c.d.	11¾	15½″
Weight	10 lbs. (Crossover network on separate chassis.)	30 lbs.
Finish	Black Anodised and Cadmium plate.	Cadmium plate and Stove Enamel.

Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

microphones

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

21B MICROPHONE

The 21B Microphone provides a new standard for frequency response and dynamic range in quality microphones. The 21B is a condenser microphone and, in addition to its miniature size and superb quality, is **omnidirectional**, shock proof, blast proof, and free from angular discrimination. Frequency response: 20 through 15,000 cps. Output level: —48 db re 1 milliwatt for a sound field of 10 dynes/cm^2.

21B and 150A BASE

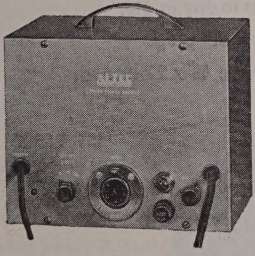
The 21B is used on the 150A Base as a stand, suspension, or hand microphone. Small size makes it ideal for stage, TV, and motion pictures.

Customer Net Price: **$83.00**

152A CABLE SET

This cable set is designed for stand mounting of the 21B and 150A Base. It is equipped with 8 pin Cannon connectors. Connector at 150A Base has ⅝″-27 thread. Length with connectors: 25 ft.

Customer Net Price: **$25.00**

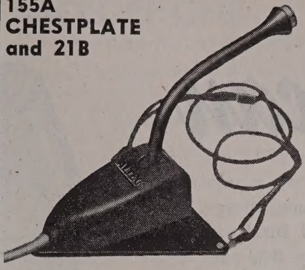


P-518A POWER SUPPLY

The P-518A Power Supply provides the necessary voltage for the 21B microphone and the impedance matching tube in the 150A Base, or the 155A Chestplate. This power supply is necessary to operate the microphone into an amplifier not specifically designed to receive it. The P-518A is a portable unit. Output impedance: 30, 250, 500 ohms. Power requirements: 117 V, 60 cycles A.C. Dimensions: 7½″ x 8¼″ x 6″.

Customer Net Price: **$90.00**

155A CHESTPLATE and 21B



The 21B on the 155A Chestplate is the ideal instrument for the active lecturer or announcer. It hangs around the neck and places the microphone near the lips, leaving the hands free. 25 feet of cable is permanently attached to the 155A Chestplate.

Customer Net Price: **$108.00**

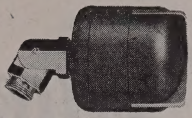
CARDIOID MICROPHONE*
639A and 639B

Ideal for broadcast or public address, these cardioid microphones with ribbon and dynamic elements provide the best possible pick-up under varying, difficult conditions. High quality three-way (639A) and six-way (639B) directivity patterns are quickly selected by turning a screw. Each embodies a dynamic moving coil type pressure element. Impedance average 40 ohms. Power output level: —76 dbm. Frequency response: 40-10,000 cps.

LIST PRICE

639A	$158.70
639B	$158.70

*Distributed by Graybar Electric Co.



DYNAMIC MICROPHONE*
632C

An exceptional, close-talking microphone for announcing and public address systems. Rugged, quiet-operating, unaffected by temperature, humidity or breath condensation.

Frequency re-sponse: 150 to 5000 cps.

Impedance: 30 ohms.

Power output level: —80 db.

List Price $70.95

*Distributed by Graybar Electric Co.

DYNAMIC MICROPHONE*
633A and 633C

This rugged, dependable high-quality microphone for public address, sound distribution system, or broadcasting, affords both non-directional and semi-directional performance.

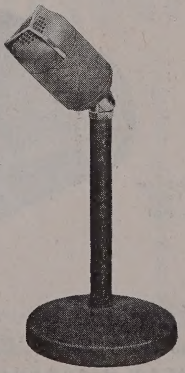
Frequency response: 40-15,000 cps.

(633A) Impedance: 30 ohms.
(633C) Impedance: 30, 150-250 ohms.

Power output level: —79 dbm.

LIST PRICE

633A	$83.10
633C	$91.50



*Distributed by Graybar Electric Co.

NEWEST
American*

This new dynamic microphone, attractively finished in Gold and Black, is efficient for all Audio pickup. The one inch diameter head provides full vision for artist and audience. Omnidirectional pickup. The accompanying graph shows the overall response and output level. No pre-amplifier required.

Easily mounted for stand or suspension use. Quickly detachable for hand use. Weight; seven ounces. Equipped with Cannon "Latch lock" plug and 25 ft. 2 conductor shielded cable. Impedance; 30-50 and 250 ohms. Available in all popular impedances.

Antihalation finish for T. V. supplied on order for additional $5.00 List.

Remove name plate to change impedance. Both 50 ohms and 250 ohms are provided.

Model ND base
List: $10.00
Code: Short

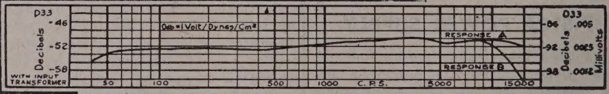
D33

FULL VISION
Dynamic
MICROPHONE
for TV • AM • FM

- **BROADCAST**
- **RECORDING**
- **PUBLIC ADDRESS**

Easily detached from mounting by slide lock.
Adjusts to any angle.
"Latch lock" plug.
Mounting; ⅝" x 27 thread.

LIST PRICE
$125.00
D33 CODE: DOING



Specify type response desired (A or B) when placing order.

Public address and home recording model D22, substantially flat from 100 to 7500 cycles. Dual impedance, 50 ohms and 40,000 ohms (high) D22 Dynamic Code: DOALL List: $75.00

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AMERICAN MICROPHONE CO. **Pasadena 1, California**

American MICROPHONES

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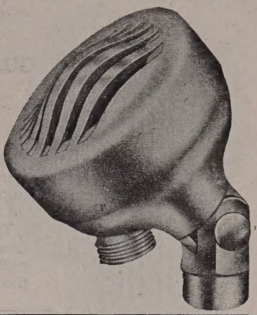
C6 CRYSTAL MICROPHONE



EXTREME SENSITIVITY. New crystal driving lever, twice as efficient as previously used, produces twice the voltage output with equal sound pressure.

BROADER RESPONSE. Results of new construction include extension of both low and high end.

BASS END IMPROVED. Naturalness insured by improvement in low frequency response.

LONGER LINES. By increasing the voltage output, the cable length may be increased proportionately. In laboratory tests, regular cables 250 feet in length have been used with a net voltage sufficient to operate any standard high gain amplifier.

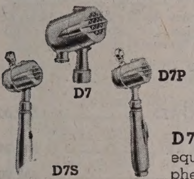
MECHANICAL NOISE REDUCED. Mechanical and stand noise is no longer a factor. The C6 method of crystal mounting reduces mechanical noises by 12 db.

LESS AMPLIFIER AND INDUCED NOISE. The high output of this microphone assures a very desirable signal-to-noise ratio.

SWIVEL HEAD. All angles for semidirectional and nondirectional pick-up are provided by the ⅝" x 27 (standard) mounting connector.

Complete with 7' cable and plug at microphone. Polished chrome finish. Net weight 8 oz. Over-all height 3". Diameter 2⅜". ⅝x27 thread provided for suspension or stand mounting.

C6 Crystal, Code CESIX.................List Price **$18.00**



THE *"Clipper"* DYNAMIC

D7 and D7T MICROPHONES

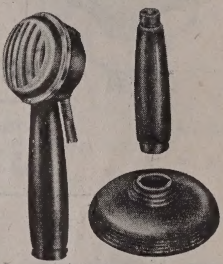
equipped with single conductor Amphenol plug and 12½ feet shielded cable. Chrome finish, ⅝"-27 thread stand mounting. Over-all height, 2½"; diameter, 1½". Net wt. 8½ oz. Hand microphones (D7P, D7TP, D7S, D7TS) with press-to-talk or slide switch all supplied with six feet of cable, loose ended. No plug.

APPLICATIONS: Excellent for communication purposes, Marine safety-at-sea installations, police broadcasting, amateur communication, public address, indoor and outdoor installations.

D7T—High Imp., 38,000 or 500 or 200 Ohms;
Code: DISET ....List Price **$27.00**
D7TP (Press-contact Switch),
Code: DIMAT ....List Price **$31.00**
D7TS (Slide Switch), Code: DIAHT.................List Price **$30.00**
D7—Low Impedance, 50 Ohms,
Code: DISEV ....List Price **$24.00**
D7P (Press-contact Switch),
Code: DIMAR ....List Price **$28.00**
D7S (Slide Switch), Code: DIAHL.................List Price **$27.00**

RC CRYSTAL MICROPHONE

Complete with NON-BREAKABLE PLASTIC STAND and 7 foot Cable



RC Crystal Microphone may also be mounted on any stand equipped with standard ⅝" x 27 thread. . . . An excellent microphone for Communication, Public Address or Amateur Radio.

HOME RECORDING OR BROADCASTING
HIGH OUTPUT, GOOD QUALITY

Base easily removed by quarter turn, releasing bayonet lock. Cable replacements accomplished by releasing set screw in back of microphone and pulling gently on spring cable protector ....List Price **$10.90**

American ★ ACCESSORIES

SUSPENSION EYE. For suspending any microphone with standard ⅝" x 27 thread. Chrome finish. Sturdy. Code: DYEYE ....List Price **$2.00**

DD DESK STAND. Round base, 4" upright. Net weight 1¼ lbs. 5¼" base. Chrome finish. Code: DYNES
List Price **$4.50**

BS BANQUET STAND. Round base, 8" in diameter. Rods 12". Extended hgt. 24". Satin Black finish. Wt. 6 lbs. Code: FUDAS ....List Price **$12.00**

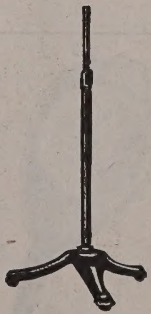
FH3 and FL3 FLOOR STANDS. Approved by the best sound studios. Positive leather, friction-lock clutch. Noiseless operation. Rods 38". Extended height 6'. Three-contact, "floor grip," rubber-mounted base.

FH3, studio model, net weight 15 lbs. **FL3,** public address model, net weight 10 lbs.

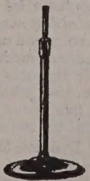
FH3 Floor Stand, Code: FUHET ....List Price **$18.50**

FL3 Floor Stand, Code: FLEXR ....List Price **$15.00**

Suspension Eye



DD Desk Stand



BS Banquet Stand

FH3 and FL3 Floor Stands

American MICROPHONES

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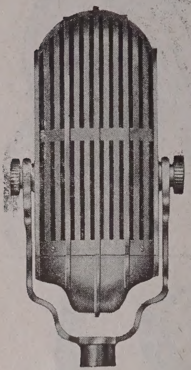
D9A *Unidirectional* MICROPHONE

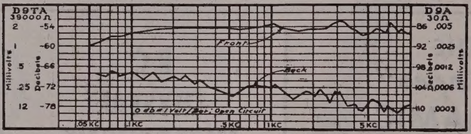


GUARANTEED to produce 30% MORE VOLUME (power) than any microphone at twice the list price. UNIDIRECTIONAL, True CARDIOID pattern pickup, frequency response good to 10,000 c. p. s.

Actual Tests are Convincing Arrange for Test with your Jobber

THE D9A DYNAMIC, a pressure-velocity combination microphone, with pick-up from front only, broad frequency response and high output, plus the usual dynamic microphone qualities of ruggedness, immunity to weather conditions, and circuit adaptability, should fill the majority of requirements.

The D9A Microphone is recommended for public address and general sound installations because its energy response field (cardioid of revolution) excludes extraneous pick-up and reduces feed-back by two-thirds. May be used for close talking due to the modified velocity section which also reduces wind noises to a minimum.



The above graph illustrates the average response characteristics for the D9A and D9AT. Voltage output levels, for 1 bar sound pressure (1 bar=1 dyne per sq. cm.) of the high and low impedance models. For 10 bar signal the output will be 20 db. higher.

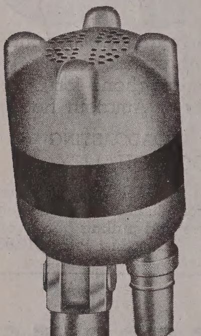
Net weight, 2½ lbs. Packed weight, 4 lbs. Height, 7"; depth, 2¼"; breadth, 2½". Standard ⅝-27 thread provided for suspension or stand mounting. Finish: Satin Chrome.

25' Shielded Rubber-Jacketed Cable Supplied with each Microphone.

D9A, Low Imp. (50 ohms).
Code: LOWEL....List **$42.00**

D9AT, High Imp. (38,000 ohms).
Code: HIWEL....List **$45.00**
Available on Order in 200 or 500 ohms....List **$45.00**

D4T DYNAMIC MICROPHONE

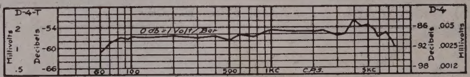


A QUALITY, LOW-PRICED, MOVING-COIL MICROPHONE. For general use where clear speech and natural music reproduction is required. This new AMERICAN microphone is a very efficient instrument, having a broad range, from 60 to 7500 c.p.s., and high output of —56 db (O db=1 v/bar). The utility value lies not only in the quality and type of response but also in mechanical features, such as light weight (approximately 10½ oz.), a full 180° vertical angular setting, and positive friction lock at the swivel.

The **D4T,** high impedance, is equipped with a single-contact, shielded plug. The 50, 200 and 500 ohm models are equipped with a two-conductor plug and have a balanced line out.

The **D4** model is of voice-coil impedance, approximately 30 ohms. Lines up to several hundred feet may be used on all models except the high impedance, where line should be restricted.

The complete assembly includes 12½ feet of shielded, rubber-covered cable and shielded plug. Finished in platinum chrome. Standard mounting, ⅝" x 27 thread.



D4T Dynamic (38,000 ohms), Code: DFORT....List Price **$24.00**
Available on order in 200 or 500 ohms....List Price **$24.00**
D4 Dynamic (30-50 ohms), Code: DEFOR....List Price **$21.50**

DHT DYNAMIC HAND-HELD MICROPHONE

Retractable Hanger — Press-to-talk Switch

This compact, sturdy microphone was designed for all applications requiring a dependable hand microphone for voice communication. Small and lightweight, it can readily be concealed in the palm of the hand. An Alnico V magnet, efficient magnetic circuit and newly developed diaphragm and voice coil assembly combine to generate the high output of 56 db below 1 volt per bar for the high impedance model.

Other desirable features are: convenient hanger which retracts into the case of the microphone when not in use; molded plastic diaphragm not affected by heat, moisture or mechanical shock; supplied with five feet of low loss cable; press-to-talk locking type switch for operation of the microphone unit. Additional switch contacts on request.

DHT Dynamic (38,000 ohms), Code: CALEB....LIST **$25.00**
Available on order in 200 or 500 ohms....**$25.00**
DH Dynamic (30-50 ohms), Code: CALYX....LIST **$22.50**
CH Carbon hand microphone with switch, hangar and 5 feet cable. 70 ohms. Code: CARBO
LIST **$20.00**

American MICROPHONES

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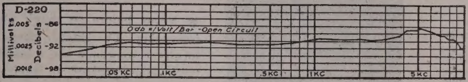
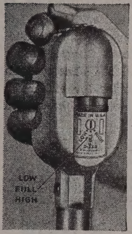
D220 DYNAMIC MICROPHONES

A WIDE RANGE HIGH FIDELITY MOVING-COIL MICROPHONE

- ★ **Two Dynamic Generators each with Specific Frequency Response.**
- ★ **Combined Outputs Elecrically and Acoustically Coupled Produce an Ideal Response.**
- ★ **Total Band 25 to above 10,000 cps. Broad Crossover from 150 cps. to 5000 cps.**
- ★ **Crossover Band an Average for Both Generators Eliminates Peaks.**



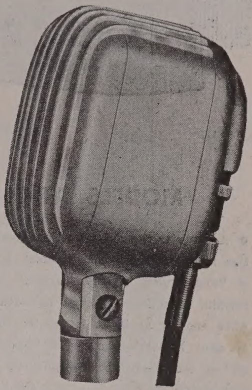


THREE TYPES OF RESPONSE FOR ALL PURPOSES

HIGH—For all purposes requiring richness in the higher frequencies. Slightly rising characteristic. (From 150 to 10,000 cps.)

FULL—For high fidelity requirements where smooth, flat response and broad range are necessary. (30 to above 10,000 cps.)

LOW—For pickup systems requiring embellished lows and good intermediate range. (25 to 5000 cps.)



Complete with 25′ cable. Balanced lines on low impedance models.

D220T Dynamic (38,000 ohms), Code: CROST .... LIST **$71.00**
Available on order in 200-250 or 500 ohms .... LIST **$71.00**
D220 Dynamic (30-50 ohms), Code: CROSS ....LIST **$65.50**

American PHONOGRAPH PICKUPS

J-1 PHONOGRAPH PICKUP

LIST PRICE

$6.00

The curved arm with off-set head was designed to provide optimum tracking for both ten and twelve inch records with minimum wear of record and stylus. Base of the arm is designed for single hole mounting. Assembly includes CR-1A Crystal Cartridge, twenty-four inch single conductor shielded wire, arm rest, mounting hardware and complete mounting instructions.

CRIA CRYSTAL CARTRIDGE

CR-1
AMERICAN

NEW "Locked in" Self Centered Needle Chuck

CR-1A Cartridge is a high output, wide range unit, which incorporates a number of new developments in cartridge design. High output and improved response are obtained by a unique method used to drive the crystal element. The cartridge is supplied with pin plug connectors for ease of assembly into the arm—no soldering iron is required. The needle chuck design incorporates a "locked-in" feature whereby the chuck is prevented from moving when tension or pressure is applied to the needle screw. This feature also insures that the needle socket will remain centrally located in its opening in the cartridge. High needle point compliance and minimum record chatter are thereby guaranteed. The cartridge will operate satisfactorily with any conventional needles; however, its high-frequency response will vary somewhat with the type needle used. Best operation will be obtained with off-set needles using sapphire or precious metal stylii.

Model	**CR1A**	**CR5**	**CR7**	**PNMA**
Needle Force, Ounces..	1¼	6 gms	8 gms	1¼
Output Voltage............	3.	1.	.1.	2.
Response	50-6000	6000	6000	50-6000
Terminals	Pin Plug	Pin Plug	Pin Plug	Pin Plug
Needle Screw	Thumb	set	set	Thumb
Needle	Optional	LP	LP & 78	Optional
Code	Cream	CABAL	CADET	Crest
List Price........................	**$4.00**	**$6.50**	**$6.50**	**$8.00**

Write for complete catalog of microphones, phoncgraph pick-ups, cartridges and stands.

ASTATIC

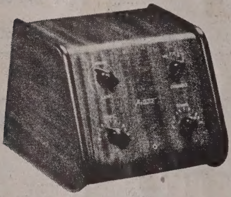
TV BOOSTERS and MICROPHONES

Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO

TELEVISION BOOSTERS

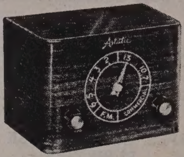
MODELS AT-1 and AT-1B

● A superior type of television booster. Ability to improve reception more effectively than ordinary boosters starts with the principle of "more tubes, stronger signal." A variable gain control knob permits reduction of signal strength to prevent picture distortion when the signal input is greater than that required. The failing of many boosters—showing a "peak" on some channels and "fall-off" on others—has been eliminated. These units provide extremely high gain, and do it throughout the television spectrum. Dual tuning controls allow separate tuning for picture and sound. Available in handsome furniture-finish mahogany or blond cabinets. The letter "B" in model numbers designates blond cabinet.



Model	Code	List Price
AT-1	ASAMI	$54.50
AT-1B	ASAMH	56.50

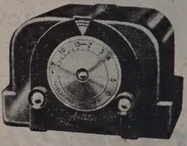
MODEL BT-1



● Never before so much ability for increasing TV signal strength—uniformly throughout the television spectrum—incorporated in such a small, simplified unit. A low-cost booster that equals the primary function of the highest price units. Quality of construction—including such features as the famous Mallory Inductuner—almost unbelievable in view of the low cost. Single tuning knob with continuous tuning through both TV and FM bands, off-on switch, selenium rectifier, single 6AK5 tube, provides for either 72 ohm or 300 ohm impedance input and output. Metal cabinet with mahogany woodgrain finish.

BT-1 Code ASAME **List Price $32.50**

MODEL BT-2



● Modern streamlined appearance along with the performance advantages of the Model BT-1. Handsomely designed, dark brown plastic cabinet. The same booster as the BT-1, with exception of cabinet and dial treatment, and addition of recessed pilot light to show when booster is on.

BT-2 Code ASAMD **List Price $34.95**

CRYSTAL MODEL D-104

● For close talking applications, such as radio amateur communications and similar uses. With high output level approximately —45 db, it possesses definitely reduced R.F. feed-back tendencies. Yoke-driven, bridge-mounted Graphoil crystal element with METALSEAL protection against moisture or dryness, shock-proof mounting and barometric compensation. Speech range frequency response from 30 to 7,500, rising 500 to 4,000 c.p.s. Chrome finish. Standard equipment includes interchangeable plug and connector, spring cable protector, 5′ shielded cable.

	List Price
D-104 —Code ASUPA	$24.60
G-D-104—Code ASVAX, with G-Stand	37.65
D-104-S—Code ASUPB, with S-Switch	27.35

CERAMIC MODEL D-104-C

● Duplicate of Crystal Model except for employment of ceramic element, which is immune to extremes of temperature and humidity. Performance comparable except for slightly lower output of approximately —58 db.

	List Price
D-104-C —Code ASUPC	$24.60
G-D-104-C—Code ASVAW	37.65
D-104-C-S—Code ASUQZ, with S-Switch	27.35

"SYNABAR" UNIDIRECTIONAL CARDIOID CRYSTAL

● Altogether professional in performance . . . performance to please the most exacting speakers and entertainers. Newly perfected unit employing special sintered metal which cancels out 15 db front to back, making it, for practical purposes, dead to sound from rear. Has truly excellent frequency range for its type and price class, 50 to 10,000 c.p.s., PLUS a Response Selector switch to provide choice of ideal pick-up characteristics for either crisp voice or general voice and music. Crystal element has special METALSEAL protection against moisture or dryness. Output level is —54 db, high impedance. Satin chrome finish. 18′ single conductor shielded cable, with or without off-on switch. Recommended, without reservation, for highest quality reproduction and elimination of extraneous noise, in the widest variety of modern applications.

	List Price
DR-10 —Code ASVFL	$37.25
DR-10-S*—Code ASVFK	39.95

*With off-on switch.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

NOTE: All microphone output ratings based on a reference level of one volt per microbar.

Astatic MICROPHONES

ASTATIC

KNOWN THE WORLD OVER

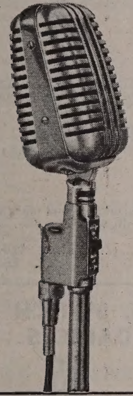
CONNEAUT, OHIO

CRYSTAL MODEL DK-1

● New non-directional unit for studio and public address, featuring reduced size and design established primarily to allow unobstructed, least detracting view of performer. Brushed chrome finish contributes to this purpose by reducing distracting light reflections and glare. Excellent frequency range, with rising characteristics between 2,000 and 5,000 c.p.s. Output level is approximately —55 db. Crystal element has moisture-proof coating. Includes 10 ft. rubber covered, shielded single conductor cable. Available with off-on S-Switch (SC-11) at $2.70 extra.

	List Price
DK-1—Code ASURV	**$22.00**

The WR-SERIES



● The WR-Series, Multi-Unit Microphones, are highly recommended for studio, public address and high quality recording purposes. Substantially flat frequency response up to 10,000 cycles. Due to their special interior assembly design, the WR-Series Microphones are practically transparent to sound waves and cannot be acoustically overloaded. Model WR-20 may be used on cable up to 100 ft. with negligible loss of output and Model WR-40 is more than able to handle cable twice this length. Output level —56 db. Finish, bright chrome with satin chrome grille. Cable length, 15 ft. Add **$2.70** for models with off-on switch. as shown.

	List Price
WR-20—Code ASVGZ	**$32.30**
WR-40—Code ASVAL	**43.25**

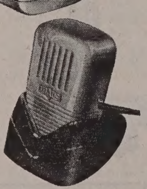
(Available with S-Switch or G-Stand)

"CARDINAL" CRYSTAL

● A sparkling gold finish, low-cost beauty with performance comparable to high-priced units. All-purpose microphone (see accessory list). Lifts from its streamlined, dark brown plastic desk stand for hand use. Wide range response, adaptable to standard AC or DC circuits, with 10′ cable Output level approximately —52 db.

	List Price
CX —Substantially flat—(Microphone only) Code ASAOA	**$9.75**
CX-1—Rising characteristics— Code ASAPZ	**9.75**

"CARDINAL" DYNAMIC



● Duplicate of Model CX in appearance, but equipped with dynamic unit.

	List Price (Microphone only)
CDH—(High Impedance) Code ASAOF	**$24.50**

"CARDINAL" CERAMIC

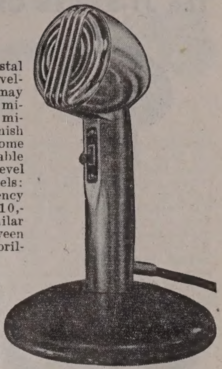
● Duplicate of Model CX in appearance, but employing ceramic element, which is immune to extremes of temperature and humidity. Equipped with 5′ cable. Output approximately —62 db.

	List Price (Microphone only)
CC —Substantially flat—Code ASAPU	**$8.95**
CC-1—Rising characteristics—Code ASAPT	**8.95**

"CARDINAL" ACCESSORIES

● "Cardinal" plastic desk base, **$1.00**; any model available with off-on switch, **$1.50** extra; hang-up hook, **$0.25**; stand adapter, **$0.35.**

"VELVET VOICE" CRYSTAL



● Here is a convertible type Crystal Microphone, providing ultra-smooth, velvety soft, wide range response, that may be used as desk, hand or floor stand microphone, to meet practically every microphone need. Beautiful gold finish housing and handle; bright chrome grille; brown baked enamel, detachable base; 10′ shielded cable. Output level approximately —52 db. Two models: Model 200 with smooth, even frequency response characteristics from 30 to 10,000 c.p.s.; Model 241, with similar range but rising characteristics between 1500 and 5500 c.p.s. for added brilliance in speech range.

(Without Switch)	List Price
200—Code ASUVA	**$13.95**
241—Code ASUVC	**13.95**
(With Off-On Switch)	
200-S—Code ASUVB	**15.00**
241-S—Code ASUVD	**15.00**

"VELVET VOICE" DYNAMIC

● This microphone is identical with Model 200, in appearance, but is equipped with a dynamic unit. Semi-directional. Exceptionally high output level of High Impedance Model, approximately —50 db. Frequency response, 30 to 10,000 c.p.s.

(Without Switch)	List Price
VDL —(50 ohms)—Code ASANA	**$19 95**
VDH*—(High Impedance)—Code ASAND	**27.50**

*High impedance model only available with ON-OFF switch, **$1.40** extra.

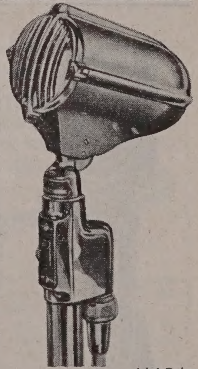
"VELVET VOICE" CERAMIC

● Also identical in appearance with Model 200, but employing the amazing, new piezoelectric ceramic element. Recommended where high temperatures and humidity are service factors. Equipped with 5′ cable. Output level approximately —62 db. Frequency response 30 to 10,000 c.p.s.

	List Price
VC —(5 Meg.)—Substantially flat—Code ASAQR	**$13.15**
VC1—(5 Meg.)—Rising characteristics—Code ASAQP	**13.15**

Available with On-Off switch at $1.05 extra

The DYNAMIC



● Three models—50 ohm impedance, high impedance or multi-impedance, the latter having a multi-impedance transformer and impedance selector switch to provide choice of 50, 200 and 500 ohms or high impedances. A semi-directional, all purpose dynamic microphone incorporating a unitary moving coil system, and carefully proportioned acoustic circuit to highly damp the natural resonance of the moving system and provide a response characteristic substantially flat from 50 to 7,000 cycles. Output level DN-HZ approximately —55 db. The "DN" design employs all features necessary for wide applicability, including Astatic's tilting-head, swivel mount, permitting semi- or non-directional positions. Opalescent gray and bright chrome finish. High- or multi-impedance models only are available with Type S Off-On Switch (as illustrated) at $2.75 extra. 10-ft. shielded cable.

	List Price
DN-50—(50 ohms)—Code ASVNJ	**$21.90**
DN-HZ—(High impedance)—Code ASVNG	**29.50**
DN-MZ—(Multi-impedance)—Code ASVNL	**39.75**

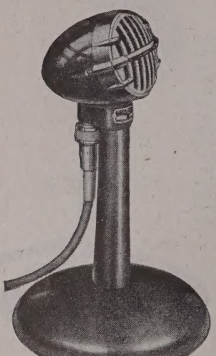
(All models available with G-Stand at $13.00 extra.)

Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC MICROPHONES AND STANDS

Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO

The JT-SERIES CRYSTAL & CERAMIC



● Because of their wide range of usefulness, excellent performance and low price, Astatic JT-Series Microphones are used extensively for amateur, public address and home recording. JT-Series Microphones are available in both wide and voice range models and, in addition to standard equipment, are furnished complete with concentric cable connector, convenient wood handle, interlocking metal base. Crystal model has 10′ cable; ceramic, 5′. Wood handle may be removed and microphone used on floor stand. Crystal models' output level, —52 db, provides ample reserve for use with high gain amplifiers. Ceramic models' output approximately —62 db. Opalescent gray with bright chrome grille.

List Price

JT-30 —Substantially flat—Code ASVLG **$16.95**
JT-40 —Rising characteristics —Code **ASVLD** .. **16.95**
***JT-30-C**—Substantially flat—Code ASVLF **16.15**
***JT-40-C**—Rising characteristics —Code ASVLC .. **16.15**
*Ceramic Models.

LAPEL TYPE MODEL L-1

● This very small dual-diaphragm crystal microphone was developed to meet especially difficult pickup conditions. Equipment includes lapel-type spring clip and over-shoulder cord to permit wide latitude of movement. Output level —62 db. Frequency response uniform from 30 to 10,000 c.p.s. Finish, statuary bronze. Furnished with 15′ cable.

List Price

Model L-1—Code ASUSN...................... **$27.35**

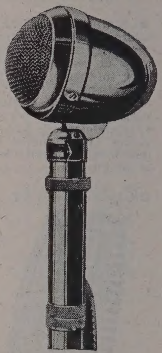
MODEL K-2

● Because of its smooth, undistorted reproduction and the fact that it cannot be acoustically overloaded, Astatic Model K-2 Crystal Microphone is favored and extensively used. In this model, Astatic provides a small size, dual-diaphragm type crystal microphone for studio use, recording, dance bands, public address installations and general applications where quality performance is required. With dual crystal unit design, Model K-2 has twice the capacitance of the usual crystal microphone and correspondingly longer cable lengths may be used. Standard equipment includes plug and socket connector and 15′ cable. Output level —62 db. Bright chrome finish.

List Price

K-2 —Code ASURX **$30.10**
K-2-S—Code ASURW, with S-Switch **32.85**
GK-2—Code ASUZA, with G-Stand **43.10**

CRYSTAL MODEL T-3



● Definitely established by long and continued popularity, Model T-3 Crystal Microphone is highly practical for many and varied applications. Its use is suggested for studio set-ups, with amateur rigs, intercommunicating systems, public address installations and for high-class recording purposes. Crystal element has special METALSEAL protection against moisture or dryness. Microphone head may be tilted with ease on unique swivel mounting and pickup pattern made semi- or non-directional, as desired. Output level —52 db. Frequency response substantially uniform from 30 to 10,000 cycles. Equipped with interchangeable plug and socket connector and 15 ft. cable. All chrome finish.

List Price

T-3 —Code ASVCX **$27.35**
T-3-S—Code ASVCW, with S-Switch **30.10**
GT-3—Code ASUZD, with G-Stand **40.40**

CERAMIC MODEL T-3-C

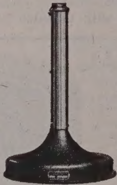
● Duplicate of Model T-3 except for employment of heat and moisture-immune ceramic element. Output level —62 db with 5′ cable.

List Price

T-3-C —Code ASVCU **$25.55**
T-3-C-S—Code ASVCT, with S Switch.................................... **28.30**

MICROPHONE STANDS, SWITCH CONNECTORS AND ADAPTERS

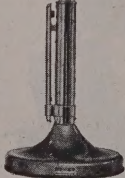
F-11



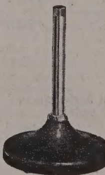
F

E-1

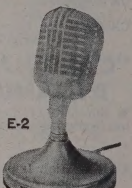
SC-11



G



E-5B E-5G



E-2

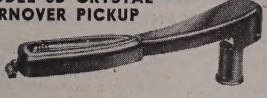
MODEL	FINISH	HEIGHT	LIST PRICE
G—(Grip-to-Talk)	Chrome & Gray	8¼″	$18.50
F—Desk	Chrome & Gray	8¼″	10.00
E-1—Desk	Chrome & Gray	5½″	5.40
E-5B—Desk	Chrome & Brown	8″	5.40
E-5G—Desk	Chrome & Gray	8″	5.40
F-11—Adapter	Chrome		4.75
SC-11—Switch Connector	Chrome		6.00
E-2—Desk Stand	Chrome & Gray	2⅝″	7.00

Astatic Crystal Devices manufactured under Brush Development Co. patents.

Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO

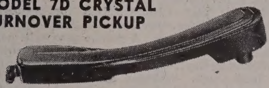
ASTATIC PICKUPS FOR SLOW SPEED AND STANDARD 78 RPM RECORDS

MODEL 6D CRYSTAL TURNOVER PICKUP



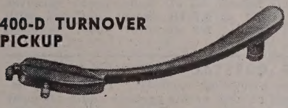
- Switches from 33⅓ or 45 RPM records to standard 78 with turnover knob at front. Plays both types of records at only eight-gram needle pressure, thus has no extra mechanism to change pressure when knob is turned, eliminating a potential source of trouble and varying reproduction quality. Employs LQD-1 Double-Needle Cartridge. Mounts seven inches from turn-table center, die-cast curved arm finished in dark brown Hammerlin.

MODEL 7D CRYSTAL TURNOVER PICKUP



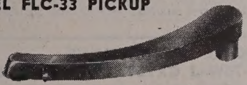
- Newly designed cast aluminum arm employing Astatic's sensational new smooth response cartridge, the tiny turnover type ACD Crystal Cartridge. Arm design affords minimum tracking error and balanced groove sidewall pressure, resulting in reduced tracking distortion and longer record and needle life. Cartridge rotates in improved snap-action turnover mechanism. Light brown Hammerlin finish.

400-D TURNOVER PICKUP



- Turnover type transcription pickup adapted from famous Astatic Studio Master "400." Plays 33⅓, 45 or standard 78 RPM recordings at eight-gram needle pressure. Employs ACD-2 Double-Needle Crystal Cartridge. Notable smoothness of response, tracking excellence, low needle talk. Gracefully curved, die-cast arm in light brown Hammerlin finish.

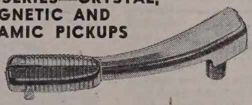
MODEL FLC-33 PICKUP



- Its U-J Crystal Cartridge for either 33⅓ or 45 RPM records is easily, instantly replaceable with the U-78-J Cartridge for playing standard records. No adjusting of needle pressure, nothing else to be done. Cartridges slip in and out like barrel and cap of non-threaded fountain pens. Special Type "U" Taper-Lock replaceable needle has tongue and groove arrangement to hold in position, removes merely by gripping small tab at rear of needle and sliding towards rear of cartridge. Novel design at base of FLC-33 eliminates tone arm resonances, assures perfect tracking. Die-cast arm, finished in high gloss black and polished aluminum.

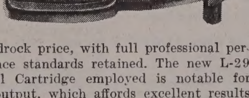
FOR COMPLETE SPECIFICATIONS SEE CHART ON PAGE D-11

510 SERIES—CRYSTAL, MAGNETIC AND CERAMIC PICKUPS



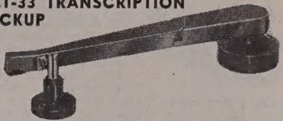
- Add Astatic's new anti-resonance swivel base, and newly developed crystal, ceramic and magnetic cartridges with special one mil or All-Groove tip, precious metal or jeweled stylus, to the popular Astatic Model 510 Pickup—and you have these new slow-speed models, the finest performers in their price class. Permanently adjusted to low needle pressures, short mounting centers make them ideal for a host of long-playing applications. Outstanding characteristics are high uniform output and low needle point impedance. Die-cast arm, finished in Hammerlin opalescent grey. Specify **Model 510-CAC** for unit employing tiny new CAC-J Crystal Cartridge, the closest thing to perfection for the most discriminating lover of serious music. **Model 510-AC** has the newest miniature Astatic crystal cartridge, the sensationally smooth response AC Cartridge with type "A" Needle for slow speed records For quality reproduction altogether out of proportion to low cost in a crystal unit, specify **Model 510-LT-4AG,** employing LT Cartridge with special All-Groove stylus tip for all record types. **Model 510-MI-2-33** offers on slow speed records highest quality reproduction to please the most discriminating—troublefree and stable through continuous service—thanks to its improved type magnetic cartridge. **Model 510-GC** has Astatic's GC Ceramic Cartridge, immune to extremes of temperature and humidity, and provides truly splendid quality of reproduction on slow speed records with its one-mil replaceable needle.

MODEL 507-L-29 PICKUP



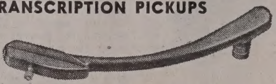
- Bedrock price, with full professional performance standards retained. The new L-29 Crystal Cartridge employed is notable for high output, which affords excellent results in use with standard phonograph amplifiers, where other lower output cartridges are not satisfactory. Has universal, screw-type needle chuck to receive standard needles. Plays 33⅓, 45 or 78 RPM records simply by using proper needle. Pickup is furnished without needle. Die-cast arm finished in opalescent grey Hammerlin. New, anti-friction swivel base.

FLT-33 TRANSCRIPTION PICKUP



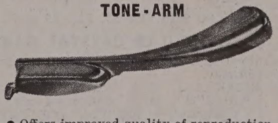
- Never before, a pickup of such professional instrument quality and precision. Like the FLC-33, this model employs the U-J Crystal Cartridge with one mil tip-radius needle, instantly replaceable with the U-78-J for playing 78 RPM records. In addition, the U-TR Cartridge with 2.5 mil tip-radius needle may be inserted to play standard lateral broadcast transcriptions. Special ball-bearing anti-resonance base is adjustable to desired height, as is unique arm-rest. Feather-touch needle pressure of five grams is accomplished by a revolutionary hinged division of the arm, which also contributes to perfect tracking and elimination of surface noise. Die-cast arm and base look their fine instrument part, with finish in telephone black. All three "U" Series Cartridges are available with diamond stylus tips instead of the regular sapphire.

MODELS 400-CAC AND 400-MI-2-33 TRANSCRIPTION PICKUPS



- The famous Astatic Studio Master "400" conventional transcription arm, adapted for slow-speed transcriptions. Incorporates the improved base mounting assembly that eliminates arm resonances and assures perfect tracking, and the CAC-J Crystal Cartridge with sapphire stylus of one mil tip-radius. Impartial experts have singled out the CAC-J as the ultimate for long-playing transcription performance Die-cast arm, permanently adjusted at six-gram needle pressure. Grey Hammerlin finish. Specify Model 400-MI-2-33 for the same arm, except for employment of Astatic's Magnetic Cartridge.

FOR SPECIAL APPLICATIONS
MODEL 8-D TURNOVER ASSEMBLY AND DOUBLE-NEEDLE CARTRIDGE, MOUNTED IN WEBSTER-CHICAGO TONE-ARM



- Offers improved quality of reproduction for all record types. Installation is the easiest and speediest job of its type . . . you replace entire tone arm. No alterations to record changer . . . all you need is a screwdriver. Simple instructions with each unit. FOR WEBSTER-CHICAGO CHANGER MODELS: 246, 256, 255, 262, 264, 346, 356, 355, 362, 357, 364.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC

CARTRIDGES FOR SLOW SPEED AND STANDARD 78 RPM RECORDS

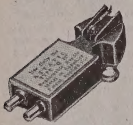
Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO

FOR COMPLETE SPECIFICATIONS SEE CHART ON PAGE D-11

AC SERIES CRYSTAL AND CERAMIC CARTRIDGES

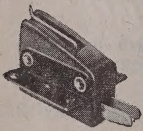
● New mechanical drive system affords new low in inertia, for extraordinary smooth response, new tracking excellence, low needle talk. Miniature size belies BIG full-throated performance. Weighs approximately five grams. Has easily replaceable Type "A" Needle with one-mil sapphire tip for slow speed records or special All-Groove tip for all record types. Models available with ceramic elements, immune to severe climates, as well as crystal. Model AC-J has correct mounting brackets to fit RCA and similar 45 RPM changers as well as other slow-speed units. AC-R has special brackets to fit special RCA 45 RPM changer (replaces RCA 76257 Cartridge).

THE CAC SERIES CRYSTAL CARTRIDGES



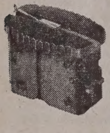
● The tiny new unit which has won the praise of experts as the "ultimate" for slow speed records. Internally equalized to follow Columbia Records Inc. ideal frequency response for the recording characteristics of LP records. Aluminum housing with standard ½" mounting holes to fit most tone arms, has adapter plate to mount in RCA and similar 45 RPM changers. Uses Q-33 needle, easily replaceable without tools, and with one-mil sapphire or diamond tipped needle for slow speed records, or special All-Groove sapphire tip for all record types.

THE GC CERAMIC CARTRIDGE



● First major stride in cartridges employing ceramic elements since Astatic pioneered in this type unit. The first with replaceable needle. Takes "Type G" needle—with either one-mil sapphire tip radius or special All-Groove tip for all record types—which slips from its rubber chuck with a quarter turn sideways. Resistance to high temperatures and humidity is not the only additional advantage. Output has been increased over that of any ceramic cartridge available. Light weight and low needle pressure make it ideal for a great variety of modern applications. Fits standard ½" mounting and RCA 45 RPM record changers.

THE U-J CRYSTAL CARTRIDGE*



● The unparalleled performance and triple duty service of the FL Series Pickups is largely due to the U-J Crystal Cartridge. A child can slip it instantly from the pickup and slip in the U-78-J or U-TR Crystal Cartridges to switch from 33⅓ and 45 to 78 RPM records or broadcast transcriptions. Secures itself on slip-in principle, the same as barrel and cap of some modern fountain pens. No changing of needle pressure, nothing else to be done. Five-gram needle pressure. Replaceable sapphire stylus with one mil tip-radius. The U-J replaces, and is interchangeable with, the discontinued LP-33. An ideal replacement for Philco Part 45-1609, Balanced Fidelity Reproducer.

THE U-78-J CRYSTAL CARTRIDGE*

● Interchangeable with U-J Crystal Cartridge, in "FLC" and "FLT" Series Pickups, to play conventional 78 RPM Records. See above description under U-J Cartridge. Five-gram needle pressure, has replaceable sapphire stylus with three mil tip-radius. Replaces LP-78 Cartridge.

Code ASWZG...**List Price $8.90**

$7.90 with FLC-33, FLT-33 or FLT-TR Pickups

THE U-TR CRYSTAL CARTRIDGE*

● Identical to U-J, except for 2.5 mil tip-radius needle for broadcast transcriptions.

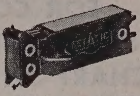
Code ASXAK...**List Price $8.90**

* All "U" Series Cartridges are instantly interchangeable in the "FLC" and "FLT" Series Pickups

MI-2J-33 MAGNETIC CARTRIDGE

● Peak fidelity of reproduction that LASTS, even under the most consistent service or adverse climatic conditions. Troublesome, costly armature balancing problems eliminated. Mumetal housing provides increased shielding effect for maximum reduction of hum. Fixed needle with one-mil sapphire stylus tip.

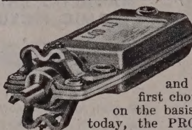
THE ACD-J DOUBLE-NEEDLE CRYSTAL AND CERAMIC CARTRIDGES



● Newest Astatic double-needle, turnover cartridge — featuring smooth response, tiny size and light weight. Extraordinary performance made possible by a mechanical drive system with a new low in inertia. Total weight approximately 5 grams. Easily replaceable Type "A" Needles.

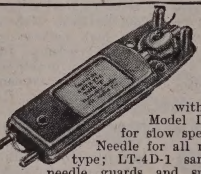
Model ACD-1J replacement cartridge for ACD-2J assembly. Model ACD-2J complete with turnover assembly and knob. All are available with ceramic instead of crystal elements, for immunity to extremes of climate. (See table for details).

THE LQD DOUBLE-NEEDLE CRYSTAL CARTRIDGE



● The LQD Cartridge — for 45, 33⅓ and 78 RPM Records — quickly became the first choice of many of the nation's largest users, on the basis of comparative listening tests, and is, today, the PROVED TOP PERFORMER for turnover type pickups. Outstanding for excellence of frequency response, particularly at low frequencies. A gentle pry with penknife removes ONE "Q" needle for replacement . . . without disturbing the other needle, without removing cartridge from tone arm. Gentle pressure snaps new needle into place. Stamped aluminum housing. Model LQD-1J, illustrated, complete with needle guards and spindle for turnover knob. Model LQD-1JB complete with entire turnover assembly and knob.

THE LT-4 DOUBLE AND SINGLE-NEEDLE CRYSTAL CARTRIDGES



● New high output, low-cost cartridge with Type "D" precious metal needles. Model LT-4M, illustrated, with single needle for slow speed records; LT-4-AG with All-Groove Needle for all records, LT-4D double-needle turnover type; LT-4D-1 same as LT-4D except equipped with needle guards and spindle for turnover knob. Stamped aluminum housing.

THE LT-5-AG CRYSTAL CARTRIDGE

● New high compliance in a low-cost cartridge. The greatly improved tracking ability allows reduced needle pressure and subsequent extension of both record and needle life. Employs D-AG Osmium Tipped All-Groove Needle for all record types. Stamped aluminum housing.

L-29 CRYSTAL CARTRIDGE

● High performance quality in a new, low-cost unit. Notably high output permits use with standard phonograph amplifiers, where other cartridges prove unsatisfactory. Universal screw type needle chuck receives any standard needle for microgrove or standard groove records. Stylus not furnished.

FOR SPECIAL APPLICATIONS CAC-W-J & CAC-78W-J CRYSTAL CARTRIDGES

● The CAC-W-J is the same cartridge as the CAC-J, except furnished with special terminals and fittings for quick installation in record changer tone arms with plug-in heads. The CAC-78W-J offers the same new quality of reproduction installed in plug-in heads for standard 78 RPM records. Available with diamond as well as sapphire stylus tip.

REFER TO CARTRIDGE TABLES FOR:

ASTATIC CARTRIDGE	APPLICATION
MD Series	Markel Record Changers (Slow speed and standard 78 RPM)
401-A	RCA Replacement (Standard 78 RPM)
L-78	Seeburg Record Changers (Standard 78 RPM)
PT	Replaces Philco parts 35-2671, 35-2671-1
402-M	Replaces Admiral 78 RPM Snap-in Cartridge—Part No. A1372
403-J	Replaces RCA Part 70338, 70339 and 72551 silent sapphire cartridges

Astatic

KNOWN THE WORLD OVER — CONNEAUT, OHIO

ASTATIC

SLOW SPEED PICKUPS AND CARTRIDGES SPECIFICATIONS

PICKUPS FOR SLOW SPEED AND STANDARD 78 RPM RECORDS

Model	List Price	Finish	Cartridge Used*	Element Type	Stylus	For Record		Cable Length**	Shipping Weight	Code
						Size	Speed			
6D	$15.90	Dark Brown Hammerlin	LQD-1	Crystal	Precious Metal† Sapphire†	7-10-12"	All	13"	2 lbs.	ASXHU
7-D	15.90	Light Brown Hammerlin	ACD	Crystal	Precious Metal† Sapphire†			13"	12 ozs.	ASXHV
8-D	11.50	Brown Plastic	(Special for Webster-Chicago Record Changers)					2"	12 ozs.	ASXHW
400-D	25.00	Light Brown Hammerlin	ACD-2	Crystal	Precious Metal† Sapphire†	10-12-16"		24"	1 lb. 8 ozs.	ASDCN
FLC-33	14.90	High Gloss Black	U-J	Crystal	Sapphire	7-10-12"	Slow	12"	14 ozs.	ASXIL
FLT-33	43.90		U-J	Crystal	Sapphire			24"	3 lbs.	ASXIP
FLC-78	14.90	High Gloss Black	U-78-J	Crystal	Sapphire	7-10-12"	78 RPM	12"	14 ozs.	ASXIU
FLT-78	43.90		U-78-J	Crystal	Sapphire			24"	3 lbs.	ASXIS
FLT-TR	43.90	Telephone Black	U-TR	Crystal	Sapphire .0025 Tip Radius	Broadcast Transcriptions		24"	3 lbs.	ASXIN
510-CAC	10.75	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	7-10-12"	Slow	13"	1 lb. 2 ozs.	ASAXD
510-MI-2-33	9.35		MI-2J-33	Magnetic	Sapphire			13"	1 lb. 2 ozs.	ASAYQ
510-GC	8.75		GC-J	Ceramic	Sapphire			13"	1 lb. 2 ozs.	ASAYR
510-AC	10.75		AC-J	Crystal	Sapphire			13"	1 lb. 2 ozs.	ASAYS
510-LT-4AG	8.35	Dark Brown Hammerlin	LT-4AG	Crystal	Precious Metal	7-10-12"	All	13"	1 lb. 2 ozs.	ASWTW
507-L-29	8.00	Opalescent Grey Hammerlin	L-29	Crystal	Not included	7-10-12"	All	13"	1 lb. 2 ozs.	ASWTT
400-CAC	25.00	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	10-12-16"	Slow	24"	1 lb. 8 ozs.	ASBCT
400-MI-2-33	23.60		MI-2J-33	Magnetic	Sapphire			24"	1 lb. 8 ozs.	ASBCM

†Precious metal stylus tip on 3-mil 78 RPM side. Sapphire stylus tip on 1-mil 45 and 33-1/3 RPM side.

*FOR PERFORMANCE DATA SEE CARTRIDGE CHART

**Super-Flexible, Single Conductor, Shielded

CARTRIDGES FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 0.5 Meg. Load	Frequency Range c.p.s.	Needle Type*	For Record	Approx. Net Wt. in Grams	Code
CAC-J	Crystal	$ 7.50	6 gr.	1.0†	30-11,000	Q-33 (J)	33-1/3 and 45 RPM	5	ASWZZ
CAC-X	Crystal	31.00	6 gr.	1.0†	30-11,000	Q-33 (X)	33-1/3 and 45 RPM	5	ASXDN
CAC-W-J	Crystal	7.50	(Same as CAC-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)					5	ASWYB
CAC-W-X	Crystal	31.00	(Same as CAC-X except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)					5	ASXDM
CAC-AG-J	Crystal	7.50	10 gr.	1.35††	30-11,000	Q-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWZX
AC-J	Crystal	8.90	5 gr.	1.0†	50-10,000	A-1 (J)	33-1/3 and 45 RPM	5	ASWYJ
AC-R-J	Crystal	8.90	(Same as AC-J except equipped with special mounting bracket with .456" mounting hole centers.)					5	ASWYO
AC-C-J	Ceramic	8.90	5 gr.	0.4†	50-6,000	A-1 (J)	33-1/3 and 45 RPM	5	ASWTN
AC-AG-J	Crystal	8.90	6 gr.	1.0††	50-10,000	A-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWYH
AC-C-AG-J	Ceramic	8.90	6 gr.	0.4††	50-6,000	A-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWTL
U-J	Crystal	8.90	5 gr.	0.5†	30-10,000	U (J)	33-1/3 and 45 RPM	4	ASXAT
GC-J	Ceramic	7.40	6 gr.	0.55†	50-10,000	G (J)	33-1/3 and 45 RPM	5	ASWZK
GC-AG-J	Ceramic	7.40	8 gr.	0.7††	50-10,000	G-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWZM
MI-2J-33	Magnetic	7.50	6 gr.	0.028†	50-12,000	Fixed (J)	33-1/3 and 45 RPM	22	ASALW
LT-4AG	Crystal	7.00	8 gr.	2.0††	50-5,000	D-AG (M)**	33-1/3, 45 and 78 RPM	8	ASXBX
LT-4M	Crystal	7.00	6 gr.	1.9†	50-5,000	D-33 (M)	33-1/3 and 45 RPM	8	ASXBW
LT-5-AG	Crystal	7.00	8 gr.	1.4††	50-4,500	D-AG (M)	33-1/3, 45 and 78 RPM	8	ASXDD
L-29	Crystal	6.00	10 gr.	3.0††	50-5,000	Not included	33-1/3, 45 and 78 RPM	8	ASWTS
DOUBLE NEEDLE TURN-OVER MODELS:				1 mil tip needle for LP 33-1/3 and 45 RPM records. 3 mil tip needle for standard 78 RPM records.					
ACD-J	Crystal	9.50	6 gr.	1.0† 1.0††	50-6,000	A-1 (J) A-3 (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWYL
ACD-C-J	Ceramic	9.50	6 gr.	0.4	50-5,000	A-1 (J) A-3 (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWTK
ACD-1J	Crystal	9.50	(Same as ACD-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-2J assembly.)					7	ASWYF
ACD-C-1J	Ceramic	9.50	(Same as ACD-C-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-C-2J assembly.)					7	ASWTJ
ACD-2J	Crystal	10.00	(Same as ACD-J except equipped with turnover bracket and knob.)					16	ASWYE
ACD-C-2J	Ceramic	10.00	(Same as ACD-C-J except equipped with complete assembly turnover and knob.)					16	ASWTI
LQD-J	Crystal	9.50	8 gr.	1.0† 1.0††	50-7000 Roll-off at 3,500	Q-33 (J) Q (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	8	ASXAL
LQD-1J	Crystal	9.50	(Same as LQD-J except equipped with needle guards and spindle for turnover knob.)					9	ASXAM
LQD-1JB	Crystal	10.00	(Same as LQD-J except equipped with complete turnover assembly and knob.)					22	ASWYR
LT-4D	Crystal	8.50	8 gr.	2.0† 2.0††	50-7,000	D (M) D-33 (M)	(Dual Needle) 33-1/3, 45 and 78 RPM	10	ASXAJ
LT-4D-1	Crystal	8.50	(Same as LT-4D except equipped with spindle for turnover knob.)					11	ASWZW

*"J" stands for Sapphire Tip, "M" for Precious Metal Tip, "X" for Diamond Tip.

**ALL-GROOVE needle tip of special design and size to play 33-1/3, 45 and 78 RPM Records.

†RCA 12-5-31V Test Record or Equivalent.

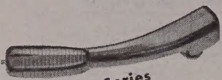
††Audio-tone 78-1 Test Record.

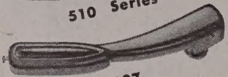
NOTE: ALL ASTATIC CARTRIDGES ARE NOW SHIPPED IN RUGGED, TRANSPARENT PLASTIC BOXES.

ASTATIC

STANDARD 78 RPM PICKUPS AND ACCESSORIES, RECORDING HEADS

Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO


510 Series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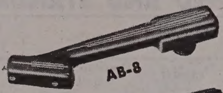
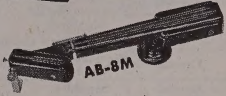
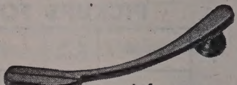

AB-8


AB-8M


400 Series

S Series

NOTICE: Pickup Models 510-MI-2 and 400-MI-2 are magnetic type units employing Astatic's revolutionary Magnetic Cartridge. Two Equalizer-Amplifier Models, for use in conjunction with these pickups, are shown below.

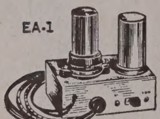
PICKUPS FOR STANDARD 78 RPM RECORDS

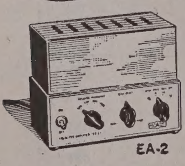
Model	List Price	Finish	Cartridge Used*	Element Type	Stylus	For Record Size	For Record Speed	Cable Length**	Shipping Weight	Code
510-QT	9.75	Smooth Light Brown Enamel	QT3-J	Crystal	Sapphire	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYL
510-L-72	7.50		L-72-A	Crystal	Optional	10 - 12"		13"	1 lb. 2 oz.	ASAYK
510-MI-2	8.35		MI-2J	Magnetic	Sapphire	10 - 12"		13"	1 lb. 2 oz.	ASALH
507-L-82	6.50	Smooth Light Brown Enamel	L-82-A	Crystal	Optional	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYG
507-L-40	5.50		L-40-A	Crystal	Optional	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYH
400-QT	25.00	Light Brown Hammerlin	QT3-J	Crystal	Sapphire	All Lateral Transcriptions	78 RPM	24"	1 lb. 8 oz.	ASBCH
400-QT-M	24.50		QT3-M	Crystal	Precious Metal			24"	1 lb. 8 oz.	ASBCI
400-LT-M	23.10		LT1-M	Crystal	Precious Metal			24"	1 lb. 8 oz.	ASBCJ
400-MI-2	23.60		MI-2J	Magnetic	Sapphire			24"	1 lb. 8 oz.	ASALF
AB-8	11.15	Smooth Brown Enamel	B-2	Crystal	Optional	10 - 12"	78 RPM	13"	2 lbs.	ASXFZ
AB-8M	13.90	Smooth Black Enamel	B-2	Crystal	Optional	10 - 12"		13"	2 lbs.	ASXEA
S-8	11.15	Black Wrinkle	B-2	Crystal	Optional	10 - 12"	78 RPM	12"	1 lb. 10 oz.	ASWCA
S-12-B-2	13.90		B-2	Crystal	Optional	All Lateral Transcriptions		12½"	2 lbs. 6 oz.	ASWEZ

Models B-10 and B-16 are available on special request.

*FOR PERFORMANCE DATA SEE CARTRIDGE CHART.
**Super-flexible, Single Conductor, Shielded.

EA-1 AND EA-2 EQUALIZER AMPLIFIERS

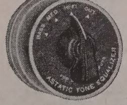

EA-1


EA-2

- The Model EA-1 is a compact unit designed for installation in radio sets and audio amplifiers, and provides the necessary equalization and preamplification to adapt the MI-2J-33 and MI-2 Cartridges to standard phonograph input circuits. Provides "bass-boost." The Model EA-2, self-powered, provides adjustable "bass-boost," adjustable treble "roll-off," and selection of "turnover frequency."

	Code	List Price
EA-1	ASAMP	$ 9.90
EA-2	ASAMO	39.50

E4P TONE EQUALIZER



- Model E4P is an adjustable tone compensation network for use between crystal pickup and amplifier. Recommended for use with all crystal pickups. Complete instructions supplied.

E4P—Code ASVHD........**List Price $3.30**

RECORDING HEADS

MODELS X-26 and X-29A

MODEL M-41

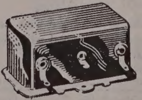
Model	Type	Maximum Recording Voltage	Useful Upper Limit	Finish	Dimensions	Net Weight	Code	List Price
X-26	Crystal	150 V. RMS	6,000 c.p.s.	Dark Brown Enamel	1⅜"x⅝"x3¼"	5½ oz.	ASXMI	$12.80
X-29A	Crystal	150 V. RMS	9,000 c.p.s.		1⅜"x⅝"x3¼"	5½ oz.	ASXMH	12.80
M-41-8 (8 Ohms)	Magnetic	3 V. RMS	7,000 c.p.s.		1⅜"x11/16"x3¾"	3½ oz.	ASXMF	12.80
M-41-500 (500 ohms)	Magnetic	30 V. RMS	7,000 c.p.s.		1⅜"x11/16"x3¾"	3½ oz.	ASXME	12.80

THE FT FILTER-TRANSFORMER

- For broadcast station use with "FLC" and "FLT" Series Pickups, to filter and match high impedance output of pickup to low impedance mixer circuits. Has output impedances of 37.5, 150 and 250 ohms.

Code ASXMR ....**List Price $28.50**

THE FL FILTER



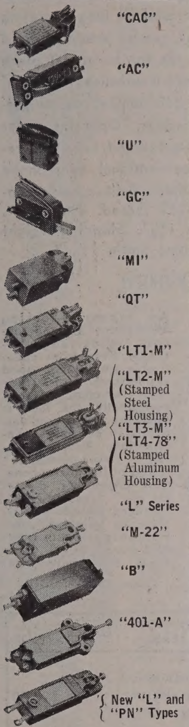
- For best performance with highest quality speakers, the FL Filter is recommended as an accessary unit with "FLC" and "FLT" Series Pickups. Controls high frequency response.

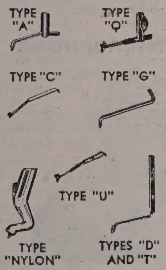
Code ASXMS ....**List Price $6.90**

Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC

CARTRIDGES FOR STANDARD 78 RPM RECORDS
•
NEEDLES





REPLACEMENT CARTRIDGES

Model No.	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 0.5 Meg Load	Frequency Range c.p.s.	Needle Type*	Approx. Net Wt. in Grams	Code
TYPE "CAC"								
CAC-78-J	Crystal	$ 7.50	10 gr.	1.35†	30 to 11,000	Q (J)	5	ASWZY
CAC-78W-J	Crystal	7.50	(Same as CAC-78-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)				5	ASWYA
CAC-78-X	Crystal	31.00	10 gr.	1.35†	30 to 11,000	Q (X)	5	ASXDL
CAC-78W-X	Crystal	31.00	(Same as CAC-78-X except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)				5	ASXDK
TYPE "AC"								
AC-78-J	Crystal	8.90	6 gr.	1.0†	50 to 10,000	A-3 (J)	5	ASWYN
AC-C-78-J	Ceramic	8.90	6 gr.	0.4†	50 to 6000	A-3 (J)	5	ASWTM
TYPE "MI"								
MI-2J	Magnetic	7.50	1 oz.	0.1††	50 to 12,000	Fixed (J)	22	ASALX
TYPE "L" SERIES								
L-26A	Crystal	4.45	2¾ oz.	1.4†	50 to 4500	Optional	30	ASWVZ
L-40A	Crystal	4.45	1¼ oz.	0.6†	50 to 4500	Optional	30	ASWUA
TYPE "M"								
M-22	Crystal	5.55	2¾ oz.	2.9†	50 to 6500	Optional	21	ASWJM
TYPE "B" SERIES								
B-2	Crystal	5.55	2¾ oz.	2.5†	50 to 4000	Optional	26	ASWHJ
B-4	Crystal	5.55	2¾ oz.	2.5†	50 to 4000	Optional	26	ASWHH
NEW TYPE "L" SERIES								
L-70A	Crystal	5.55	1¼ oz.	1.0†	50 to 4000	Optional	28	ASWVT
L-71A	Crystal	6.65	1 oz.	1.0†	50 to 8000	Optional	28	ASWVP
L-72A	Crystal	6.65	1¼ oz.	3.5†	50 to 4000	Optional	28	ASWVL
L-82A	Crystal	5.55	2¾ oz.	3.5†	50 to 5000	Optional	28	ASWSJ
L-92A	Crystal	6.00	1 oz.	2.25†	50 to 7000	Optional	28	ASWTR
TYPE "LT" SERIES								
LT1-M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	28	ASXAA
LT2-M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	20	ASXAC
LT3-M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	11	ASXAE
LT4-78	Crystal	7.00	10 gr.	2.0†	50 to 5000	D (M)	8	ASWYW
TYPE "QT" . . . NOTE: Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 5,000 c.p.s.								
QT3-J	Crystal	8.90	1 oz.	0.85†	50 to 10,000	Q (J)	23	ASXBN
QT3-M	Crystal	8.40	1 oz.	0.85†	50 to 10,000	Q (M)	23	ASXBL
TYPE "GC"								
GC-78-J	Ceramic	7.40	12 gr.	0.7†	50 to 10,000	G-78 (J)	5	ASWZI
TYPE "U"								
U-78-J	Crystal	8.90	5 gr.	0.5†	30 to 10,000	U-78 (J)	4	ASWZG
"P. N." TYPES								
L-74A	PN Crystal	10.00	1½ oz.	1.4†	50 to 4000	Optional	28	ASWVD
L-78	PN Crystal	11.15	(Special P.N. Crystal Cartridge for Seeburg Record Changers)				28	ASWWO

SPECIAL PURPOSE TYPES

Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage	Frequency Range c.p.s.	Needle Type	Application	Approx. Net Wt. in Grams	Code
PT	Crystal	$ 5.00	1 oz.	1.4†	50 to 10,000 Roll-off at 3000	Not Included	Replacement for Philco Parts—35-2671, 35-2671-1	27	ASWTB
401-A	Crystal	4.45	2¾ oz.	1.4†	50 to 4500	Optional	Replacement for RCA	27	ASWTA
402-M	Ceramic	6.90	12 gr.	0.7†	50-10,000	G-78 (M)	Replacement for Admiral 78 RPM Snap-in Cartridge —Part No. A1372.	8	ASWZN
403-J	Crystal	7.50	Special replacement kit consisting of CAC-78-J Cartridge with necessary adapter plate and screws to replace RCA Part 70338, 70339 and 72551 silent sapphire cartridges.						ASWUZ
DOUBLE-NEEDLE MODELS									
MD-5J	Crystal	10.90				M-5 (J) Set	Special for Markel Record Changer—for 33-1/3 and 45 RPM	15	ASWWA
MD-6J	Crystal	10.90				M-6 (J) Set	Special for Markel Record Changer for 78 RPM	21	ASWWG
NOTE: Cartridge types B, QT and LT also available with PN Crystal upon request.									

*"J" stands for Sapphire tip, "M" for Precious Metal tip, "X" for Diamond tip.
††Columbia 10,004 Test Record
†Audio-tone 78-1 Test Record.
**Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 4,000 c.p.s.

REPLACEMENT NEEDLES

Type	LIST PRICE		Tip Size	For Cartridge Types
	Sapphire (J)	Osmium (M)		
A-1	$1.50	$1.00	1-mil	AC, ACD Series
A-3	1.50	1.00	3-mil	AC-78, ACD Series
A-AG	1.50	1.00	AG*	AC-AG
C-1	1.50	1.00	1-mil	MD-1
C-3	1.50	1.00	3-mil	MD-3
D	None	1.00	3-mil	LT-3D, LT-4D, MD
D-33	None	1.00	1-mil	LT-3D, LT-4, LT-4D
D-AG	None	1.00	AG*	LT-4-AG, LT-5-AG
G	1.50	1.00	1-mil	GC Series
G-78	1.50	1.00	3-mil	GC-78 Series, 402-M
G-AG	1.50	1.00	AG*	GC-AG

Type	LIST PRICE			Tip Size	For Cartridge Types
	Diamond (X)	Sapphire (J)	Osmium (M)		
Nylon		1.50	1.00	3-mil	Nylon Series
Q	$25.00	1.50	1.00	3-mil	CAC-78, LQD and QT Series
Q-33	25.00	1.50	1.00	1-mil	CAC, CQ, LQD and QT-33 Series
Q-AG		1.50	1.00	AG*	CQ-AG, CAC-AG
T		None	1.00	3-mil	LT1-M, LT2-M, LT3-M
T-33		None	1.00	1-mil	LT-33
U		1.50	1.00	1-mil	U Series
U-78		1.50	1.00	3-mil	U-78 Series
M-5**		3.25	2.25	1-mil	MD-5
M-6**		3.25	2.25	3-mil	MD-6

*ALL-GROOVE Needle Tip of Special Design and Size to Play 33-1/3, 45 and 78 RPM Records.
**Card of two matched needles, one with reversed rake angle for special Markel Record Player requirements.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

SHURE CRYSTAL AND CARBON MICROPHONES

"MONOPLEX" SUPER-CARDIOID CRYSTAL

MODEL 737A

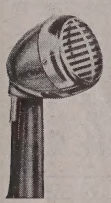
A high-output, undirectional microphone that ranks far above ordinary crystal microphones. The Super-Cardioid "Monoplex" is TWICE AS UNIDIRECTIONAL AS THE CARDIOID. It has a 14 to 1 front to rear pickup ratio and REDUCES PICKUP OF RANDOM SOUND BY 73%! The "Monoplex" employes the same type of acoustic phase-shifting network used in the Shure Broadcast microphones. New moisture-proofed "Metal Seal" crystal for long operating life. Case pivots at rear, can be pointed toward desired sound or upwards for horizontal plane pickup. The "Monoplex" is excellent for high-quality public address, communications, recording and similar applications. Operates under adverse conditions of background noise and reverberation where a conventional microphone would be practically useless. Built-in cable connector. Standard ⅝"—27 thread. Height 4". Width 3$\frac{3}{32}$". Thickness 1⅞". Shipping weight 2¼ lbs. Rich satin chrome finish.

MODEL	CABLE	OUTPUT	IMPED.	LIST PRICE
737A	15 ft.	54.0 db below 1 volt per microbar	High Impedance	$39.75

Microbar=one dyne per sq. cm.

Code: RUMON

707A CRYSTAL



MODEL 707A

Good-quality performance at low cost. Has good response characteristics, is free from peaks, has typical semi-directional pickup. Uses moisture-proof Bimorph Crystal. Ideal for low-cost P. A. systems, call systems, amateur 'phone transmitters and similar applications.

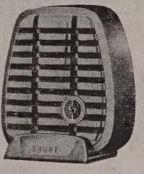
Pearl Gray case with rich satin chrome finish on front grille. The case is a heavy die casting. Standard ⅝"—27 thread. Diameter 2⅜". Shipping weight 2¼ pounds. High impedance.

Code: 707A—RUDOF

MODEL	OUTPUT	CABLE	LIST PRICE
707A	51.0 db below 1 volt per microbar	7 ft.	$15.50

Microbar = one dyne per sq. cm.

THE "REX"



710 SERIES

Its extremely low price makes this striking hand-held microphone a natural for hams, low-cost public address systems, and as a replacement for home recording microphones. A rugged unit designed for high speech intelligibility. The "Rex" saves further costs, as it needs no desk stand! Has a broad base, sits firmly on a table top without tipping over. Frequency response 60 to 9000 c.p.s. 5' shielded cable. Beautiful Burgundy-red metallic finish. Die-cast case complete with stand adapter. 2⅔" wide, 3¼" high, 1⅛" thick. High impedance.

Code: 710A—RUDEL
710S—RUDET

MODEL	OUTPUT LEVEL	SHPG. WT.	LIST PRICE
710A—5'	50 db below 1 volt per microbar	1¼ lb.	$10.95
710S—5' (with switch)	50 db below 1 volt per microbar	1½ lb.	$12.95

Microbar = 1 dyne per sq. cm.

STRATO-LINER

MODEL 708A

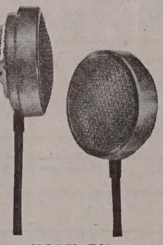
An expensive-looking microphone at moderate cost. Wide-range response (free from undesirable peaks) for good reproduction of either voice or music. Placed horizontally, the 708A is semi-directional; used vertically it becomes non-directional. Bimorph Crystal. A swivel permits 90° tilting of the microphone. Case dimensions: diameter 2½", length 4-7/16". Standard thread ⅝"—27. Shipping weight 2½ lbs. Frequency response is 60-8000 c.p.s. Pearl Gray finish. High impedance.

Code: 708A—RUDUM

MODEL	OUTPUT LEVEL	CABLE	LIST PRICE
708-A	51.0 db below one volt per microbar	7 ft.	$27.50

Microbar = one dyne per sq. cm.

LAPEL MICROPHONE



MODEL 76B

Designed for Public Address, lecturing, portable transmitters, and all general uses for intelligible reproduction of speech. Pressure-actuated diaphragm-type crystal microphone. Graphoil Bimorph crystal, moisture-sealed. Microphone is inconspicuous, weighs only 1½ ounces. Response from 40 to 6,000 c.p.s. High frequency response accentuated for maximum intelligibility. 1⅞" diameter. Gray finish. Lapel clip. 20-foot shielded single-conductor cable. Shipping weight 1 pound. Output level: 57 db below 1 volt per bar. Code RULOP. List Price $27.00.

MODEL "100" SERIES CARBON MICROPHONE

A high-quality, carbon microphone specially designed for mobile equipment. Rugged, dependable unit with clear, crisp voice response and high output. Fits snugly into palm of hand. Heavy duty switch for push-to-talk performance. Furnished with hook for suspension and bracket for wall mounting, plus coiled-cord cable. Adopted as standard microphone by leading manufacturers of police transmitters. Output level: 5 db below 1 volt for 100 microbar speech signal. Net weight 14 oz. Shipping weight 1¼ pound. Case dimensions: 3¾" high, 1¾" deep, 2¾" wide. 70 to 80 ohms impedance.

MODEL	SWITCH ARRANGEMENT	CABLE	CODE	LIST PRICE
101C	Two Wire Relay Switch normally open (No microphone switch).	Coiled Cord 11" retracted 5' extended	RUCEG	$35.00
102C	Relay normally open. Microphone switch normally open.	Coiled Cord 11" retracted 5' extended	RUCEM	$35.00

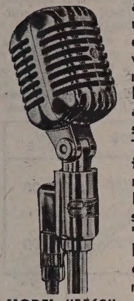
Microbar = one dyne per sq. cm.

MODEL C15C Coiled Cord with trimmed and tinned leads. Used in "CB" and "100" Series Microphones.

MODEL: C15C Code: RUCOR List Price. $6.75

MULTI-IMPEDANCE DYNAMIC MICROPHONES SHURE

NEW "SMALL UNIDYNES"



MODEL "556S"
(For Broadcast)

The "Small Unidynes" are the only small sized uni-directional moving coil dynamic microphones! They are completely new microphones with improved performance, yet retaining all of the highly desirable features of the world famous standard "Unidynes." The internal unit, based on the Shure-patented "Uniphase" principle, has been designed for high overall efficiency and extended peak-free frequency response. Rugged coil construction also provides greater immunity of the moving coil system to abnormal atmospheric conditions and mechanical shock.

Model "55S" and Model "556S" are considerably smaller than the standard Model "55" and Model "556" and are ideal for installations where it is desired to keep the microphone size to a minimum and still retain maximum operating efficiency.

The "Small Unidynes" are "Perfect Performers"—ideal for high quality public address, theatre-stage sound systems, recording and remote broadcasting. Because of the unusual ruggedness and reliability, Model "55S" is also recommended for fixed station use in the Police, Fire and Transportation services. For studio broadcasting and television use and similar applications where the utmost in quality is desired, Model "556S" is recommended. "Small Unidynes" reduce reflection and reverberation, decrease random noise energy pickup by approximately 67%, allow performer to stand at a distance from the microphone 75% greater than is possible with non-directional (omnidirectional) microphones, have smooth response from 40-15,000 c.p.s. at front—dead at rear. Standard ⅝"—27 thread. Both are supplied with a 20 foot high quality cable and plug assembly. Model "556S" features a Cannon connector, and it also has a special newly designed shock isolation unit.

MODEL "55S"
(For General Purpose)

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59.4 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	60.1 db below 1 Milliwatt per 10 microbar signal
H—High	60.5 db below 1 volt per microbar

Dimensions for both units: case 3 5/16" high; 2 3/16" wide, 3 1/16" deep. Shipping weight: "55S" 3¾ pounds; "556S" 4¼ pounds.

MODEL	CABLE	CODE	LIST PRICE
556S	20 ft.	RUDOV	$100.00
55S	20 ft.	RUDOT	$ 72.50

STANDARD UNIDYNES

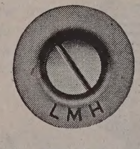
MODEL "556"
(For Broadcast)

The Shure Super-Cardioid Dynamic Microphones are Multi-Impedance Microphones—three microphones in one. Gives you a choice of low, medium, or high impedance in one unit. Model "556" is specially designed for Broadcasting. Held within extremely close tolerances in frequency response. Features internally isolated cartridge and external vibration absorbing unit. Model "55" is a "General Purpose," high-quality dynamic. It is identical to the "556" in appearance with the exception of the external vibration absorbing unit.

Following is technical data covering both models: Reduces reflections and reverberation—decreases random noise energy pickup by 73%. Smooth response from 40 to 15,000 cycles over wide angle at front—dead at rear. Single unit construction accomplished through Shure "Uniphase" principle (Patented). Floating moving coil system. Swivel head. Standard ⅝"—27 thread. "556" has convenient terminals for attaching longer length cables. "55" has built-in connector. Case 4¼" high, 3¼" wide, 3½" deep. Ship. wt.: "556", 4¾ lbs.; "55", 5¼ lbs.

MODEL "55"
(For General Purpose)

Multi-Impedance Switch on Models "55", "55S", "556", "556S", "51"



IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	56.1 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	56.8 db below 1 Milliwatt per 10 microbar signal
H—High	57.5 db below 1 volt per microbar

Microbar = 1 dyne per sq. cm.

MODEL	CABLE	CODE	LIST PRICE
556	7 ft.	RUMUB	$100.00
55	20 ft.	RUMUL	$ 72.50

Microbar = one dyne per sq. cm.

"SONODYNE" HIGH-OUTPUT DYNAMIC

MODEL "51"

A rugged pressure-type dynamic microphone with wide-range frequency response and semi-directional pickup characteristics. Features a multi-impedance switch for low, medium or high impedance. Operates on the principle of a moving coil element in a magnetic field. Has built-in receptacle and a two-conductor shielded cable with microphone plug attached.

The rich satin chrome case is functionally designed for improved acoustical performance and modern appearance. Frequency response 60-10,000 c.p.s. The "Sonodyne" is ideal for all general-purpose use including public address, wire and tap recording, communications and similar applications. Code: RUSON

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	53.0 db below 1 Milliwatt for 10 Microbar signal
M—150-250 ohms	52.5 db below 1 Milliwatt for 10 Microbar signal
H—High Impedance	52.0 db below 1 volt per Microbar

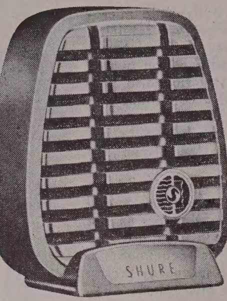
MODEL	CABLE	SHPG. WEIGHT	LIST PRICE
51	15 ft.	3½ lbs.	$45.00

Microbar=one dyne per sq. cm.

CONTROLLED RELUCTANCE MICROPHONES
AND RECORDING HEADS

SHURE

THE "HERCULES"



510 SERIES

The "Hercules" is a hand-held magnetic unit. Provides the ruggedness, clear reproduction, and high output long needed for Public Address, Communications, and Recording—AT AN AMAZINGLY LOW PRICE! Recommended for Announcing and Mobile Public Address Systems; Communications; Home Recording; high quality Inter-Communication. Ideal for general-purpose use in tropical countries and all coastal areas where humidity is a problem.

The output voltage is induced in a coil of wire by causing a sound wave to modulate the reluctance of the magnetic circuit. By the control of this reluctance the utmost in quality and stability is achieved. High impedance is obtained without the use of a transformer. The "Hercules" can be used either Indoors or Outdoors. Fits snugly in the hand, sits firmly on a desk. Frequency response is 100 to 7,000 c.p.s. Furnished with 5' shielded cable. Green metallic finish. Die-cast case. Complete with stand adapter. 2⅔" wide, 3¼" high, 1½" thick.

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
510C	5 ft.	52.5 db below 1 volt per microbar	High	1½ lb.	RUTUF	$15.00
510S (with switch)	5 ft.	52.5 db below 1 volt per microbar	High	1¾ lb.	RUTUS	$17.00

Microbar = one dyne per sq. cm.

THE "GREEN BULLET"

MODEL 520

The "Green Bullet" is a magnetic unit, especially designed to provide quality music and speech reproduction at moderate cost. It is practically immune to the effects of high temperatures and humidity. The "Green Bullet" has a stability assured by unique control of the reluctance of the magnetic system. It features: high output, good response, high impedance without the need of a transformer. The "Green Bullet" has a beautiful modern metallic green finish with a plated grille. Frequency response is 100 to 7,000 c.p.s. Furnished with 7' single-conductor shielded cable.

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
520	7 ft.	52.5 db below 1 volt per microbar	HIGH	1½ lbs.	RUDAL	$17.50

Microbar = 1 dyne per sq. cm.

THE "DISPATCHER"

MODEL 520SL

This new Controlled Reluctance unit is designed to handle the most severe field requirements of paging and dispatching systems. The unit is supplied with 3-conductor shielded cable, and is wired to operate both microphone and relay circuits. The "Dispatcher" is ideal for police, taxi-cab, railroad, airport, bus, truck, and all emergency communications work where dependability is vital. Large grip-bar assures positive contact. Firm downward pressure on grip-bar locks switch. NOTE: THE UNIT CAN BE PICKED UP WITHOUT ACTUATING THE MICROPHONE.

MODEL	OUTPUT	IMPED.	CODE	LIST PRICE
520SL-7'	52.5 db below 1 volt per microbar	HIGH	RUDAN	$35.00

Microbar = 1 dyne per sq. cm.

THE "RANGER"

The new Shure "Ranger" is a new development of a similar magnetic unit originally housed in microphones used by the Armed Forces. The "Ranger" is especially recommended for those applications where long lines are used, and a rugged hand-held microphone is needed. It is ideal for outdoor public address (sports arenas, athletic fields), mobile communications, hams, audience participation shows, etc. The "Ranger" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand. Has heavy-duty single-throw, double-pole leaf-type switch for push-to-talk operation. Phosphor-bronze blades and silver contacts for maximum operating life. Furnished with 5' three-conductor shielded cable. Frequency response is 100 to 9,000 c.p.s.

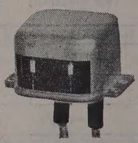
505 SERIES

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
505B	5 ft.	47.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	1¼ lb.	RUDAY	$27.50
505C	5 ft.	50.5 db below 1 volt per microbar	High	1¼ lb.	RUDAX	$27.50

Microbar = 1 dyne per sq. cm.

TAPE RECORDING HEAD

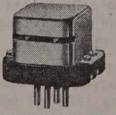
The Shure Tape Recording Head is a high quality, precision-engineered unit incorporating recording, reproducing, and erasing in one head. Suitable for all types of tape recording: professional, semi-professional, experimental, technical, and amateur use. Records on half width of tape—for double-track recording.



TAPE MODEL 815

Model: 815 Code: RUWAT List Price: $15.00

WIRE RECORDING HEAD



WIRE MODEL 812

The Shure magnetic Wire Recording Head is a high quality recording unit with recording, play-back, and signal erasure in one small unit. Has standard 4-prong adapter base. The Model "812" is a direct replacement unit for the improved Sears-Roebuck Wire Recorder.

Model: 812 Code: RUWIR List Price: $15.00

SHURE CRYSTAL PHONOGRAPH PICKUPS AND NEEDLES

PHONOGRAPH PICKUPS

Like the popular Shure Cartridges, each Shure Phonograph Pickup has been designed to meet specific requirements. There is at least one model for each type of reproduction desired — standard (78 RPM), fine-groove (33⅓ and 45 RPM), or single-needle "All Purpose" and dual-needle "Turnover" for playing all types of records. Each tone arm is scientifically curved and balanced for faithful tracking, and designed to emphasize the best qualities of the cartridge with which it is equipped.

STANDARD FOR 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
92H	Fig. D	$5.50	3.5V	1 oz.	5000 c.p.s.	W42H	None	9 oz.	RUSUV
93A	Fig. C	7.50	1.6V	1⅛ oz.	6000 c.p.s.	W57A	None	13 oz.	RUGLI
96A	Fig. C	8.50	4.3V	1⅛ oz.	6000 c.p.s.	W56A	None	13 oz.	RUGAB
900HS*	Fig. B	11.50	1.8V	1⅛ oz.	4500 c.p.s.	W60HS*	A62A	12 oz.	RUZUA

TURNOVER FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER		SHIPPING WEIGHT	CODE
			MG	STD.				MG	STD.		
901D	Fig. A	$16.25	1.2V	1.4V	7 grams	10,000 c.p.s.	W22AB	A65MG	A62A	12 oz.	RUZEI

SINGLE-NEEDLE ALL-PURPOSE FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
			MG	STD.						
92U	Fig. D	$9.75	2.0V	2.3V	8 grams	4500 c.p.s.	W66B	A66U	9 oz.	RUZIP

FINE-GROOVE FOR 33⅓, 45 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
902MG	Fig. B	$10.75	2.0V	10 grams	7500 c.p.s.	W31AR	A53MG	12 oz.	RUGEX

SPECIAL SHURE PICKUP FOR "WEBSTER-CHICAGO" THREE SPEED CHANGERS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER		SHIPPING WEIGHT	CODE
			MG	STD.				MG	STD.		
920W	Fig. E	$11.50	1.2V	1.4V	6 grams	10,000 c.p.s.	W22AB	A65MG	A62A	6 oz.	RUZUT

*"Humi-Seal" Metal Wrapped Moisture Proofed Rochelle Salt Crystal for Use in Tropical Areas.

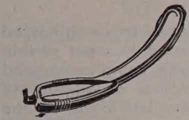


Fig. A

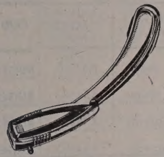


Fig. B

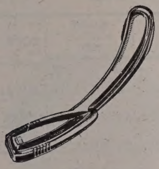


Fig. C

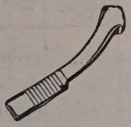


Fig. D

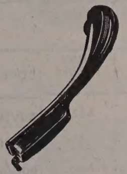


Fig. E

PHONOGRAPH PICKUP NEEDLES

All Shure Needles are manufactured to exacting specifications to assure top quality performance. Needle-point quality is carefully controlled by precision craftsmanship. Extended performance is assured by life tests at the Shure Laboratories. SPECIFY SHURE NEEDLES ONLY. ACCEPT NO SUBSTITUTES.

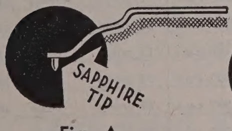


Fig. A

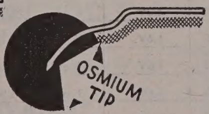


Fig. B

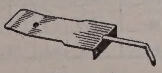


Fig. C

MODEL	ILLUSTRATION	DESCRIPTION	LIST PRICE	CODE
A52A	Fig. C	Std. Osmium	$1.50	RUGEM
A53MG	Fig. C	MG Osmium	1.50	RUGES
A56U	Fig. C	All Purpose Osmium Unipoint	1.50	RUGEP
A61A	Fig. A	Std. Sapphire	2.50	RUZAN
A62A	Fig. B	Std. Osmium	1.50	RUZAP
A63MG	Fig. B	MG Osmium	1.50	RUGAZ
A64MG*		MG Osmium	2.00	RUZAS
A65MG	Fig. A	MG Sapphire	2.50	RUGAY
A66U	Fig. B	All Purpose Osmium Unipoint	1.50	RUZIK
A67U	Fig. A	All Purpose Sapphire Unipoint	2.50	RUZIN

*Standard Bent Shaft Needle Not Illustrated.

CRYSTAL AND CERAMIC PICKUP CARTRIDGES SHURE

All Shure Replacement Cartridges have been painstakingly designed and engineered to meet the most exacting specifications. Each has been designed to meet certain specific requirements, such as high output, extended range, high compliance, and maximum tracking. For the finest in standard 78 RPM, fine-groove, or all-purpose replacement cartridges, see the charts below which furnish complete data on the popular Shure "Vertical Drive," "Lever-Type," "Muted Stylus," and "Direct Drive" Cartridges.

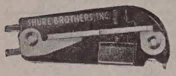


Fig. A
"Direct Drive"

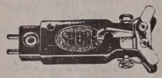


Fig. B
"Vertical Drive"
(Turnover)

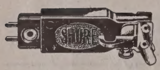


Fig. C
"Vertical Drive"
(Single Needle)

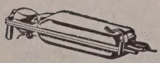


Fig. D
"Muted Stylus"

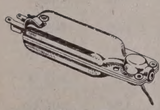


Fig. E
"Lever Type"

FINE GROOVE CARTRIDGES FOR 33⅓, 45 RPM RECORDS

MODEL NO.	ILLUSTRA-TION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
W21F*	Fig. C	Crystal	$7.75	1.5V	6 grams	10,000 c.p.s.	4½ grams	A63MG	RUGEX
W31AR	Fig. A	Crystal	6.50	2.1V	7 grams	7,500 c.p.s.	5½ grams	A53MG	RUGEB
WC31AR	Fig. A	Ceramic	6.50	.65V	7 grams	7,500 c.p.s.	5½ grams	A53MG	RUGED
W53MG	Fig. E	Crystal	8.50	1.3V	6 grams	8,500 c.p.s.	12 grams	A64MG	RUGET

TURNOVER CARTRIDGES FOR 33⅓, 45, AND 78 RPM RECORDS

MODEL NO.	ILLUSTRA-TION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FOORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.		CODE
				MG	STD				MG	STD.	
W22A	Fig. B	Crystal	10.50	1.2V	1,4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A61A	RUVAL
W22AB	Fig. B	Crystal	9.50	1.2V	1.4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A62A	RUVAX
WC22AB	Fig. B	Ceramic	9.50	.21V	.18V	9 grams	10,000 c.p.s.	5 grams	A65MG	A62A	RUVUC

ALL PURPOSE SINGLE NEEDLE CARTRIDGES FOR 33⅓, 45, 78 RPM RECORDS

MODEL NO.	ILLUSTRA TION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
				MG	STD.					
W26A	Fig. C	Crystal	$8.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A67U	RUVUP
W26B	Fig. C	Crystal	7.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A66U	RUVUM
W36B	Fig. A	Crystal	6.50	2.3V	2.5V	9 grams	7,000 c.p.s.	5½ grams	A56U	RUGEN
WC36B	Fig. A	Ceramic	6.50	.6V	.7V	9 grams	7,000 c.p.s.	5½ grams	A56U	RUGER
W66B	Fig. D	Crystal	7.50	2.0V	2.3V	8 grams	4,500 c.p.s.	12 grams	A66U	RUSUN

STANDARD CARTRIDGES FOR 78 RPM RECORDS

MODEL NO.	ILLUSTRA-TION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
W23B	Fig. C	Crystal	$7.75	1.1V	6 grams	8,000 c.p.s.	4½ grams	A62A	RUVER
WC33B	Fig. A	Ceramic	6.50	.75V	9 grams	7,000 c.p.s	5½ grams	A52A	RUGEL
W42B	Fig. E	Crystal	4.45	1.3V	1 oz.	5,000 c.p.s.	25 grams	None	RUGUB
W42H	Fig. E	Crystal	4.45	3.5V	1 oz.	5,000 c.p.s.	25 grams	None	RUGUT
W56A	Fig. E	Crystal	6.65	4.3V	1⅛ oz.	6,000 c.p.s.	12 grams	None	RUGUS
W56R**	Fig. E	Crystal	7.50	4.3V	1 oz.	10,000 c.p.s.	25 grams	None	RUGEV
W57A	Fig. E	Crystal	5.55	1.6V	¾ oz.	6,000 c.p.s	12 grams	None	RUGLA
W58A	Fig. E	Crystal	5.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None	RUGLU
W58HS***	Fig. E	Humi-Seal Crystal	6.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None	RUGUY
W59A	Fig. E	Crystal	5.55	2.5V	1 oz.	6,000 c.p.s	25 grams	None	RUGAT
W60A	Fig. D	Crystal	8.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A61A	RUSIS
W60B	Fig. D	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A62A	RUSID
W60HS***	Fig. D	Humi-Seal Crystal	8.50	1.8V	1 oz.	4,500 c.p.s	25 grams	A62A	RUSIB
W61B	Fig. D	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	25 grams	A62A	RUSIL

*With .453 Mount for Oak Changer.
**Cutter-Cartridge for Wilcox-Gay "Recordette."
***"Humi-Seal" Metal Wrapped Rochelle Salt Crystal Ideal for Tropical Areas.

SHURE SWITCHES AND ACCESSORIES

MICROPHONE REPLACEMENT CARTRIDGES

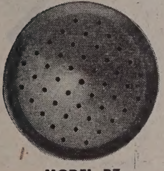
CONTROLLED RELUCTANCE

MODEL R5

The Model R5 Controlled Reluctance Microphone Cartridge is available for service installation and is also ideal for the replacement of crystal microphone cartridges in Shure cases of the Model 707A and Model 100 Series designs. It will also replace cartridges in cases of other manufacturers' models of similar design, where space permits. Complete installation instructions in English and Spanish are included. It is an acoustically controlled balanced-armature transducer ideal for both microphone and soft-speaker applications. Practically unaffected by heat and humidity. Supplied with rubber mounting ring. Overall diameter of mounting ring 2¼''; thickness of rubber ring 3/16''. Overall depth of cartridge ⅞''. Shipping weight 4 ounces.

Code: RUTUC. List Price: $10.00

CRYSTAL

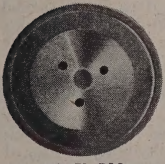


MODEL R7

The Model R7 Crystal Microphone Cartridge is available for service installation as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A series. High output—48db below 1 volt per microbar. Cartridge supplied with rubber mounting rings and a complete set of mounting instructions.

Model: R7 Code: RUDEC
List Price $7.75

CARBON



MODEL R10

Model R10 Carbon Cartridge used in "CB", "100", and "120" Series Carbon Microphones. Rubber mounting rings. Easy to install.

Model: R10 Code: RUTUB
List Price $11.00

CABLE TYPE TRANSFORMER

Model A86A is a high-quality cable-type transformer which offers additional versatility when used in conjunction with Shure Models 55, 55S, 556, 556S, and 51 Dynamic Microphones, which employ the impedance matching switch. It solves the frequent problem of installations requiring long lengths of microphone cables without the loss of high-frequency response. Model A86A matches 35 to 50 and 150 to 250 ohm microphones to high impedance amplifier input. Compact, sturdy. Case diameter 1⅝'', length 2⅞'', 2-foot cable. Shipping weight, 1¼ pounds.

Model: A86A Code: RUDEB List Price: $16.00

TAKE-APART STAND

Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle. Metal top threaded ⅝''—27. Height overall 6-11/16''. Base diam. 4½''. Length of handle 5⅞''. Shipping weight 1 pound.

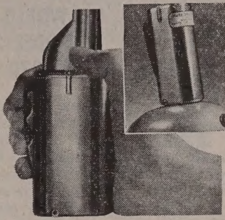
Code: RUKAB List Price: $3.00

Model A41B. Microphone handle only. Threaded ⅝''—27.

Code: RUJAD List Price: $1.25

"GRIP-TO-TALK SLIDE-TO-LOCK" SWITCH

This rugged Heavy-Duty Switch employs a long life, leaf-type switch element that withstands the most severe field requirements of paging and dispatching systems. Has spring-temper, phospor-bronze switch blades with pure silver contacts. Ideal for Police, Taxi-Cab, Railroad, Airport, Bus, Truck, and all emergency communications work. Large grip-bar assures positive contact. Firm downward pressure on grip-bar locks switch. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure S36A Desk Stand as shown in illustration. No soldering necessary, simply plug in. Switch element can be readily removed for rewiring to accommodate other switching combinations. Rich satin chrome finish. Shipping weight 1 pound.



MODEL A88A

Model: A88A Code: RUNEL List Price: $11.75

ON-OFF PRESS-TO-TALK SWITCHES

A83B

A84B

A85C

Plug into the microphone quickly and conveniently. Durable, dependable. No soldering necessary.

Model A83B. Rotary-type "On-Off" switch. Quickly attached to any cable-connector type Shure microphone. Internal plug establishes connections. Bakelite arrow knob.

Model A83B. Code: RUNIM List Price: $6.50
55A15 Switch element only. List Price: $1.50

Model A84B. Momentary "On-Off" switch. Press-to-talk Bakelite disc.

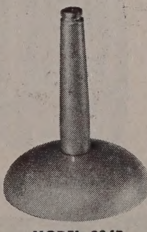
Model A84B. Code: RUNID List Price: $7.50
55A16 Switch element only. List Price: $1.75

Model A85C. Momentary Relay-Type switch. Press-to-talk Bakelite disc. Normally-open switch closes circuit comprising one conductor and shield of outgoing cable for operation of relay or other device; remaining conductor and shield of cable carry microphone output. Must be used with two-conductor shielded cable. Standard Shure cable-connector receptacle. Satin chrome finish.

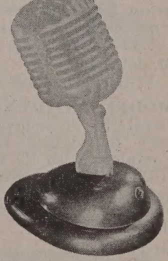
Model A85C. Code: RUNAT List Price: $10.75
55A19 Switch element only. List Price: $2.00

MODERN DESK STAND

Model S36A. Streamlined Desk Mount with stable support. Fits Shure connector-type Microphones, concealing plug in base. Ideal for use with A88A Grip-to-Talk Switch. Adapter provided for other type microphones. Removable button for installation of ⅜'' standard bushing switch or volume control. Pearl Gray finish. Base: 2½'' high, 5'' wide, 7'' long. Shipping weight 1½ pounds.



MODEL S34B



MODEL S36A

Model: S36A Code: RUSEF List Price: $5.50

Microphones BY TURNER

THE WORLD FAMOUS TURNER MODEL 22X CRYSTAL 22D DYNAMIC

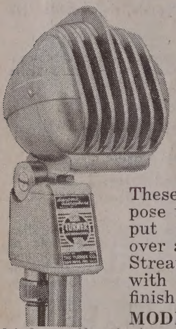
Tops in value, tops in performance. Accurate pickup and faithful reproduction have made these units the most popular general purpose microphones on the market. Full 90° tilting head for semi or non-directional operation. Satin chrome finish. ⅝"-27 coupler.

MODEL 22X CRYSTAL. High quality humidity protected crystal, mechanical shockproofed, barometric compensator. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60 - 9000 c.p.s. Complete with 7 ft. removable cable set.................List Price **$22.50**

Model S-22X.
With slide on-off switch. List Price **25.00**

MODEL 22D DYNAMIC. High quality Alnico magnets in high level dynamic circuit. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 70 - 9000 c.p.s. 7 ft. removable cable set. Available in 50, 200, 500 ohms or high impedance.
List Price **$27.25**

Model S-22D.
With slide on-off switch. List Price **29.75**



HIGH PERFORMANCE! EYE APPEAL! MODERATE COST! MODEL 33X-33D CRYSTAL OR DYNAMIC

These high fidelity, all purpose units combine high output with smooth response over a wide frequency range. Streamlined case designed with full rich satin chrome finish. 90° tilting head.

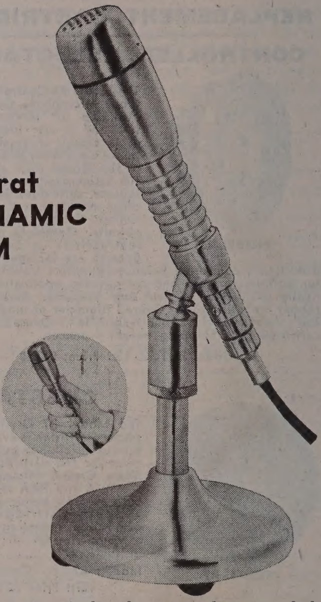
MODEL 33X CRYSTAL has high quality 2-element moisture sealed crystal, automatic barometric compensator, and mechanical shock proofing. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-9000 c.p.s. Complete with 20 ft. removable cable set......................List Price **$24.50**

Model S-33X.
With slide on-off switch. List Price **27.00**

MODEL 33D DYNAMIC. Alnico magnets. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9000 c.p.s. Complete with 20 ft. removable cable set. High impedance wired single ended (single conductor shielded cable). 50, 200 or 500 ohms wired for balanced line (two conductor shielded cable)..........List Price **$29.00**

Model S-33D.
With slide on-off switch. List Price **31.50**

The New Turner Aristocrat Model 50D DYNAMIC for TV - FM - AM



- ★ **Recording . . .**
- ★ **Broadcast . . .**
- ★ **Public Address**

THE CROWN JEWEL OF DYNAMIC MICROPHONES

New beauty, new styling, new utility, and **new performance** make the Turner Aristocrat the finest of fine microphones. Each unit is **laboratory calibrated** to insure specification standards. Use indoors or out — in hand, on stand, suspended, or concealed in stage settings. Quickly and easily detached from ball swivel coupler for hand use. Non-directional polar pattern picks up sound from any direction. Equally effective for individual or group pickups with wide range, high fidelity reproduction. Completely self-contained, — its **high output dynamic generator requires no closely associated auxiliary equipment for outstanding results.**

MODEL 50D DYNAMIC. Frequency response: 50-15,000 c.p.s. flat within 2½ db. Level: 56 db below 1 volt/dyne/sq. cm. at high impedance. Available in 15, 50, 200, 500 ohms or high impedance output. Complete with ball swivel coupler, and 20 ft. two conductor shielded cable with cannon quick-disconnect plug (stand not included)...............List Price **$150.00**

THE TURNER COMPETITOR MODEL 60X CRYSTAL MICROPHONE

Competitor

A striking, low cost crystal microphone recommended where good quality speech reproduction is required and the factor of economy is important. A natural for hams, low priced public address systems, dictation machines, and home recorders. Use in hand, on desk, or on stand. Frequency response is 70 - 7000 c.p.s. and output level is 52 db below 1 volt/dyne/sq. cm. 6 ft. single conductor cable is securely anchored to case and cannot twist or pull out. Baked on beige wrinkle enamel finish. Complete with stand adaptor.

Model 60X ....List Price **$10.85**
Model S60X. With on-off slide switch.....List Price **12.85**

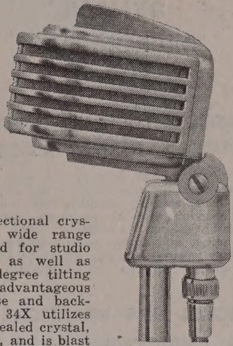
THE TURNER COMPANY, CEDAR RAPIDS, IOWA

Microphones BY TURNER

BROADCAST QUALITY DYNAMIC

MODEL 211. Precision engineered for critical recording, P.A., sound system and broadcast work, including FM. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 30-10,000 c.p.s. Equipped with tilting head, balanced line output connection, and 20 ft. 2-conductor, heavy duty removable cable set. Satin chrome finish. 50 ohms, 200 ohms, 500 ohms or high impedance.

Model 211 ....List Price $47.50



MODEL 34X CRYSTAL MICROPHONE

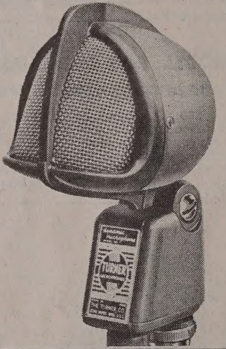
Attractive, high fidelity, semi-directional crystal unit. Exceptionally smooth wide range frequency response. Recommended for studio and public address installations as well as quality recording work. Ninety degree tilting head permits tilting to most advantageous position to reduce audience noise and background disturbances. The Model 34X utilizes a high quality Bimorph moisture sealed crystal, automatic barometric compensator, and is blast and mechanical shock-proofed. Satin chrome finish. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-10,000 c.p.s. Complete with 20 ft. removable cable set.

List Price $29.00

Model S-34X. With slide on-off switch ....List Price 31.50

BEAUTIFUL NEW MODELS 25X AND 25D

CRYSTAL AND DYNAMIC



A new leader in beauty and performance for all sound installations, call systems, recording, amateur communications, etc., indoors or out. Striking, modern case finished in rich two-tone umber gray with chrome plated grille. Full 90° tilting head for semi or non-directional operation. ⅝″—27 coupler.

MODEL 25X CRYSTAL. Genuine Bimorph, high quality, moisture sealed crystal, mechanically isolated. Level: 52 db below 1 volt/dyne/sq. cm. Response: 50-9,000 c.p.s. Complete with 20 ft. removable cable set.

Model 25X ....List Price $27.50

Model S-25X. With slide on-off switch ....List Price 30.00

Model P-25X. With push-to-talk button switch ....List Price 30.00

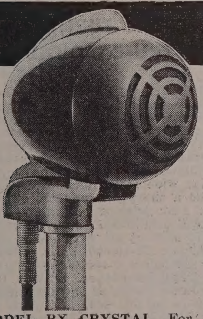
MODEL 25D DYNAMIC. High flux Alnico V magnets. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 50-10,000 c.p.s. Complete with 20 ft. removable cable set. High impedance wired single ended (single conductor shielded cable); 30, 200 or 500 ohms wired for balanced line (two conductor shielded cable).

Model 25D ....List Price $40.00

Model S-25D. With slide on-off switch List Price 42.50

Model P-25D. With push-to-talk button switch ....List Price 42.50

TURNER *Challengers*



INEXPENSIVE, PRACTICAL MICROPHONES FOR GENERAL SOUND WORK

Priced within the range of every user. Turner Challenger Microphones offer performance, quality and appearance usually found in microphones listing at twice their low cost. Available with a choice of crystal or dynamic elements, they retain many of the high quality features of Turner construction. You can rely on Turner Challengers — they are fully guaranteed.

MODEL BX CRYSTAL. For recording, P.A., and amateur work. Brown Metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. Response 60-6,000 c.p.s. Complete with 7 ft. attached cable.

Model BX ....List Price $11.75

MODEL BD DYNAMIC. Same appearance and finish as BX. Equipped with dynamic cartridge. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-6,000 c.p.s. Complete with 7 ft. attached cable. 50, 200, 500 ohms or high impedance.

Model BD ....List Price $16.85

MODEL CX CRYSTAL. Satin chrome finish. 7 ft. removable cable set. Standard ⅝″ 27 mounting. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7,000 c.p.s.

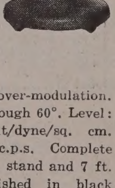
Model CX ....List Price $16.25

MODEL CD DYNAMIC. Same style and finish as CX. High quality magnets. 7 ft. removable cable set. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7,000 c.p.s. 50, 200, 500 ohms or high impedance.

Model CD ....List Price $20.75

MODEL VT-73

Crystal desk microphone engineered for quality speech



Highest quality humidity sealed, genuine Bimorph crystal. Rising curvature of response between 500-4,000 c.p.s. increases intelligibility at effective voice frequencies without over-modulation. Head is adjustable through 60°. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7,000 c.p.s. Complete with ball swivel head, stand and 7 ft. attached cable. Finished in black wrinkle and chrome.

Model VT-73 ....List Price $21.50

TURN TO TURNER for "sound performance"

RUGGED TURNER DYNAMIC MICROPHONES

Microphones BY TURNER

UNFAILING DEPENDABILITY IN ANY CLIMATE OR TEMPERATURE . . .
FAMOUS TURNER MODEL 99

Professional in appearance and performance. Smooth response not affected by heat, cold or humidity. Has adjustable saddle ⅝″—27 mounting. Semi or non-directional operation. For announcing, and mobile public address systems, paging systems, communications, recording machines, etc. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9,000 c.p.s. 20 ft. removable single conductor shielded cable set. 50, 200, 500 ohms or high impedance.

Model 99 ....List Price **$36.00**

MODEL 999 BALANCED LINE DYNAMIC
For studio results under critical conditions.

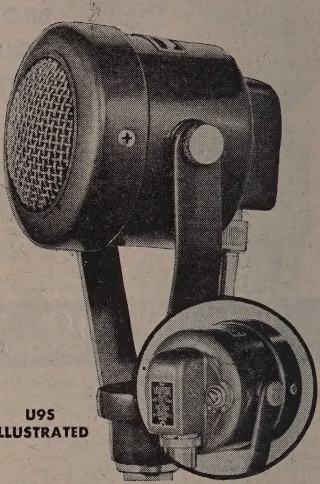
Same professional appearance as Model 99. Voice coil and transformer leads are insulated from ground and microphone case. Line is balanced to ground. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high imedance. Response: 60-9,000 c.p.s. With 3 pin polarized locking connector and 20 ft. balanced line low capacity cable. 50, 200, 500 ohms or high impedance.

Model 999 ....List Price **$39.50**

MODEL U9S MULTI-IMPEDANCE DYNAMIC
Four impedances at your finger tips

50, 200, 500 ohms or high impedance — get it quickly with the turn of the switch on the Turner U9S Dynamic. Same precision engineering and rugged construction as the Model 999 with built-in tapped multi-impedance transformer and switch. Dependable at all impedances and frequencies. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9,000 c.p.s. Complete with 20 ft. balanced line removable cable set.

Model U9S ....List Price **$42.50**



U9S ILLUSTRATED

TURNER MODEL 87
Velocity Microphone High Fidelity . . . Bi-Directional Multi-Impedance

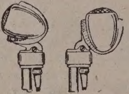
A new unit, engineered with single element ribbon supported in the field of an Alnico V magnet for maximum sensitivity. Thorough shielding excludes hum pick-up. The Model 87 has a bi-directional pick-up pattern with exceptionally smooth response from 80-10,000 c.p.s. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. Built-in impedance switch gives selection of 50, 200, 500 ohms or high impedance output. Universal swivel mounting, ⅝″—27 thread. Finished in dark umber gray with bright chromium screen. Complete with 20 ft. two conductor balanced line shielded cable.

Model 87 ....List Price **$49.85**

MODEL 77 . . .
THE TURNER "TRU-CARDIOID"

The Turner "Tru-Cardioid" is a super-cardioid type microphone employing a combination of dynamic and velocity generators. "Tru-Cardioid" pickup pattern practically eliminates feedback, audience and background noise. Has wide range pickup at front and a sharply attenuated output at rear with approximately 15 db discrimination between front and rear at all frequencies. Response: 70-10,000 c.p.s. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. Built-in impedance selector switch gives choice of 50, 200, 500 ohms or high impedance output. 90 degree tilting head, ⅝″—27 mounting. Finished in dark umber gray with polished chromium screen. Complete 20 ft. removable two conductor shielded cable set.

Model 77 ....List Price **$79.50**



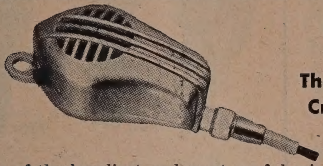
TILTING HEADS

Turner Microphone Models 22X, 22D, 25X, 25D, 33X, 33D, 34X, 211, and 77 are all equipped with 90° tilting heads.

TURN TO TURNER for "sound performance"

Microphones BY TURNER

MODERN, CONVENIENT, HAND HELD MICROPHONES



MULTI-PURPOSE MICROPHONE
The Turner "Han-D" Crystal or Dynamic

One of the handiest and most useful microphones made. Hang it, hold it, or mount on any standard floor or desk stand. Standard ⅝"—27 thread mounting. Balanced to fit the hand naturally, Ideal for stage, paging, public address, amateur, mobile and traveling mike broadcasting. Satin chrome finish. Positive contact slide switch permits on-off operation.*

MODEL 9X CRYSTAL. High quality, shock mounted, humidity protected crystal. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7000 c.p.s. Complete with removable 7 ft. single conductor shielded cable set.
List Price $23.50

MODEL 9D DYNAMIC. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7000 c.p.s. Complete with removable 7 ft. single conductor shielded cable set. 50, 200, 500 ohms or high impedance.
List Price $28.50

*Also available with heavy duty non-locking push-to-talk switch at same price. Specify: "P-9D" on order.

THE POPULAR LOW COST TURNER TWENTY

A light-weight, convenient, hand held microphone available in a choice of crystal, dynamic, or carbon circuits. Various switching arrangements provide versatility for a wide range of applications. Equipped with hook ring for hanging. Bronze metalustre finish. Cable is securely anchored and is guaranteed not to pull out.

Model 20X Crystal. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7000 c.p.s. 7 ft. cable. List $12.85

Model S20X. With push to talk switch having slide-lock feature. Switch connected in microphone circuit, normally open. List $14.85

Model SR-20X. With push to talk slide-lock switch. Wired for relay control. List $17.85

Model 20D Dynamic. Level: 52 db below 1 volt/dyne/sq. cm. Response: 100-7000 c.p.s. 7 ft. cable. List $16.85

Model S20D. (With push to talk switch having slide lock feature.) List $18.85

Model SR-20D. (For Relay Operation). List $21.85

Model 20R Carbon. Level: 32 db below 1 volt/dyne/sq. cm. Response: 200-4000 c.p.s. 48" cable. List $12.85

Model S20R. (With push to talk switch having slide lock feature.) List $14.85

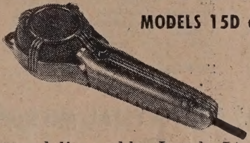
Model SR-20R. (For Relay Operation). List $17.85

MODEL 35X CRYSTAL

The Turner "Fireball" Combination Desk or Hand Microphone

The "Fireball" can be used either as a hand microphone or as a desk unit. A quarter turn releases handle from base or locks it securely. Complete with metal handle, base and 7 ft. attached cable. Brown wrinkle finish. High quality crystal. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7000 c.p.s.
List Price $14.25

MODELS 15D and 15D-NC HAND-HELD DYNAMICS



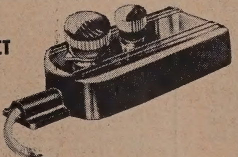
Model 15D. Heavy duty functionally designed case finished in gray gun metal. Hook for hanging when not in use. Equipped with attached 20 ft. two conductor shielded balanced line cable. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7000 c.p.s. Available in 50, 200, 500 ohms or high impedance. ....List Price $31.50

Model P-15D. With push-to-talk button switch. ....List Price $34.00

Model 15D-NC. Noise cancelling. Designed for intelligible communications under adverse background noise conditions. Unwanted sound cancelled out. Same case and finish as 15D. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-5000 c.p.s. Available in 50, 200, 500 ohms or high impedance. Complete with attached 20 ft. two conductor shielded balanced line cable. ....List Price $34.00

Model P-15D-NC. With push-to-talk button switch. List Price $36.50

MAGNETIC CONTACT PICKUPS FOR MUSICAL INSTRUMENTS



MODEL MM. Standard Turner pickup. ALNICO V circuit provides uniform response over entire musical range. Gives pleasing reproduction of any string instrument. High impedance output. Installed in a few seconds. Finished in gray gunmetal. Complete with 20 ft. single conductor cable and mounting device.

Model MM/VC. With colume cotnrol. $19.00
Model MM. Without volume control. 16.75
DELUXE MODEL MIP (not illus.). 23.50

L40 LAPEL MICROPHONE

Small, lightweight, and inconspicuous, the L40 can be worn in the lapel or concealed. Highest quality Bimorph, moisture sealed crystal produces high signal level. Engineered for crisp, clear speech reproduction. Chest sounds damped out. Alligator clip. Satin chrome finish. Level: 52 db below 1 volt/dyne/sq. cm. Response: 50-8000 c.p.s. With 20 ft. attached cable.
List Price $25.00

WITH THIRD HAND—L40-3H

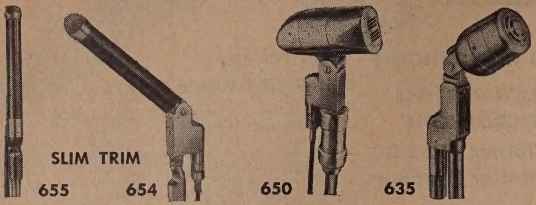
Slips over neck in a jiffy. Ideal for mobile sound work and call systems where operator needs both hands free. Indispensable for demonstrators. ....List Price $30.00

Crystals licensed under patents of the Brush Development Company,

THE TURNER COMPANY, CEDAR RAPIDS, IOWA

No finer choice than Electro-Voice Microphones

HIGH-FIDELITY TV-BROADCAST DYNAMICS



Ultra-Wide-Range, Flat Response! High Output! Rugged, Versatile! Laboratory Calibrated!

Proved in studio and remote use on network and local telecasts and broadcasts. Exclusive, long-life *Acoustalloy* diaphragm and highly efficient magnetic structure assure ultra-wide-range high fidelity response. High output level gives excellent signal to noise ratio. Omnidirectional, becoming slightly directive at extremely high frequencies. Close tolerances and individual laboratory control guarantee uniformity. Ideal for audience participation, applause pick-up, recording and high quality public address . . . for individual or group pick-up of voice and music indoors and outdoors.

Model 655 Slim-Trim TV Dynamic. Frequency response 40-15,000 c.p.s., 2.5 db. Output level −51 db. *Pop-proof* head stops wind and breath blasts. Can be used on stand, in hand or on boom; easily concealed in studio props. Needs no additional closely-associated auxiliary equipment. *Acoustalloy* diaphragm. Impedance 250 ohms. Easily changed to 50 ohms. Removable swivel. Cannon XL-3 connector. Has ½" pipe thread. ⅝"-27 adapter furnished. Made of high tensile aluminum. Size: with swivel 11⅜" long; dia. 1 1/16". 18 ft. broadcast-type cable. Net wt., less swivel, 10 oz.

List Price $200.00

Model 654 Slim-Trim Broadcast Dynamic. Similar to Model 655. Frequency response 50-13,000 c.p.s., substantially flat. Output level −55 db. Recessed selector in stud gives 50 or 250 ohms impedance. *Pop-proof* head. *Acoustalloy* diaphragm. Swivel case, made of brass. Cannon XL-3 connector. ⅝"-27 thread. ½" pipe thread adapter furnished. 18 ft. broadcast-type cable. Size: 10" long with stud; 1 1/16" dia. Net wt., 15½ oz.

List Price $90.00

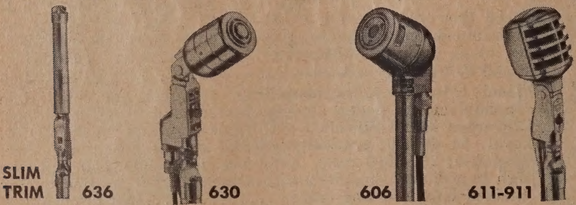
Model 650 Broadcast Dynamic. Frequency response 40-15,000 c.p.s., 2.5 db. Output level −46 db. Dual-type external shock mount. Recessed impedance selector switch gives 50 or 250 ohms. Tiltable head. Pressure cast case, finished in durable Satin Chromium. *Acoustalloy* diaphragm. Cannon XL-3 connector. ⅝"-27 stand coupler. 18 ft. broadcast type cable. Size: 2¼" x 4⅝" x 5¼" including stud. Shock mount is 1½" x 3⅞". Net wt., including shock mount, 2¾" lbs.

List Price $150.00

Model 635 Broadcast Dynamic. Meets exacting requirements of TV and Broadcast service. Compact, rugged, versatile—used in studios and on remotes, on a stand or in the hand, indoors and out. Response 60-13,000 c.p.s., 2.5 db. Output level −55 db. 50-250 ohms impedance selector. *Acoustalloy* diaphragm. Head tilts through 90° arc. ⅝"-27 thread. Cannon XL-3 connector. Satin Chromium finish. 18 ft. broadcast-type cable. Size 2" x 4¼" x 4½". Net wt., 1½ lbs.

List Price $70.00

E-V DYNAMIC, DIFFERENTIAL* AND CRYSTAL MICROPHONES



Model 636 "Slimair" Dynamic for P. A. Exceptionally fine for public address, recording, and other general-purpose use. Rugged, versatile. High-fidelity response 60-13,000 c.p.s. Output −55 db. *Pop-proof* head stops wind and breath blasts. *Acoustalloy* diaphragm. Alnico V. Omnidirectional. Wide pick-up range, for individual or group work indoors and outdoors. Used in hand, on stand, or overhead—or can be concealed in stage props. "On-Off" switch optional. Brass case, in Satin Chromium finish. Swivel head permits 90° vertical tilt. MC-4 connector. ⅝"-27 thread. 18 ft. cable. Size: 10¼" long incl. stud. Dia. 1 1/16". Net wt., 15 oz. High or low impedance selection.

List Price $65.00

Model 630 High Fidelity, High Output Dynamic. Brilliant, general-purpose dynamic—famous for quality far beyond its moderate price! Substantially flat response 60-11,000 c.p.s. Assures faithful reproduction of speech and music. Output level −55 db. Compact, lightweight, extra rugged for indoor and outdoor use. Unaffected by heat and humidity. Exclusive *Acoustalloy* diaphragm. Swivel head permits 90° tilt. Built-in cable connector. ⅝"-27 thread. Satin Chromium finish. "On-Off" switch. 18 ft. cable. Size 2" x 4¾" x 4½" including stud. Net wt., 1½ lbs. Available in Hi-Z, 50, 200, 250 or 500 ohms impedance.

List Price $45.00

Model 606 Differential* Dynamic. Close-talking, noise-cancelling microphone. Used in airport control towers, police dispatching, close-talking public address and high noise industrial applications. Response substantially flat, 100-6,000 c.p.s. Output −55 db. *Acoustalloy* diaphragm. Head at 22° fixed tilt. ⅝"-27 thread. Built-in cable connector. Satin Chromium finish. Size 2" x 3¼" x 2½" incl. stud. Net wt., 12 oz. Available in Hi-Z, 50, 200 or 250 ohms impedance. (*Patent No. 2,350,010.)

Model 606-8. With 6 ft. cable. List $40.00
Model 606-20. With 18 ft. cable. List $42.00

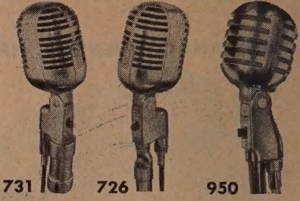
E-V "Mercury" Model 611 Dynamic. For economical public address systems, home recorders, Ham rigs, other uses. Smooth response 50-8000 c.p.s. Output −55 db. Non-directional. *Acoustalloy* diaphragm. Tiltable head. "On-Off" switch. Built-in cable connector. ⅝"-27 thread. Satin Chromium finish. Available in Hi-Z, 50, 150, 250 or 500 ohms impedance. Size 2⅜" x 3⅛" x 6¼" incl. stud. Net wt. 2 lbs.

Model 611-8. With 6 ft. cable. List $37.50
Model 611-20. With 18 ft. cable. List $39.50

E-V "Mercury" Model 911 Crystal. Same smart design and fine performance as Model 611. Response 50-8000 c.p.s. Output −50 db. Metal Seal Crystal. High imp. Net wt. 1½ lbs.

Model 911-8. With 6 ft. cable. List $27.50
Model 911-20. With 18 ft. cable. List $29.50

CARDIOID UNIDIRECTIONAL MIKES



Overcome Background Noise, Stop Feedback, Improve Pick-up

E-V Mechanophase* Principle provides wide-angle front pick-up—dead at rear. Solves difficult sound pick-up problems—assures finer, clearer reproduction of voice and music—simplifies microphone and speaker placement—increases pick-up range—permits higher volume levels. Tiltable head. Satin Chromium finish. ⅝"-27 thread. 18 ft. cable. Size, less shock mount, 2½" x 3½" x 9". Net wt., 2½ lbs.

Model 731 Dynamic (Cardyne II). Flat response 30-12,000 c.p.s. Output level −53 db Dual-type external shock mount. High-Low impedance selector. Cannon XL-3 connector. "On-Off" switch (optional).

List Price $95.00

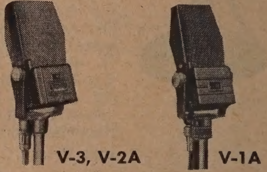
Model 726 Dynamic (Cardyne I). Frequency response, 40-10,000 c.p.s. Output level −55 db. High-Low impedance selector, MC-3 type connector. "On-Off" switch.

List Price $75.00

Model 950 Cardax Crystal. First High level cardiod crystal microphone with *Dual Frequency Response*—Flat for high fidelity sound pick-up (output −57 db), or rising characteristic for extra crispness of speech (output −50 db). Fully enclosed Metal Seal crystal. Built-in cable connector. "On-Off" Switch. Size 2½" x 2⅞" x 6¼", including stud. Net wt., 1¾ lbs. *E-V Pat. Pend.

List Price $42.50

High Fidelity, High Output Bi-Directional VELOCITY



Superb pick-up and reproduction of voice and music has made these microphones favorites over the years. Advanced design now brings Dynamic advantages to Velocity performance. Response is smooth, peak-free over a wide frequency range. Equal front and back pick-up. Zero pick-up at sides, top and bottom. Excellent for individual or group work in public address, broadcasting, recording. Proper placement and tilting reduce feedback and random noise. *Acoustalloy* Diaphragm. Reflection-free housing. Internal shock absorber. Locking cradle. "On-Off" switch. ⅝"-27 thread. 18 ft. cable.

Model V-3. Impedance selector provides high or low impedance. Substantially flat response, 40-10,000 c.p.s. Output level −53 db. Size 3½" x 2¾" x 8", including stud. Net wt., 2½ lbs.

List Price $70.00

Model V-2A. Similar to V-3, but without impedance selector switch. Choice of 50, 250, 500 ohms, or Hi-Z.

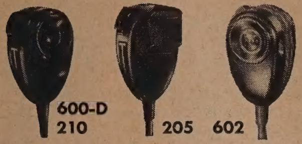
List Price $60.00

Model V-1A. Same high quality in compact, smaller size, ribbon-type velocity. Frequency response 40-9,000 c.p.s., substantially flat. Output level −63 db. Size 2¾" x 2⅛" x 6½" including stud. Net wt., 2 lbs. Available in Hi-Z, 50, 250 or 500 ohms impedance.

List Price $50.00

Electro-Voice Microphones • Stands • TV Boosters

E-V MOBIL-MIKES



Model 600-D Dynamic. Lightweight, hand-held, extra-rugged. Withstands extreme climatic conditions. Smooth response provides higher articulation and more usable power level; less fatiguing to listener. Output −55 db. *Acoustalloy* diaphragm. Press-to-talk switch. Size 2¼" x 2" x 4". Black phenolic case, with mounting bracket. 6 ft. cable. Choice of high or low impedances. Wt. 8 oz.

List Price........................$38.50

Model 600-DL. With switch lock. List...$40.00

Model 210 Carbon. Similar to Model 600-D, but single-button carbon. Gives high intelligibility speech transmission. Substantially flat response. Output −50 db. Press-to-talk switch. 5 ft. cable. Net wt., 7 oz.

List Price........................$27.50

(Also available in exact replacement models for Motorola, RCA, G.E. and similar mobile equipment)

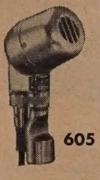
Model 205 Differential* Carbon. Close-talking, noise-cancelling single-button carbon Mobil-Mike. Gives maximum speech intelligibility under high ambient noise. Blast proof, waterproof, shock resistant. Substantially flat response gives high articulation. Output −50 db. Press-to-talk switch. Black phenolic case, with mounting bracket. 5 ft. cable. Size 2¼" x 2¼" x 4". Net wt., 7 oz. (*Patent No. 2,350,010)

List Price........................$33.00

Model 602 Differential Dynamic. Similar to Model 600-D, but close-talking, noise-cancelling *Differential* type. Assures clear speech transmission under intense noise in any weather or climate. Output −55 db. Press-to-talk switch. 5 ft. cable. Available in all impedances. Wt. 8 oz.

List Price........................$45.00

Model 605 Durable Dynamic

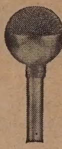


For dependable, low-cost general-purpose use. Substantially flat response, 50-7500 c.p.s. Output level −55 db. Non-directional, becoming directive at higher frequencies. *Acoustalloy* diaphragm. Head at 22° fixed tilt. Built-in cable connector. Satin Chromium finish. Available in Hi-Z, 50, 200, or 250 ohms impedance. Net wt., 12 oz.

Model 605-8. With 6 ft. cable.
List................$29.50

Model 605-20. With 18 ft. cable.
List................$31.50

Model 920 "Spherex" Crystal

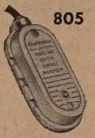


Fine quality all-direction pick-up for conferences, round table discussions, home recording and public address. Substantially flat frequency response, 60-7000 c.p.s. Output level −50 db. Omnidirectional polar pattern. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Lustrous Satin Chrome finish. ⅝"-27 thread. Diameter 2¼". Net wt., 8 oz.

Model 920-8. With 6 ft. cable.
List................$19.50

Model 920-20. With 18 ft. cable
List................$21.00

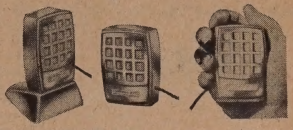
Model 805 Contact Microphone



For guitar, banjo, mandolin, violin or any vibrating musical instrument. Increases natural sound volume, enriches tonal effects. Response 40-8000 c.p.s. High impedance. Crystal sealed against moisture and acoustic feedback. Chromium finish. 15 ft. cable. Net wt. 2 oz.

List Price...........$16.50

Multi-Purpose CENTURY



Most popular microphone ever produced! Incomparable for all low-cost applications. Hundreds of thousands in use for public address, paging, recording, amateur communications. Can be used in any position—in hand, on table, on stand or overhead. Excellent frequency response. High output level. Essentially non-directional, becoming directive at higher frequencies. Highest purity pressure cast case finished in rich, durable Satin Chromium. Rugged, light weight. Size 3" x 2³⁄₁₆" x 1". Furnished with ⅝"-27 thread stand adapter.

Model 915 "Century" Crystal. High capacity, moisture sealed crystal. Smooth response 60-7500 c.p.s. Output −50 db. High impedance. AC-DC insulated. 7½ ft. cable. Net wt., 6 oz.

List Price........................$12.50

Model 915-S. Same with slide-to-talk switch.
List Price........................$14.00

Model 615 "Century" Dynamic. Has exclusive, long-lasting E-V *Acoustalloy* diaphragm. Withstands extreme temperature, humidity, corrosive effects of salt air, and severe mechanical shocks. Smooth response 55-7500 c.p.s. Output −55 db. High impedance. 7½ ft. cable. Net wt., 8 oz.

List Price........................$19.50

Model 415. Reclining Desk Stand. Mounts Century at 15° tilt. Gray-brown finish. Size 2⅝" x 2¾" x 1". Net wt., 4 oz.

List Price........................$1.50

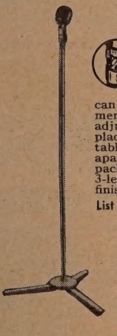
TV Distribution System

Model 3100 TV Distribution System. Provides complete isolation for 4 receivers. Can be used in multiple.

List Price........................$69.50

ELECTRO-VOICE FLOOR AND DESK STANDS

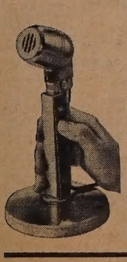
Model 425 Deluxe Floor Stand



Remarkably light in weight, yet very stable. Red button at top of shaft gives one-hand height control from 37" to 66". Locks automatically on release. Shaft can be rotated without any adjustment device. Unique locking-type adjustable legs permit stand to be placed flush against wall or speaker's table. Easy to assemble or take apart. Folds into small, compact package. Modern die-cast base. 3-leg spread 17". Satin Chromium finish. Net wt., 7½ lbs.

List Price...............$26.50

Touch-to-Talk Stand



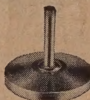
Fits *any* microphone with standard ⅝"-27 thread! Specially-designed, lever-type switch for relay operation or microphone "On-Off"—closes or opens instantly, or locks in "talk" position, with light finger-tip action. Gives easy *"Break-in"* operation in communications, public address, paging, dispatching. Switch is self-contained unit, easily removable from the round die-cast base. Single-pole double-throw. Stand finished in Satin Chromium. Gray plastic switch lever and red locking button.

Model 428. "Break-in" Touch-to-Talk Stand with switch. Ht., 7". Base diam., 5⅛". Net wt., 1¾ lb.

List Price...........$12.50

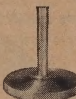
Model 328. Touch-to-Talk Switch only. Ht., 6¼". Net wt., 8 oz.

List Price...........$11.00



Model 423-A Desk Stand. Sturdy, smartly styled, round die-cast base, 5⅛" diam. Rests firmly. Rich Satin Chromium finish. Rubber base buttons. ⅝"-27 thread. Choice of 3" or 5" matching stem riser. Net wt., 1 lb.

List Price....................$4.00



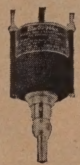
Model 427-A Desk Stand. Attractive, round die-cast base rests stably on desk or table. 5" stem riser. Satin Chrome finish. Standard ⅝"-27 thread. Base diam. 4⅝". Net wt., ⅝ lb.

List Price........................$3.25

Model 427. Same as 427-A but finished in lustrous gray-brown.

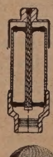
List Price....................$2.50

Low Impedance Microphone-to-Grid Matching Transformer



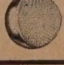
Model 502. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a high permeability shield inside a pressure cast case. Designed for mounting on amplifier chassis or in series with the microphone line. Designed for 50 and 250 ohm (500 ohms optional) microphones. Broadcast fidelity. Response 40-20,000 cps ±1 db, for speech or music. MC-4 input connector.

List Price.................$15.00



Model 345 Shock Mount. Dual-type external shock mount prevents reproduction of external shocks and stand vibrations. Permits tilting microphone head. ⅝"-27 thread. Easily attached or removed. Satin Chromium finish. Size 1½" x 3⅞". Net wt. 10 oz.

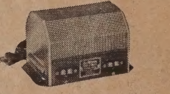
List Price..................$13.50



Model 335 Blast Filter. Acoustically treated, scientifically curved grille stops wind and breath blasts in dynamic microphones. Does not affect frequency response. Easily fits over head of E-V Models 630, 635 and 605 Microphones. Satin Chromium finish.

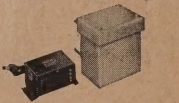
List Price...................$5.50

TV BOOSTERS



Model 3000 TUNE-O-MATIC. Completely automatic, self-tuning booster with uniformly high *usable* gain, for all TV channels. Turned "On" or "Off" by receiver switch—no separate manual tuning needed. Unique all-channel broad band circuit, with 4-stage amplification. Easily concealed. Just plug in between TV receiver and electric outlet. Assures *better* pictures, *better* sound. Uses four 6J6 RF tubes. Power consumption: 20 watts. Power source: 105-125 volts, 50-60 cycles, AC Input: 150-300 ohm twin lead. Output: 150-300 ohm twin lead. Size: 7¾" x 5½" x 4¾". Net weight: 4 lbs.

List Price..................$59.50



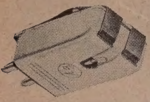
Model 3010 TENNA-TOP. Booster mounts on antenna mast. Minimizes local interference, noise and "snow" patterns. Junction box, installed at the set or concealed elsewhere, separates power voltage from signal voltage. Completely automatic, the booster employs two 2-stage amplifiers in self-tuning circuit. Booster similar to Model 3000 is turned "On" or "Off" by receiver switch. Gain is uniform throughout each channel. *Tenna-Top* will operate from any set using 105-125 volts, 60 cycles AC with power consumption between 100-500 watts. Combined net wt., 11 pounds.

List Price..................$89.50

No finer choice than Electro-Voice Phono Cartridges

CARTRIDGES FOR 78 R.P.M.

Model 12 Crystal. The most versatile 78 r.p.m. replacement. Replaces over 80% of cartridges in use. Medium voltage output is ideal for most phono combinations. Weighs 1/5 ounce. Tracks perfectly with less needle force. Ideal for "in stock" cartridges for general replacement. Output, 2 volts. Supplied with E-V Snap-In Holder and mounting hardware. For standard ½" hole centers, RCA 13/16" mounting or Webster-Electric side mounting cartridges.



Uses **O-3** Osmium or **S-3** Sapphire Needle

Model 12, with O-3 Osmium needle. List....$7.50

Model 12, with S-3 Sapphire needle. List...$8.50

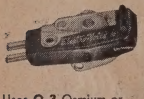
Model 32 Crystal. The 78 r.p.m. cartridge that provides the longest record life, lowest needle talk and greatest stylus life. Ideal for record enthusiasts with valuable libraries of 78 r.p.m. records. Frequency response comparable to wide range magnetics. Output 1 volt, useable in most radio-phono combinations. Standard ½" mounting. Uses E-V whisker-type needle.

Uses **O-3** Osmium or **S-3** Sapphire Needle

Model 32, with O-3 Osmium needle. List....$6.50

Model 32, with S-3 Sapphire needle. List...$7.50

Model 42 Ceramic. The Model 42 cartridge utilizes a ceramic generating element for complete moisture inhibition. Long-lasting in extremely hot, humid climates. Output is .8 volt. Inherently, ceramic elements have a lower output than crystal elements. Purchasers should be advised to turn set gain control to higher level than normally used with crystal cartridges. Mounting bracket of Model 42 drilled for mounting in tone arms with either ½" or ⅝" hole centers.



Uses **O-3** Osmium or **S-3** Sapphire Needle

Model 42, with O-3 Osmium needle. List....$6.50

Model 42, with S-3 Sapphire needle. List...$7.50

CARTRIDGES FOR 45 and 33⅓ R.P.M.

Model 14 Crystal. The E-V Model 14 cartridge gets *all* the music from the extended range fine groove records. Response follows professional standards . . . is free from peaks and distortion that mar wide range response. Range *guaranteed* 50 to 15,000 c.p.s. ± 2½ db. A truly high fidelity phono-cartridge that requires no expensive preamplifier or equalizer. Output, 1 volt. Uses E-V 1-mil, whisker-type needle.

Uses **O-1** Osmium or **S-1** Sapphire Needle

Model 14, with O-1 Osmium needle. List....$7.50

Model 14, with S-1 Sapphire needle. List....$8.50

Model 34 Crystal. The high compliance-to-voltage output ratio of this cartridge makes it a superb replacement for 45 and 33⅓ r.p.m. players. Reproduction is fuller yet needle tracks with whisker touch in record grooves. Records sound better and last longer. Output, 1.25 volts, slightly higher output than average fine groove cartridge. Mounting bracket has ½" and ⅝" hole centers. Makes ideal replacement in RCA-type "45" changers and in Columbia 33⅓ "LP" player. Uses E-V whisker-type 1-mil needle.

Uses **O-1** Osmium or **S-1** Sapphire Needle

Model 34, with O-1 Osmium needle. List.....$6.50

Model 34, with S-1 Sapphire needle. List....$7.50

Model 44 Ceramic. Model 44 utilizes a ceramic generating element for complete moisture inhibition. Makes an ideal, long lasting replacement in hot, humid climates. Output is .5 volt. Ceramic elements are inherently lower in output than crystal elements. Purchasers should be advised to turn volume control higher than normally used with crystal cartridges. Model 44 mounts in tone arms with either ½" or ⅝" hole centers.

Uses **O-1** Osmium or **S-1** Sapphire Needle

Model 44, with O-1 Osmium needle. List....$6.50

Model 44, with S-1 Sapphire needle. List...$7.50

CARTRIDGES FOR 78, 45, 33⅓ R.P.M.

Model 33 Crystal. Utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Simplifies operation of multi-speed changers. Tracks well in all grooves. 2.3 mil tip reduces record wear over other types of all-purpose needles. Output 1 volt on microgroove, 1.8 volts on 78 r.p.m. records. Mounting bracket has ½" hole spacing for wide adaptability and ease of installation. Uses E-V whisker-type 2.3 mil needle.

Model 33, with O-2 Osmium needle. List....$6.50

Model 33, with S-2 Sapphire needle. List...$7.50

Model 33-B. Exact replacement for Admiral Part No. 409A13-1 and 409A13-2 and Motorola Part No. 59B691907C and 59K691430. Has .05" terminal pins. **With O-2 Osmium needle. List........$6.50**

Uses **O-2** Osmium or **S-2** Sapphire Needle

Model 43 Ceramic. Model 43 utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Ceramic generating element assures complete moisture inhibition. Ideal replacement for multi-speed changers in hot, humid climates. Output is .5 to .8 volt. It is an inherent characteristic of ceramic elements to have a lower output than crystal elements. Purchasers should be advised to turn set volume control higher than normally used with crystal cartridges. Mounting bracket has two sets of mounting holes spaced at ½" and ⅝" centers for wide adaptability in installation.

Uses **O-2** Osmium or **S-2** Sapphire Needle

Model 43, with O-2 Osmium needle. List....$6.50

Model 43, with S-2 Sapphire needle. List....$7.50

Model 16-TT Crystal TWIN TILT. The Twin-Tilt Cartridge with a one-piece, twin-tip needle will play all types of records . . . 78, 45 and 33⅓ r.p.m. without weight change. The Model 16-TT is complete with Tilt mechanism. Merely tilt the selector handle to select the 1-mil or 3-mil needle tip . . . for slow or fast speed records. Output, 1-volt on each tip. Excellent for Webster-Chicago 356 changer cartridge replacement. With Osmium 3-mil tip and Sapphire 1-mil tip on single E-V silent, whisker-type styles.

Model 16-TT, List Price..................$10.00

Model 16. Cartridge only, without Tilt mechanism for exact replacement of units already installed.
List Price............................$9.00

Uses **O-13, SO-13** or **S-13** Twin Tip Needles

Model 96-T Crystal TURNOVER. Popular Turnover type cartridge with separate needles for fast and slow speed records. The two needles are completely isolated from one another allowing correct frequency response on each. "Free" needle does not cause distortion. Output, 1 volt on each needle, ample for all turnover replacements. Positive-acting turnover mechanism prevents needle set-down error. Turnover Cartridge, complete with 3-mil Osmium needle, O-3, and 1-mil Sapphire needle, S-1.

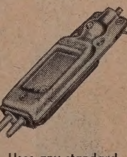
Model 96-T. List Price..................$10.00

Model 96. Same but without turnover harness for installation in existing mechanism.
List Price............................$9.00

Uses **O-1** or **S-1** and **O-3** or **S-3** Needles

WITHOUT NEEDLE

Model 50 and 60 Crystal. These Bimorph high-level cartridges are supplied without needles. They can use any standard 1-mil, 3-mil or all-purpose tip replacement needle. Output level with straight shank is 5 volts; with compliant needle, 3½ volts. Ideal replacement in record players with low gain amplifiers and in single-play phonographs.



Model 60, less needle, with lightweight, aluminum case. **List Price..................$5.50**

Model 50, less needle with heavier brass case.
List Price............................$4.50

For very high voltage output, E-V recommends Model H-60. Output 7 to 9 volts on 78 r.p.m. records. Similar to Model 60, but with unique crystal drive system.

Model H-60, less needle. **List Price.........$5.50**

Uses any standard replacement needle

ELECTRO-VOICE REPLACEMENT NEEDLES

MODEL	TYPE AND APPLICATION	LIST PRICE
O-3	Single-Tip .003" Osmium for Models 12, 32, 42, 96, 96-T	$1.50
S-3	Single-Tip .003" Sapphire for Models 12, 32, 42, 96, 96-T	2.50
O-2	Single-Tip .0023" Osmium for Models 33, 33-B, 43	1.50
S-2	Single-Tip .0023" Sapphire for Models 33, 33-B, 43	2.50
O-1	Single-Tip .001" Osmium for Models 14, 34, 44, 96, 96-T	1.50
S-1	Single-Tip .001" Sapphire for Models 14, 34, 44, 96, 96-T	2.50
SO-13	Twin-Tip .001" Sapphire-.003" Osmium for Models 16 & 16-TT	3.00
O-13	Twin-Tip .001" Osmium-.003" Osmium for Models 16 & 16-TT	2.50
S-13	Twin-Tip .001" Sapphire-.003" Sapphire for Models 16 & 16-TT	3.50

Model 10 (not listed here) takes same needle as Models 12, 14 or 16.
Model 30 (not listed here) takes same needle as Models 32, 33 or 34.

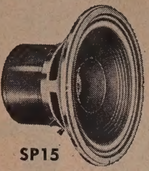
Electro-Voice High Fidelity Speakers and Systems

RADAX SPEAKERS

SP8-B

SP12-B

SP12


SP15

New, modern concepts in 2, 3 and 4-way high fidelity speaker systems bring true *Dynamic Realism* within reach of all! Unique new *E-V RADAX* principle of high-frequency propagation and dispersion . . . heavier "pound rated" magnets for more driving power and generous distortion damping factors . . . separate 2, 3 and 4-way reproducing systems for the home . . . acoustically-correct Klipsch licensed* folded corner horn speaker enclosures with authentic furniture styling . . . these and other E-V exclusives create a totally new experience in the enjoyment of sound reproduction!

Discovery of the *E-V RADAX* Principle provides an *economical* and *super-efficient* method of utilizing two disparate coaxially mounted cones to divide the audio spectrum . . . while both operate from only a single voice coil. *Built-in* mechanical crossover from the low-frequency cone to the high-frequency propagator ("*Whizzer*") permits design of each cone for optimum response. This provides a true coaxial two-way speaker system that assures clean, sparkling wide-range reproduction.

Frames are extra sturdy. Voice coil is formed of edgewise wound aluminum ribbon. Both speaker cones are moisture inhibited.

Model SP8-B. Radax Super-Eight. 8-inch coaxial speaker. 15-20 watts. Response 120-13,000 c.p.s. ±7 db. 8 ohms impedance. Crossover, 6000 c.p.s. 1½ lb. Alnico V magnet. 8¼″ diam., 7″ baffle opening, 5⅛″ depth behind mtg. panel. Wt., net 6¾ lbs., shpg. 7½ lbs.

List Price $42.50

Model SP12-B. Radax Twelve. 12-inch coaxial speaker. 15-20 watts. Response 75-13,000 c.p.s. ±6 db. 8 ohms impedance. Crossover, 4500 c.p.s. 1½ lb. Alnico V magnet. 12⅛″ diam., 11″ baffle opening, 6⅜″ depth behind mtg. panel. Wt., net 7 lbs., shpg. 7¾ lbs.

List Price $45.00

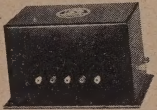
Model SP12. Radax Super-Twelve. 12-inch coaxial speaker. 25 watts. Response 70-13,000 c.p.s. ±5 db. 8 ohms impedance. Crossover, 4000 c.p.s. 3 lb. Alnico V magnet. 12½″ diam., 11″ baffle opening, 7½″ depth behind mtg. panel. Wt., net 27 lbs., shpg. 30 lbs.

List Price $90.00

Model SP15. Radax Super-Fifteen. 15-inch coaxial speaker. 30 watts. Response 70-13,000 c.p.s. ±5 db. 12 ohms impedance. Crossover, 3000 c.p.s. 5¼ lb. Alnico V magnet. 15⅛″ diam., 13½″ baffle opening, 8⅞″ depth behind mtg. panel. Wt., net 33 lbs., shpg. 36 lbs.

List Price $120.00

CROSSOVERS



All E-V Crossovers use high Q air cored coils. Insertion loss less than ½ db, phase rotation 270° (135° in X-35). Non-metallic containers eliminate distortion with varying load and frequency. Attenuation 12 db per octave.

Model X-35. Crossover. Full M-derived ¼ section. 3 db loss point, 3500 c.p.s. Impedance: input 16 ohms, output 12 ohms. 5″ x 7″ x 2″. Wt., net 2 lbs., shpg., 3 lbs. **List Price . $20.00**

Model X-8. Crossover. Full ½ section, M-derived. 3 db loss point, 800 c.p.s. Impedances: 16 ohms. 8″ x 5½″ x 4½″. Wt., net 10 lbs. shpg., 12 lbs. **List Price $50.00**

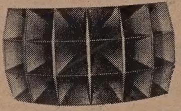
Model X-6. Crossover. Full, M-derived ½ section. 3 db loss point, 600 c.p.s. Impedances: 16 ohms. 9″ x 6″ x 5″. Wt., net 12 lbs., shpg., 14 lbs. **List Price $60.00**

Model X-4. Crossover. Full, M-derived ½ section. 3 db loss point, 400 c.p.s. Impedances: 16 ohms. 9½″ x 8″ x 6″. Wt., net 15 lbs., shpg., 17 lbs. **List Price $75.00**

Model X-2635. 4-Way Crossover. Full M-derived half sections. 3 db loss points, 200, 600 and 3500 c.p.s. Impedances: 16 ohms, 11½″ x 8″ x 7½″. Wt., net 19 lbs., shpg., 21 lbs.

List Price $110.00

H. F. HORNS



Each cell of E-V horns is truly exponential permitting full range spherical wave shape. Individual cell intercepts solid angle of 20°. Horns operate one full octave below recommended crossover point without serious unloading.

Model 8-1x4 Horn. 800 cycle. 20° x 40°. 4″ h, 15″ w, 12½″ d. Wt., net 12 lbs., shpg., 15 lbs. Takes T-25 driver. **List Price $40.00**

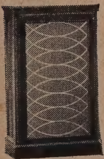
Model 8-2x4 Horn. 800 cycle. 40° x 80°. 8″ h, 15″ w, 12½″ d. Wt., net 20 lbs., shpg., 24 lbs. Takes T-25 driver. **List Price $55.00**

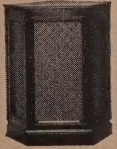
Model 8-2x6 Horn. 800 cycle. 40° x 120°. 8″ h, 18″ w, 12½″ d. Wt., net 25 lbs., shpg., 29 lbs. Takes T-25 driver. **List Price $75.00**

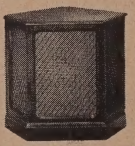
Model 6-2x5 Horn. 600 cycle. 40° x 100°. 11″ h, 21″ w, 15″ d. Wt., net 35 lbs., shpg., 40 lbs. Takes T-40 driver. **List Price $120.00**

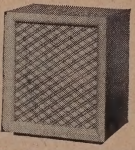
Model 4-2x5 Horn. 400 cycle. 40° x 100°. 18″ h, 38″ w, 31″ d. Wt., net 75 lbs., shpg., 100 lbs. Takes T-40 driver. **List Price $180.00**

Model 4-3x6 Horn. 400 cycle. 60° x 120°. 28″ h, 43″ w, 34″ d. Wt., net 100 lbs., shpg., 130 lbs. Takes T-40 driver. **List Price $300.00**


The PATRICIAN


The REGAL


The MARQUIS


The CONTEMPORARY

The PATRICIAN Folded Corner Horn Speaker Enclosure. Utilizes separate 4-way Speaker System for highest fidelity reproduction. Authentic styling, selected woods, exquisite hand-rubbed mahogany finish. 60″ high, 41″ wide, 30″ deep. Wt., net 210 lbs., shpg. 285 lbs.

List Price $550.00

The REGAL Folded Corner Horn Speaker Enclosure. For separate, super-efficient 2-way speaker system. Authentically styled in beautiful French Provincial. Hand-rubbed mahogany finish. 42″ high, 33″ wide, 28″ deep. Wt., net 78 lbs., shpg. 108 lbs.

List Price $265.00

The PERIOD Speaker Enclosure. (*Not illustrated*) Conventional bass-phase-inverted-reflex enclosure for separate 2-way or 3-way reproducing systems. Superbly styled mahogany or bleached blonde finish. 36″ high, 31″ wide, 19″ deep. Wt., net 70 lbs., shpg. 100 lbs.

List Price $230.00

The CONTEMPORARY Speaker Enclosure. Created for mounting a variety of separate 2-way system components. Functional modern design in rich mahogany or bleached blonde finish. 31¾″ high, 26″ wide, 18″ deep. Wt., net 53 lbs., shpg. 70 lbs.

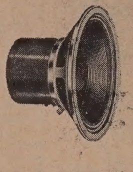
List Price $200.00

The MARQUIS Folded Corner Horn Speaker Enclosure. For 2-way speaker system. Offers, at modest cost, all the advantages of superior bass reinforcement. Warm mahogany finish. 31″ high, 33″ wide, 28″ deep. Wt., net 60 lbs., shpg. 77 lbs.

List Price $225.00

Audio enthusiasts can easily make their own 2-way, 3-way or 4-way systems with E-V individual low-frequency and high frequency reproducers, horns, crossover networks, and enclosures. Utility model enclosures also available for industrial, public address and other general-purpose use.

LOW FREQUENCY DRIVERS

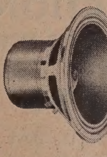


Model 12W. 12-inch L. F. Driver. Resonance 57 c.p.s. 3 lb. Alnico V magnet. 15-20 watts. 16 ohms impedance. 12⅛″ diam., 11″ max. baffle opening, 7″ depth behind mounting panel. Wt., net 27 lbs., shpg. 30 lbs.

List Price $90.00

Model 12W-1. Same as 12W but with 8 ohms impedance.

Model 12WK. 3.2 ohms DC (for Klipsch baffles only).

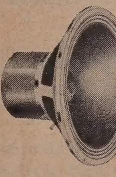


Model 15W. 15-inch L. F. Driver. Resonance 37 c.p.s. 5¼ lb. Alnico V magnet. 20-30 watts. 16 ohms impedance. 15⅛″ diam., 13½″ max. baffle opening. 9″ depth behind mounting panel. Wt., net 32 lbs., shpg. 35 lbs.

List Price $120.00

Model 15W-2. Same as 15W but with 8 ohms impedance.

Model 15WK. 3.2 ohms DC, 32 c.p.s. resonance (for Klipsch baffles only).



Model 18W. 18-inch L. F. Driver. Resonance 27-30 c.p.s. 5¼ lb. Alnico V magnet. 2030-watts. 16 ohms impedance. 18¼″ diam., 16½″ max. baffle opening, 10″ depth behind mounting panel. Wt., net 35 lbs., shpg. 39 lbs.

List Price $135.00

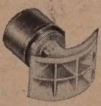
Model 18W-2. Same as 18W but with 8 ohms impedance.

Model 18WK. 3.2 ohms DC, 22-24 c.p.s. resonance (for Klipsch baffles only).

HIGH FREQUENCY DRIVERS

Model SP8-B-T Tweeter. 15-20 watts. Frequency range ±7 db to 13,000 c.p.s. 8 ohms impedance. 1½ lb. Alnico V magnet. 8¼″ diam., 7″ baffle opening, 5⅛″ behind mtg. panel. Wt. net 6¾ lbs., shpg. 7½ lbs.

List Price $42.50



Model T-10. Super H-F Driver. 10-25 watts. Response, ±5 db. 2000-20,000 c.p.s. Impedance 12 ohms. (8 or 16 ohms optional). Includes 8-cell horn. Dispersion 40° x 80°. 9½″ long x 7″ high. Throat diam. 1″. Recommended crossover 3500 c.p.s. Wt., net 8 lbs., shpg. 10 lbs.

List Price $75.00

Model T-25. H-F Driver. 10-25 watts. Response ±5 db 500-13,000 c.p.s. Impedance 16 ohms. 1¾ lb. Alnico V magnet. 5″ diam., 6″ deep. Throat diam. 1″. Wt., net 12 lbs., shpg. 15 lbs.

List Price $90.00

Model T-40. H-F Driver. 40 watts. response ±5 db 200-13,000 c.p.s. 16 ohms impedance. 7″ deep, 8″ diam. Throat diam. 1¼″. Wt., net 27 lbs., shpg. 30 lbs.

List Price $180.00

The ARISTOCRAT. Folded Corner Horn Speaker Enclosure, with direct front radiation of high frequencies for 12″ full range driver. Gives at least 1 full octave of added bass range at full efficiency. Klipsch licensed*. Mahogany finish. 29½″ high, 19″ wide, 16½″ deep. Wt., net 44 lbs., shpg. 55 lbs.

List Price $99.50

Same in Bleached Blonde finish.

List Price $106.00

*Klipsch licensed. Pat. No. 2310243 and No. 2373692.

VELOCITY **AMPERITE** MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

The Finest Cardioid Dynamic!

P.G.
PRESSURE GRADIENT
DYNAMIC

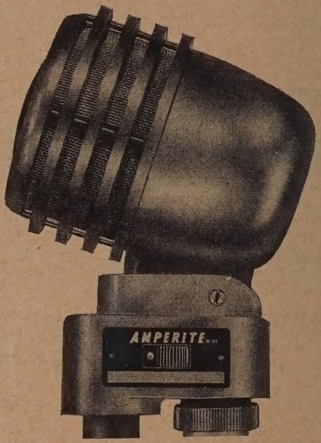
You can actually hear the difference!

•UNI-DIRECTIONAL
NEW SUPERIOR ELIPSOID PICKUP PATTERN

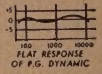
•ELIMINATES FEEDBACK
TROUBLE BECAUSE IT HAS LOWEST FEED BACK POINT OF ALL DIAPHRAGM TYPE MICROPHONES

•FLAT RESPONSE. FREE FROM ANNOYING PEAKS, GIVING STUDIO QUALITY REPRODUCTION

The P.G. diaphragm follows air particle velocity where amplitude is a **GRADIENT** of the **PRESSURE.** In ordinary dynamics amplitude is restricted from following air particle velocity. The **P.G. DYNAMIC** is a radical improvement in this type of microphone. You can actually hear the difference. Case is designed according to modern acoustic principles. Rugged, not affected by temperature, altitude or humidity. **Has unusually high output.**



ELIPSOID PICKUP PATTERN



FLAT RESPONSE OF P.G. DYNAMIC

Model PGH —hi-imp. } **$32.00**
Model PGL —50 ohms } **List**

Output	—55 db
Freq. Resp.	40-10000 CPS
Cable Length	25 ft.
Finish	Chrome
Switch	Yes
Cable Connector	Yes
Stand Thread	⅝-27
Ship. Wt.	2½ lbs.

PLASTIC BAFFLE FOR P.G. DYNAMIC
Increases output of the microphone 4 db. Especially useful when performer is at distance of 12″ or more. Excellent for picking up entire stage, bands, etc. Snaps into place.
Model PG.....List $1.50

Model PGAH —hi-imp. } **$25.00**
Model PGAL —50 ohms } **List**

Output	—60 db
Freq. Resp.	70-8000 CPS
Cable Length	12 ft.
Finish	Chrome
Switch	Yes
Cable Connector	Yes
Stand Thread	⅝-27
Ship. Wt.	2½ lbs.

AMPERITE MICROPHONE STANDS—SPECIFICATIONS

Model	Description	Base Wt.	Base Spread	Height Range.	Thread	List Gunmetal or Chrome	Ship. Wt.
DS-M	Comb. Desk & Banquet	6 lb.	7½″	16″–24″	⅝-27″	$12.00	11 lb.
DS	Desk only	6 lb.	7½″	3″	⅝-27″ & ½″ P.	6.00	11 lb.

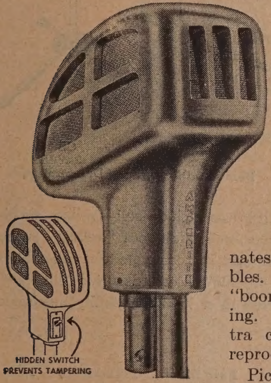
VELOCITY **AMPERITE** MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

New AMPERITE STUDIO "Ribbon" MICROPHONE

MODELS R80H-R80L

A "Blastproof Velocity" Eliminates Feedback Troubles



The Finest in Microphones regardless of Price

Reproduction is of the very highest type. Excellent for broadcasting, recording and public address. Eliminates feedback troubles. Will not become "boomy" on close talking. An entire orchestra can be faithfully reproduced.

Pick-up angle 120° front and back with practically no frequency discrimination. In spite of the wide pick-up angle, feedback is reduced to a minimum.

Not affected by temperature, altitude or humidity. Will operate under any climatic conditions—indoors or outdoors. Not affected by wind.

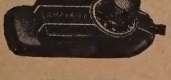
Frequency range 40-14,000 cps. Output —56 db. Complete with switch (optional), cable connector and 25′ cable. Finish—Chrome. Stand. thread, Standard ⅝″-27.

Model	List
R80L—200 ohms output	$80.00
R80H—High impedance	80.00

50 ohms available. Shipping Weight 10 lbs.

AMPERITE KONTAK MIKE FOR MUSICAL INSTRUMENTS

(Model SKH)



(Model KKH)

Gives natural reinforcement without peaks. Easily attached without tools. Will operate with either low or high-gain amplifiers. Frequency response 40 to 9000 cps. Output, —40 db.

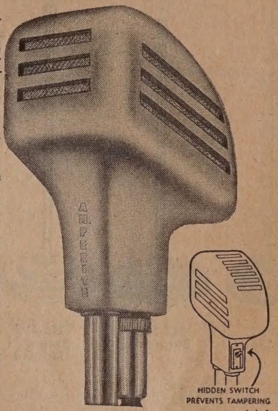
Shipping Weight 2 lbs.

Model SKH—Hi-impedance	List $12.00
Model KKH—With Hand Volume Control	List 18.00
Model KF —Foot Pedal Only	List 18.00

Low impedance available in model SKH at same price.

New "RIBBON" MICROPHONE, RBHG—RBLG

Automatically Adjusted for Close or Distant Pick-Up
A "Blastproof" Velocity



Studio reproduction — low feedback. A "ribbon" microphone that brings broadcast quality within everyone's reach. **Perfectly natural reproduction on close talking—you can even shout into it.** Will also faithfully reproduce an entire orchestra.

Pick up angle front and back—120° with practically no frequency discrimination. In spite of wide pick-up angle—feedback is reduced to an absolute minimum. Low feed back is due to flat response of the microphone.

Excellent for studio—P. A. or recording. Not affected by temperature, altitude or humidity. Can be used under all climatic conditions, and will withstand rough handling. Not affected by wind.

Frequency range 50-11,000 cps. Output —62 db. Complete with switch, cable connector, and 25′ cable. Finish — Chrome. Stand thread—Standard ⅝″—27.

	List
Model RBHG—High impedance	$42.00
Model RBLG—200 ohms output	42.00

50 ohms available. Shipping Weight 8 lbs.

COMPACT VELOCITY, ACH—ACL

The smallest complete velocity ever made

Compact—yet a complete Amperite "Ribbon" Microphone including transformer, switch and cable connector. Recommended wherever a compact microphone is a necessity. Can be used either as a hand microphone or on a stand. Frequency range 120 to 8,000 cps. Output —65 db.

Complete with switch—cable connector—12′ cable. Stand thread—Standard ⅝″-27.

	List
Model ACH—High impedance	$32.00
Model ACL—200 ohms output	32.00

50 ohms available

Shipping Weight 5 lbs.

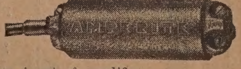
Amperite 7JH—7JL VELOCITY MICROPHONE "Lapel" Type

Reproduction is so perfect—you can hardly tell a microphone is working. Free from annoying peaks or mechanical reproduction. Output does not change with any position of the head. It can be concealed in clothing. Will operate under all climatic conditions. Unusually low feedback. Frequency range 60-7,000 cps. Output: —63 db. Cable length 25′. Rubber case.

Model 7JH—High impedance	List $32.00
Model 7JL—200 ohms output	List 32.00

50 ohms available. Shipping Weight 3 lbs.

Model LGP—Input Transformer (Cable Type)



Enables the use of low impedance microphones and cable lengths up to 5,000′ with amplifiers having high impedance input. Special shielding eliminates hum pick-up. Can be used with 25, 50, or 200 ohm microphones. Output connects directly into high impedance input of amplifier.

Standard grade recommended for speech. Laboratory grade for music.

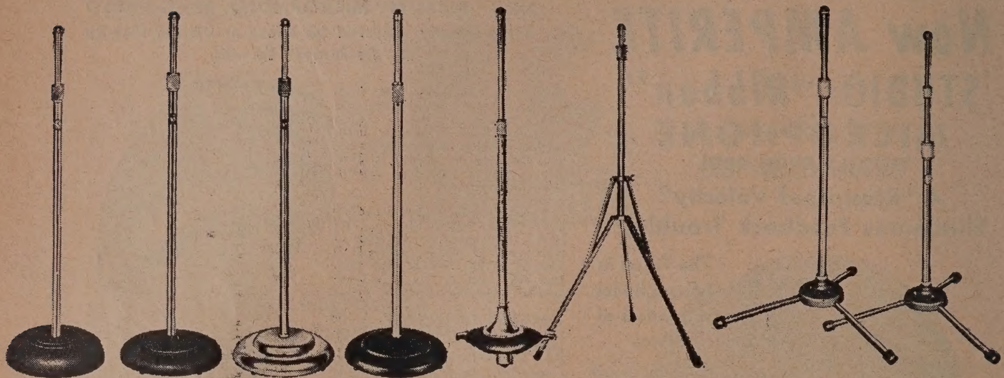
Model LGP—Lab—40 to 14,000 cps.	List 10.00

Shipping Weight 3 lbs.

ATLAS SOUND CORPORATION

"FULL GRIP — VELVET ACTION" Microphone Stands

No slipping - No rattle - No noise - No scratching - No wear



MS-10C **Leader**	**MS-12C** **Standard**	**MS-11C** **Standard DeLuxe**	**MS-20** **Professional**	**MS-24** **Studio DeLuxe**	**CS-1** **Collapsible**	**CS-32** **2-piece Demountable**	**CS-33** **3-piece Demountable**

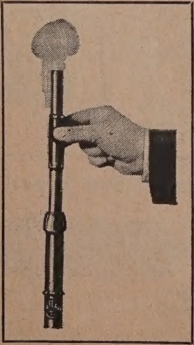
The "Full Grip" Clutch offers an extended length clutch body, permitting a secure, full-hand grip. The clutch mechanism is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping, or sudden dropping. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated weight is most useful. All bases include self-leveling, shock-absorbent base pads, plus three additional "anti-tip" points located between the base pads. The complete tube assemblies of all models are "super-chrome" plated, assuring "life-time" wear. All models terminate in a ⅝"-27 carefully machined thread.

MODEL	Weight	Base Finish	Tube Finish	Height Adjst.	Base Diam.	LIST PRICE
MS-10C	9 lbs.	Gray Shrivel	Full Chrome	35" to 64"	10"	$10.00
MS-12C	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	10.75
MS-11C	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	13.00
†MS-20	15 lbs.	Gray Shrivel	Full Chrome	42" to 72"	12"	15.50
†MS-24	24 lbs.	Chrome & Gray Shrivel	Full Chrome	42" to 72"	17"	21.50
§CS-1	5 lbs.	Cadmium Plated	Full Chrome	23" to 62"	Collapsible	18.75
*CS-32	4 lbs.	Chrome & Gray	Full Chrome	36" to 64"	Demountable	10.25
*CS-33	3 lbs.	Hammerloid	Full Chrome	26" to 64"	Demountable	11.75

*Each stand is individually packed complete in a single carton.

†The MS-20 and MS-24 use large diameter, oversize, telescoping brass tube assemblies (⅞" telescoping tube — 1⅛" base tube) resulting in a handsome and fine-appearing stand that supplements the professional appearance of large-size high quality microphones.

§Collapsible to a minimum overall length of 23 inches.



NEW AUTOMATIC "Sleeve Action" MICROPHONE STAND

Quiet . . . No Rasp . . . Smooth . . . No Jolt or Jar

This amazing new automatic "Sleeve Action" clutch mechanism is a fully automatic means of adjusting the height of a microphone stand. A slight downward pressure on the "Sleeve Action" control permits the telescoping section to be lowered. To raise the stand, the telescoping tube can be grasped at any point and simply extended. The new "Sleeve Action" is built for life-time use. It cannot creep or change position without a deliberate pressure on the actuating sleeve control.

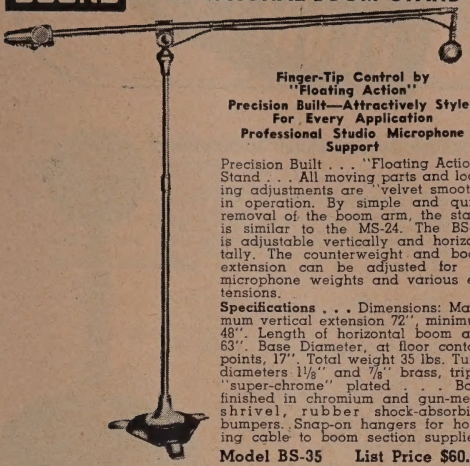
The quality of materials, plating, and general specifications are identical to the "Full Grip" models described above. The "Sleeve Action" stand is available in two models; either full chrome or shrivel base.

MODEL	Weight	Base Finish	Tube Finish	Height Adjst.	Base Diam.	LIST PRICE
MS-12S	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	$17.75
MS-11S	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	20.00

***NOTE SLEEVE ACTION MODELS TEMPORARILY DISCONTINUED**

ATLAS SOUND CORPORATION

PROFESSIONAL BOOM STAND



Finger-Tip Control by "Floating Action"
Precision Built—Attractively Styled For Every Application
Professional Studio Microphone Support

Precision Built . . . "Floating Action" Stand . . . All moving parts and locking adjustments are "velvet smooth" in operation. By simple and quick removal of the boom arm, the stand is similar to the MS-24. The BS-35 is adjustable vertically and horizontally. The counterweight and boom extension can be adjusted for all microphone weights and various extensions.

Specifications . . . Dimensions: Maximum vertical extension 72", minimum 48". Length of horizontal boom arm 63". Base Diameter, at floor contact points, 17". Total weight 35 lbs. Tube diameters 1 1/8" and 7/8" brass, triple "super-chrome" plated . . . Base finished in chromium and gun-metal shrivel, rubber shock-absorbing bumpers. Snap-on hangers for holding cable to boom section supplied.

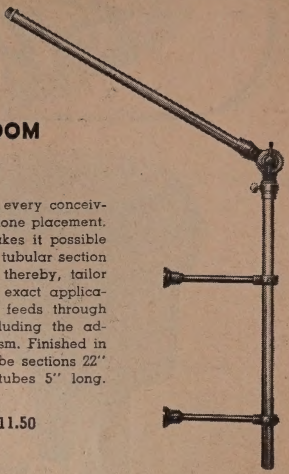
Model BS-35 List Price $60.00

MICROPHONE ADAPTORS AND FITTINGS

MODEL	Description	LIST PRICE
AD-1	5/8"-27 female to 1/2" pipe thread male (RCA Adapter)	$0.85
AD-2	1/8" pipe female to 5/8"-27 male	.60
AD-3	1/8" pipe female to 5/8"-27 female	.60
AD-4	3/4" long, 5/8'-27 male running thread	.30
AD-5	5/855-27 female to 5/8"-27 female coupling	.60
AD-6	7/8"-27 female to 7/8"-27 female coupling	.60
AD-7	3" long tube 5/8"-27 male each end	.60
AD-8	6" long tube 5/8"-27 male each end	.70
AD-9	7/8"-27 female to 5/8"-27 female	.60
AD-10	5/8"-27 female to 5/8"-27 female (W. E. Adaptor)	1.20
AD-11	Flange, 5/8-27" female. Base Diameter 1 1/4"	.70
AD-12	Flange, 5/8"-27 male. Base holes on 7/8" mounting centers	.70

All adaptors chrome plated.
We are prepared to supply any special types of adaptors or fittings, and bent tube sections, to your specifications in reasonable quantities.

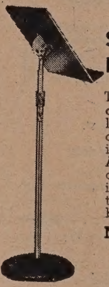
MODEL US-1 BOOM BRACKET KIT



Will answer practically every conceivable problem of microphone placement. Set Screw assembly makes it possible to simply cut down any tubular section to any dimension and, thereby, tailor the bracket to suit the exact application. Microphone cable feeds through entire support arm including the adjustable elbow mechanism. Finished in bronze enamel. Main tube sections 22" long, support bracket tubes 5" long.

List Price $11.50

SPEAKER'S or ORCHESTRA DESK ATTACHMENT



This desk attachment can be applied to any type of microphone stand. This is an item which has long been required in many permanent as well as rental installations. It offers the speaker facilities for holding notes or other reference material. A microphone can be directly attached to the desk by using the BC-1 Bracket Clamp. The DA-1 is complete with 5/8"-27 thread attachment and tilt-adjustment. Sturdy construction, finished in bright aluminum.

Model DA-1 (less floorstand) **List Price $10.00**

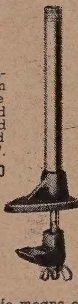
MODEL DA-1 (shown with MS-20 floor stand)

ADJUSTABLE BANQUET STAND

This stand incorporates the "Full Grip-Velvet Action" principle of adjustment. The tube and base are completely finished in "super chrome" offering a fine appearing stand suitable for use on a banquet table. Adjustable from 18" to 32". Base diameter 8"; Weight 5 lbs.

Model TS-6 List Price $9.00

BRACKET CLAMP



A multitude of useful applications. Can be used with Boom Arm, Goose Neck, etc. Chrome tube 6" long. Castings finished in gray shrivel. Can be clamped or permanently screwed or bolted in position. Thread size 5/8"-27.

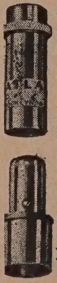
Model BC-1 List Price $3.50

FLEXIBLE GOOSE NECK

Can be attached to any microphone stand so that some amount of overhang can be accomplished. Ends have 5/8"-27 male and female threads. Finished in bright chrome. Length 13".

Model GN-13 List Price $2.75

"SNAP-ON" MICROPHONE ATTACHMENT



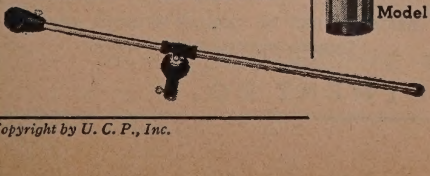
A quick, simple, and safe means of attaching any microphone to any floor stand. Eliminates the need of threading the microphone on and off the stand. A two-section "Snap-On" ball bearing spring sleeve attachment permits the microphone to be attached or removed instantaneously. One section is attached to the microphone and one section permanently fastened to the stand.

Model SO-1 List Price $2.75

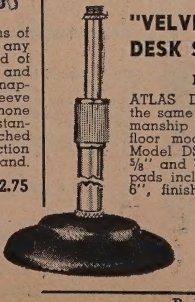
"BABY BOOM" ATTACHMENT

Easily attached to any type of microphone stand. Can be locked in any position. Length of tube 32", chrome plated; castings in gray shrivel. 5/8"-27 thread size.

Model BB-1 List Price $7.50



"VELVET ACTION" DESK STANDS

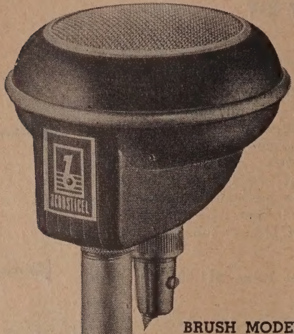


MODEL DS-7

ATLAS Desk Stands employ the same fine finish and workmanship as embodied in the floor models. The adjustable Model DS-7 uses heavy duty 5/8" and 7/8" tubing. Felt base pads included. Base diameter 6", finish gray shrivel; tube chromium plated.

Model	Height Adj.	List Price
DS-5	Fixed 6"	$3.00
DS-7	8" to 13"	5.00

Brush CRYSTAL PRODUCTS



BRUSH MODEL BA-109 MICROPHONE

The Brush Model BA-109 microphone using the improved Acoustical* was created for public address, home recording and amateur applications. The "Metalseal" * crystal insures long life and reliability. Styled in rich maroon plastic and brushed chrome in compliance with the recent trend in industrial design.

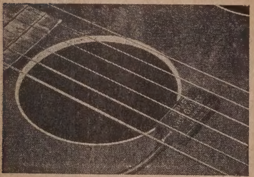
- ✓ Response from 40 to 10,000 cps.
- ✓ Output Level 54 db. below 1 volt/dyne cm².
- ✓ Non-directional.
- ✓ High Impedance equivalent to approximately .002 mfd. (1.8 meg. ohms at 1,000 cycles.)

The microphone is designed for use with standard 5/8" 27 thread microphone stand.

List Price **$22.50**

*Trade Mark Shipping Wt. 1 lb.

BRUSH MODEL "VM-1" "VIBROMIKE"



The VM-1 or "Vibromike" is a miniature CONTACT-TYPE microphone with high sensitivity and unusually wide-range frequency response (30 to 6,000 cps.). Output voltage from .05 to .1 volt or higher. Size of microphone 7/8" x 3/4" x 5/8".

Designed for a broad field of reproduction applications through direct contact. Adaptable to musical instruments, industrial uses—detecting mechanical vibrations. Hermetically sealed in black rubber covered case.

Microphone complete with mounting clamp and 25' of cable.

List Price **$19.50**

BRUSH MODEL "BL-2" LAPEL MICROPHONE

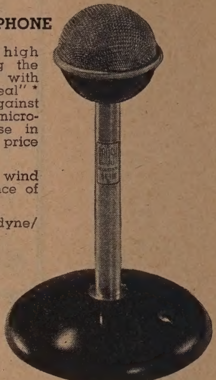
The improved Model BL-2 lapel microphone features virtually flat response. Output level 57 db. below 1 volt/dyne cm². Small and rugged (1½" x 2¼") the BL-2 can be used in hand or as instrument pickup as well as in lapel.

Microphone complete with 25' of cable.

List Price **$25.00**

Net Wt. 8 oz. Shpg. Wt. 2 lbs.

BRUSH MODEL BA-106 MICROPHONE



The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed "Acousticel" * with Sintered bronze damping. "Metalseal" * crystal is used for protection against conditions of high humidity. This microphone offers unexcelled response in microphones of this type and price range.

Vibration, shock or low frequency wind noise do not affect the performance of this microphone.

Output level 50 db. below 1 volt/dyne/cm².

Flat from 40 to 6,000 cps. Unexcelled for home recording, public address systems, ham shacks, monitoring and institutional and industrial applications.

Net Wt. 1¼ lbs.
Shipping Wt. 3¼ lbs.

List Price **$19.75**

BRUSH MODEL BA-116 MICROPHONE

The Brush Model BA-116 microphone features rugged dependability and uniform frequency response. Because of its quality features, this microphone is unexcelled in its price range for home recording, amateur, public address, institutional and industrial paging applications.

The microphone's "Metalseal" * cartridge insures long life and reliability. It's shock mounted for protection against microphone stand and other mechanical noises.

Styled in brown hammered metallic finish and designed for desk or hand use without need of a stand. A standard 5/8" 27 thread is incorporated for floor stand use.

Net Wt. 1 lb. 4 oz. Shipping Wt. 1 lb. 8 oz.

Frequency Response	Output	Cable	List Price
50 to 6,000 cps.	53 db. below 1 volt/dyne/cm²	8'	**$14.75**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request
* Trade Mark. Reg. U. S. Pat. Off.

THE BRUSH DEVELOPMENT CO.

Brush CRYSTAL PRODUCTS

Brush crystal phones possess the following outstanding features:

1. **BIMORPH* crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.**
2. **Wider range response with more uniform output.**
3. **Compensation for ear coupling.**
4. **Light-weight, rugged, shock-proof construction.**

HIGH FIDELITY MODEL "A-1"

For use where HIGH FIDELITY and extended frequency response are of paramount importance. (60 to 10,000 cps. Corrected for rising response below 200 cps.) Especially suited to monitoring, sound measurement, audiometry, and similar exacting headphone applications. Sensitivity approx. 1.5 bars per volt at 1,000 cps. Impedance over 80,000 ohms at any frequency within audio range. Headset complete with 5′ cord and headband.

List Price $18.00
Net Wt. 6 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" LORGNETTE PHONE

The "A" lorgnette phone is designed for use in group hearing aid sound systems installed in churches, concert halls, theatres and auditoriums. Telescope extension from 12" to 17". Attractively finished in satin black. Light weight, easy to handle, and comfortable at the ear.

Single phone complete with 5′ cord and lorgnette handle.

List Price $9.75
Net Wt. 5 oz. Shipping Wt. 1 lb.

MODEL "BA-303" HUSHATONE*

A miniature, molded plastic extension speaker for under pillow use. Disc shaped (4$\frac{3}{16}$" dia. by 1$\frac{1}{16}$" thick). Makes no uncomfortable lump beneath the pillow. Tone quality comparable to cone type speaker because of specially engineered response. Speaker gives ample output with low power consumption (.001 watt). Hermetically sealed, can be dipped into disinfecting solution (temperature not above 120°F). Light weight BIMORPH* crystal drive element insures uniform response and high sensitivity. No parts to wear, loosen, or become detached. Furnished in maroon with satin chrome trim. HUSHATONE* with 10′ cord.

Fair Trade Retail Price $9.75
Net Wt. 8 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" GENERAL PURPOSE

Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. The BIMORPH* crystal drive element insures wide ranges response (100 to 8,000 cps. and high sensitivity. High impedance; ideal for multiple installations.

Headset complete with 5′ cord and adjustable headband.

List Price $12.00
Net Wt. 6 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" SINGLE PHONE

Particularly adapted to individual or group hearing aid and radio applications. Light weight, good ear seal, and comfortable to wear. Spring steel headband with soft rubber cushion to eliminate slipping.

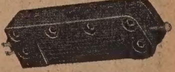
Single phone complete with 5′ cord and headband.

List Price $6.45
Net Wt. 3 oz. Shipping Wt. 1 lb.

BRUSH MODEL "RC-20" CRYSTAL CUTTER

The Brush RC-20 Crystal Cutter has been designed to satisfy the demand for high quality, low cost recordings in the home, school and studio. Due to its inherent stiffness, the RC-20 will cut lateral type records in virtually all hard or soft disc materials. Being of simple and compact design, it is readily adaptable to all types of transcription equipment. A three watt amplifier is sufficient to satisfactorily drive the RC-20 cutter frequency response — flat within plus or minus 3 db. from 50 to 9 000 cps.

Cuts "Constant Amplitude" without equalization, and "Constant Velocity" or other desired frequency characteristics with suitable equalization. Complete technical data sent on request. Cutter (less stylus).



List Price $25.00
Net Wt. 4 oz. Shipping Wt. 2 lbs.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request

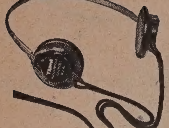
*Trade Mark Reg. U. S. Pat. Off.

THE BRUSH DEVELOPMENT CO.

—TRIMM—

HEADSETS AND ACCESSORIES

FEATHERWEIGHT



The world-famous TRIMM FEATHERWEIGHT headset. Weight: 4½ oz. complete with two units, 5-ft moisture-proof cord. Bakelite shell and cap. A custom-built phone throughout. Available in all standard ohmages.

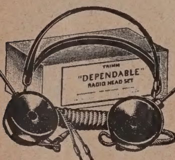
24,000-OHM IMP. SPECIAL for amateurs

No. 106—Double, adjustable nickel-plated headband	$11.00
No. 107—Double, fabric-covered wire headband	11.00

STANDARD FEATHERWEIGHT HEADSETS are available in 3, 76, 220, 500, 2M, 4M and 5M ohms d.c. resistance (Impedance approximately 5 times greater).

No. 100—Double, adjustable nickel-plated headband	$11.00
No. 104—Double, fabric-covered wire headband	11.00

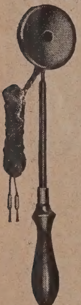
DEPENDABLE



When a high grade headset is desired, but price must be considered, choose the DEPENDABLE. Bakelite caps and shells. Extra heavy chrome steel forged magnets, 5-ft. cord, vinyl plastic covered wire headband.

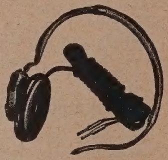
No. 65—Double, 2M ohms	$4.80
No. 67—Single, 1M ohms	2.60

GROUP HEARING AID COMPONENTS



FEATHERWEIGHT EARPHONES

The most widely used single earphones for group hearing aid systems in churches, theatres, mortuaries, etc., are of the FEATHERWEIGHT type. Available with either lorgnette handles, or single headbands. Standard ohmages: 76, 1,000 ohms d.c. Low (less than 100-ohm), medium (100-500-ohm), and high (500 ohms and over lines respectively.



No. 110—Headband type	$7.15
No. 120—Lorgnette type	8.25

OUTLET BOXES AND CONTROLS

Boxes 460 and 461 are recommended for the majority of installations, combines volume control and jack. No. 460 has brown wrinkle finish, No. 461 glossy ivory to improve visibility in theatres. Standard ohmages: 1000 for low impedance lines, 10,000 for high.

No. 460—Outlet Box (Brown—specify ohmage)	$4.40
No. 461—Outlet Box (Ivory—specify ohmage)	4.40
No. 477—Outlet Box, dual jack, brown, same general shape as No. 460	3.85
No. 478—Outlet Box, dual jack, ivory	3.85
No. 484—Outlet Box, single jack, brown	3.30
No. 485—Outlet Box, single jack, ivory	3.30

PROFESSIONAL

The choice of countless users . . . The original TRIMM headset. Watch case bipolar design, cap and shell molded of brown bakelite (unless specified otherwise). Chrome steel forged magnet, concealed terminals, 5-ft. tinsel-braided cord. Standard resistance for double headsets: 4, 78, 500, 2M, 3M and 4M ohms d.c.

No. 70—Double (4M ohms furnished if not specified)	$5.80
No. 72—Single (2M ohms maximum ohmage)	3.30

ACME

A superior lightweight, low-cost headset. Cap and shell of molded bakelite. Weight: 6 oz. Cord: 4½-ft.

No. 24—Double, 2M ohms, vinyl-covered headband	$3.95
No. 25—Double, 2M ohms, metal headband	3.35
No. 27—Single, 1M ohms, metal headband	2.00

"501" PLUG

Similar to widely used Sig. C. PL-55 plug, brass body, tip permanently attached to rod, assembly cannot come apart. Precision profiled and polished for perfect contact with jack.

No. 501 —Black plastic shell	$1.75
No. 501-10—Black plastic shell, similar appearance to No. 501 but combines tip and sleeve assembly of "511" type plug. Ideal where cost is important	1.15
No. 501-11—Red plastic shell	1.15

"511" PLUG

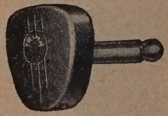
The standard radio phone plug. Tip and sleeve bright nickel. Stay cord anchorage provided. Shielded types have a fiber liner.

No. 511 —Black plastic shell	$0.55
No. 511-1—Red plastic shell	.55
No. 511-2—Shielded, nickel-plated, single-piece shell	.95
No. 511-3—Shielded, nickel-plated, two-piece shell	1.45
No. 511-4—Shielded, nickel-plated, stubby shell	.90
No. 515 —Adapter (Couples Amphenol type microphone plug to standard phone jack)	.50

"512" PLUG

Compact, non-protruding design. Bakelite body, nickel-plated tip and sleeve. Cord pin tips held by set screws.

No. 512	$0.75



"514" MIN-A-PLUG

Developed especially for shielded microphone cable. Standard tip-sleeve construction. Wing type terminal clamps directly onto cord shield. Center conductor solders to lug.

No. 514 —Black plastic shell	$0.55
No. 514-1—Red plastic shell	.55
No. 514-2—Shielded shell	.90
No. 514-3—Shielded, stubby shell	.85

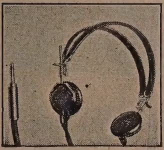
See other sections of U.C.P. Catalog or TRIMM General Catalog for more complete listings of headsets, plugs, jacks, replacement parts.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

—TRIMM—

HEADSETS AND ACCESSORIES

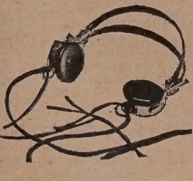
COMMERCIAL



One of the most ruggedly built yet lightweight headset. Practically non-breakable. Shell and cap molded of high strength plastic. Diameter 2⅛", depth ¾", cord 5-ft. tinsel, moisture-proof construction, type No. 501-10 plug attached. Leather-covered headband. This headset is recommended for monitoring service because of its high quality performance.

No. 156—Double, 600 ohms Imp.	$17.60
No. 157—Double, 17M ohms Imp.	17.60
No. 158—Double, 600 ohms Imp., no plug	15.95
No. 159—Double, 17M ohms Imp., no plug	15.95

ARMY-NAVY



Very sensitive, 6-ft. waterproof cord, phone tip terminals. Plastic cap, metal shell. Leather headband. Weight: 1 lb. Available in two impedances.

No. 29—Double, 2,200 ohms d.c. (20M ohms Imp.)	$17.60
No. 28—Double, 112 ohms d.c. (600 ohms Imp.)	17.60

TRIMM "B"

Suggested for hospital installations. Bakelite shell and cap. Forged bar magnet. Fabric-covered headband. 5-ft. tinsel cord.

No. 42—Double, 2M ohms	$8.80
No. 43—Double, 600 ohms Imp.	8.80
No. 44—Single, 1M ohms	5.10
No. 45—Single, 300 ohms Imp.	5.10

Ohmages given are d.c. resistance unless specifically indicated as impedance which is about 4-7 times the d.c. resistance.

Prices subject to change without notice.

HEADSET REPLACEMENT PARTS

CORDS FOR TRIMM HEADSETS

No. 811—Double, black, 4½-ft., braided. Fits Acme and Rex	$1.27
No. 821—Double, black, 5-ft., braided. Fits Dependable	1.32
No. 822—Double, black or brown (specify), braided. Fits Professional	1.54
No. 831—Double, black, 6-ft., moisture-proof, braided. Fits Featherweight	2.09
No. 870—Double, black or brown (specify), 6-ft., moisture-proof, braided. Fits Commercial	1.76
No. 880—Double, black, 6-ft., water-proof, braided. Fits Army-Navy, etc.	3.30
No. 807—Single, black, 4½-ft., all-rubber. Fits Acme and Rex	.62
No. 826—Single, black, 5-ft., braided. Fits Dependable, Professional, etc.	.94
No. 838—Single, black, 6-ft., moisture-proof, braided. Fits Featherweight	1.65

MISCELLANEOUS CORDS

No. 881—Double, black, 5-ft., pin tips at terminal and receiver ends	$1.10
No. 882—Double, black, 5-ft., pin tips at terminal. Fits Brush type A headsets	2.20
No. 883—Double, black, 5-ft., pin tips at terminal, spade at receiver end	1.10
No. 884—Double, black, 5-ft., pin tips at terminal, eyelet and receiver end. Fits Brandes, etc.	1.21
No. 845—Double, all synthetic rubber cordage with molded plastic crotch. Terminals and length as specified. Widely used in hospital radio installations	2.75

DIAPHRAGMS

No. 610—Featherweight	$0.25
No. 612—Professional, Dependable	.20
No. 613—Acme and Rex	.20

EAR CUSHIONS

Sponge rubber ear cushions provide maximum ease in wearing headsets. Fit TRIMM Featherweight, Commercial, Acme, Rex, and "E" types.

No. 654 .... $1.50

For complete listing see TRIMM General Catalog

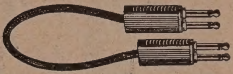
ADDITIONAL PRODUCTS MANUFACTURED BY TRIMM

- * WIRE WOUND POTENTIOMETERS
- * RHEOSTATS
- * L AND T PADS
- * MIDGET EARPHONES
- * STETH-A-PHONES
- * MIN-A-PHONES
- INSTITUTIONAL HEADSETS
- SPECIAL ARMY-NAVY HEADSETS
- PLUGS
- JACKS
- PATCHCORDS
- REPLACEMENT CORDS

* Items marked with (*) are temporarily discontinued

COMPLETE LINE OF TELEPHONE PLUGS AND JACKS TO A-N SPECIFICATIONS
Further information on all items available upon request.

PATCH CORDS



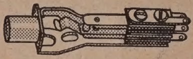
Widely used by the majority of radio stations. Cord assembly uses TRIMM No. 506 twin plugs and high quality shielded cord. Plug self aligning.

Number following "840" represents length.

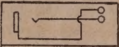
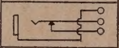
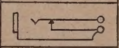
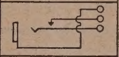
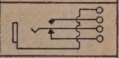
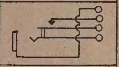
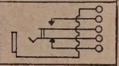
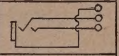
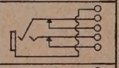
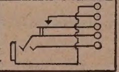
No. 506—Plug, twin type	$ 4.95
No. 840-1-PP—Cord-Plug assembly	13.20
No. 840-2-PP—Cord-Plug assembly	13.42
No. 840-3-PP—Cord-Plug assembly	13.80
No. 840-4-PP—Cord-Plug assembly	14.19
No. 840-6-PP—Cord-Plug assembly	14.96

See TRIMM Bulletin R-15 for more complete listing of Patch Cords, Plugs, etc.

JACKS



TRIMM "90" Series, illustrated above, is commonly used for telephone switchboard types of applications, and permits very close spacing of jacks. The bushing at end of frame is plain, unthreaded, and the jack is mounted by means of a screw through the panel mounting plate. Frame is of steel, suitably plated. Springs are of nickel silver, and contacts are of fine silver providing excellent electrical contact.

CIRCUIT	"90" SERIES CODE No.	LIST
	90-01	$1.00
	90-02	1.21
	90-03	1.21
	90-04	1.27
	90-05	1.32
	90-06	1.38
	90-07	1.54
	90-25	1.21
	90-26	1.60
	90-27	1.76

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

New! Headset LISTENING COMFORT

TELEX TWINSET*

Rests Lightly On Sides of Head—*Nothing* Need Touch Ears!

Telex **Twinset** weighs only 1.6 oz. Eliminates listening fatigue. Adjustable, self-locking sound arm may fit into the ear or may be moved a fraction of an inch away, so that nothing **touches** the ear.

Telex **Twinset** adjusts simply to any shape head, without pinching or pressure. So flexible it may be coiled up and slipped into the pocket! Perfect for any headset need—amateur, experimental, commercial. **Approved by CAA.**

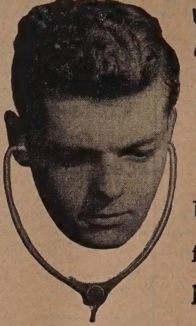
PRICES	List	Dealer Net
Twinset only	$12.95	$ 7.77
Twinset with cord	17.00	10.20
Monocord only	4.05	2.43

SPECIFICATIONS

Sensitivity—101 db. above .000204 dynes per sq. cm. for 10 microwatts input.

Impedances—1000 ohms (brown), 64 ohms (yellow). (Coding visible inside female socket.)

Construction—Weight: 1.6 oz. Tenite plastic and bright nickel for all major parts. Headband: Z-nickel steel wire cased in plastic. Single 5' Monocord plugs into either receiver. Special cord with built-in volume control available.



TELEX MONOSET*

Under-Chin Headset for many unique headset applications

Telex **Monoset** sends signal directly into both ears, blocking out background noise. Built of durable Tenite, the **Monoset** is excellent for communications, office dictation equipment, aircraft radio, wired sound installations, dental offices and beauty shops.

PRICES	List	Dealer Net
Monoset only	$ 9.95	$ 5.97
Monoset with standard cord	14.00	8.40
Monoset with volume-control cord	18.30	10.98
Standard cord	4.05	2.43
Volume-control cord	8.35	5.01

SPECIFICATIONS

Sensitivity—88 db. above .00024 dynes per sq. cm. for 10 microwatts input.

Impedances—128 ohms, 500 ohms, 2000 ohms.

Construction—Weight: 1.2 oz. Sealed magnetic receiver. Unbreakable, grey polished Tenite construction. Removable plastic eartips. Choice of 5' tinsel cord with standard plug or built-in volume control.

TELEX EARSET*

The modern earphone that *slips onto* the ear!

Weighing only 1/2 oz., this entirely new conception in earphone design finds a ready welcome among stenographers, technicians—all who use single-phone headsets.

Earset's flat plastic frame slips onto the ear, holds the sensitive receiver securely in place. User's other ear is always free for phone calls or conversation. Telex **Earset** fits either right or left ear, may be worn by anyone without special adaption. Also available with metal frame at slightly higher cost.

PRICES	List	Dealer Net
Earset only	$ 7.75	$4.65
Earset with cord	11.80	7.08
Standard cord	4.05	2.43

SPECIFICATIONS

Sensitivity—Comfortable listening level with .3 milliwatt input.

Impedances—128 ohms, 2000 ohms.

Construction—Weight: 1/2 oz. Clear plastic ear frame. Sealed, rust-proof receiver. 5' Monocord with standard phone plug connection.

*Trademark

TELEX®

Standard of the World for Quality Headsets

TELEX PARK • ST. PAUL 1, MINNESOTA

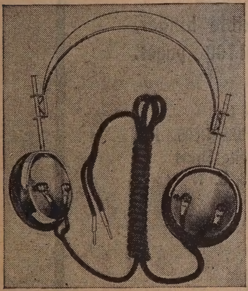
IN CANADA: ATLAS RADIO CORP. • TORONTO

HEADPHONES By C. F. CANNON

THE "CHIEF"
Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is 2$\frac{1}{16}$". Double coils, two in each receiver. Chrome steel magnets ¼" diameter. Supplied with braid-covered headband with permanent adjustment and no removable parts. Cotton covered cord, 4½ ft. long.

CC-2—2000 ohms D.C.	**List $4.00**
CC-3—3000 ohms D.C.	**List 4.50**
CC-5—5000 ohms D.C.	**List 5.50**



BRANDES "SUPERIOR"
Matched Tone Headset

A rugged headset, millions of which are in use all over the world. Large size diaphragms of 2⅛" diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjusment. 4½ ft. cotton covered cord.

BS-2—2000 ohms D.C.	**List $3.50**

BRANDES "ADMIRAL"
Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.	**List $3.75**
BA-3—3000 ohms D.C.	**List 4.25**
BA-5—5000 ohms D.C.	**List 5.75**

CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

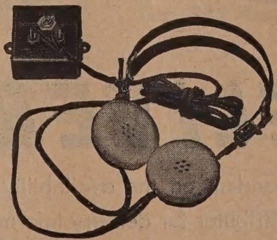
The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm 2⅛". Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2	**List $6.50**
AM-25-3	**List 7.00**
AM-25-5	**List 8.50**

ALNICO MAGNETIC No. 15

A new, small size, extra sensitive headset, light in weight. Diameter of diaphragm 1⅞". Molded cap and case. Steel adjustable headband. 4½ ft. cord.

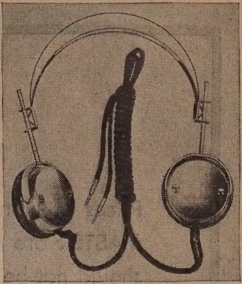
AM-15-2	**List $4.00**
AM-15-3	**List 4.50**



CANNON-BALL HEARING AID
For Radio

Provides perfect reception for private listening without disturbing others. Can be attached to any radio and permits listening to phones alone, speaker alone, or both together, as desired.

With single phone	**List $5.75**
With double phones	**List 8.00**



THE "MASTER"
Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm 2$\frac{1}{16}$" diameter. Double coils. Chrome steel magnets. 4½ ft. cotton-covered cord.

MC-2—2000 ohms D.C.	**List $3.50**
MC-3—3000 ohms D.C.	**List 4.00**
MC-5—5000 ohms D.C.	**List 5.50**

CANNON-BALL "EMPIRE"
Lightweight Headset

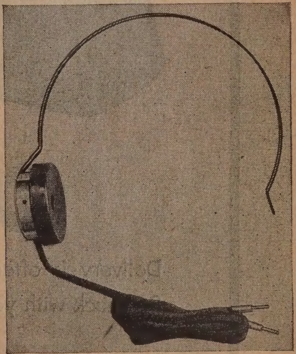
A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is 1⅞". Polished aluminum cases with bakelite caps. Steel adjustable headband. 4½ ft. cord. Inside terminal connections.

EC-2—2000 ohms D.C.	**List $3.00**
EC-3—3000 ohms D.C.	**List 3.25**

THE "DIXIE"
Cannon-Ball Headset

The "Dixie" is of the same general construction as the "Master" headset except that the terminals are on the outside.

CD-2—2000 ohms D.C.	**List $3.25**
CD-3—3000 ohms D.C.	**List 3.50**



CANNON-BALL "GRAND"
Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm 1⅞". Aluminum case and bakelite caps. Chrome steel magnet, double coils. 4½ ft. cord. Spring steel headband permanently attached.

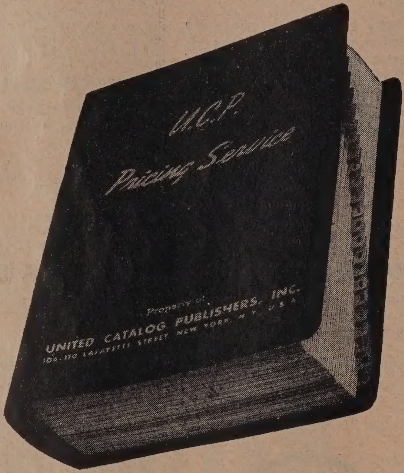
SG-1—1000 ohms D.C.	**List $1.85**

Phones can be supplied with any resistance required or with variations to meet special requirements. Sanitary plastic covered cords available for institutional use. Write for special quotation.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**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DELIVERY

Delivery is often dependent on the availability of raw materials. So check with your distributor for delivery information.

Fairchild Recording and Playback Equipment

PLAYBACK EQUIPMENT

524A1	Transcription Table in Cabinet	$485.00
524C1	Transcription Table less Cabinet	415.00
200	Turret Head 3-Way Pickup Arm	65.00
205	Passive Equalizer, Lateral & Vertical	50.00
Miniature Dynamic	210 - 1.0 mil tip	47.50
Cartridges With	211 - 2.0 mil tip	42.50
Diamond Stylus	212 - 2.8 mil tip	42.50
	213 - 2.0 mil tip Vertical	50.00
636	Pickup Preamplifier with Power Supply	110.00

DISK RECORDERS & ACCESSORIES

523	Studio Recorder, with Microgroove	$2985.00
539G1	Recorder in Trunk	985.00
539K1	Console Recorder, Microscope, Spiralling	1395.00
541A1	Magnetic Cutterhead	160.00
300	Thermo-Stylus Kit for Fairchild Cutter	100.00
304	Same With Special Advance Ball & Mount	125.00
301	Thermo-Stylus Kit for RCA Cutter	115.00
302	Thermo-Stylus Kit for Presto Cutter	115.00
539A19	Microscope Kit for 539 Recorder	140.00
539-325	Microgroove attachment for 539 Recorder	135.00
539C12	Spiralling Kit for 539 Recorder	35.00
628A1-1	Diameter Equalizer, Single Channel Write for double channel information	130.00

TAPE RECORDERS

125	Tape Recorder, complete with amplifiers	$2750.00
	Same, with Pic Sync	add 1250.00
135	Automatic Framing Attachment	1375.00
140	Control Track Generator	335.00

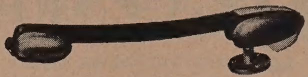
UNITIZED AMPLIFIER SYSTEM

Consists of 620 Power Amplifier, 621 Preamplifier, 623 Line Amplifier, 624 Output Switching, 625 Input Switching, 626 NAB Equalizer, 627 Variable Equalizer, 629 Mixer, 630 VU Panel, 631 Bridging Device, 632 Auxiliary Power Supply, 633 Frame and other mounting accessories.

Write for detailed information and prices.

NOTE: All prices are net, f.o.b. Whitestone, New York and subject to change without notice.

Turret-Head Arm



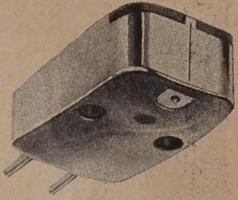
No more messy multiple pickup installations with several arms, equalizers, switches.

One arm, one equalizer do the trick—up to three cartridges in the Turret Head Arm. Equalizer with 4 NAB curves for lateral, two for vertical.

Merely turn a knob on the pickup to select proper cartridge with correct diamond tip for required record. Stylus pressure is adjusted automatically.

New viscous damping eliminates arm resonance; also greatly reduces danger of breakage in handling.

A True Moving Coil Reproducer



A cartridge for every requirement — 78 standard, 33-1/3 transcription, microgroove, vertical. Select only the ones you need. You may be sure of close tolerances in dimensions of the diamond tip to fit the groove for maximum efficiency and minimum distortion.

Frequency response — 30-12,000 cycles.

Unusual mechanical construction allows high compliance to heavily modulated grooves.

Output unequalized — 3 millivolts. Output impedance — 80 ohms, but can be fed into any higher impedance including the grid of a tube.

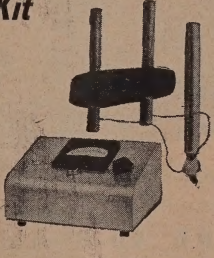
Pic-Sync Tape Recorder

Each time you retake a sound track, film production costs go up. The waste of film stock and the time delay for processing increase operating cost immeasurably. You *eliminate* these extra costs with the Fairchild PIC-SYNC Tape Recorder. Play back the sound at once . . . check it . . . erase the track . . . retake the sound *before the talent, the set and crew are disbanded.*

NOW USE PIC-SYNC Tape Recorders for ALL Original Sound Tracks

1. ¼" tape costs 80% less than 16mm magnetic film.
2. ¼" tape requires 50% less storage space.
3. ¼" tape recorded quality practically as good as "live" for dubbing or TV broadcast purposes.
4. ¼" tape noise level far lower than sprocket driven tape or film. This is vital in multiple dubbing operations.

Thermo Stylus Kit



Applies heat directly to cutting jewel, reducing basic surface noise to vanishing point. Records at least 20 db lower noise level.

Minimizes mechanical loading of the cutter by disk material, thus increasing high frequency response, especially at small diameters.

Invaluable for microgroove, standard 33-1/3 and 45 r.p.m. speeds.

Available for Fairchild, RCA and Presto Cutterheads.

Easily installed and operated. Includes heat control and calibrated meter.

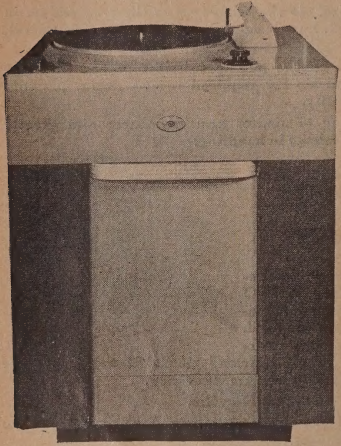
WRITE: **FAIRCHILD**
RECORDING EQUIPMENT
CORPORATION

154th ST. and 7th AVE.,
WHITESTONE, N. Y.
PHONE: INDEPENDENCE 3-2100

WRITE for information on the Control Track Generator which permits lip synchronous recording on good quality portable tape recorders for later transference to film, on Pic-Sync Recorder.

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS



Presto Type 153 Reproducer extra

PRESTO 64-A TRANSCRIPTION TURNTABLE

The Presto 64-A transcription turntable offers the following features which are of major importance to the owner and operator: Unusual mechanical simplicity . . . low mechanical disturbance . . . maximum speed accuracy . . . extreme ruggedness for long continuous operation . . . instantaneous selection of desired speed . . . and no requirements for mechanical adjustments.

This transcription turntable is directly gear driven and employs two separate motors, one for 33-1/3, and the other for 78.26 rpm. There is no friction device of any kind in the mechanism and no mechanical shift is required to change speeds. To select 33-1/3 rpm, 78 rpm or "off," the operator merely throws a three position switch. These changes may be made as rapidly as desired while the turntable is in motion with no damage to the mechanism. Only one motor at a time is in operation. The transmission "over runs" the motor which is not turning and thus does not carry it along in rotation although the stationary motor is never disengaged from the mechanism.

SPECIFICATIONS

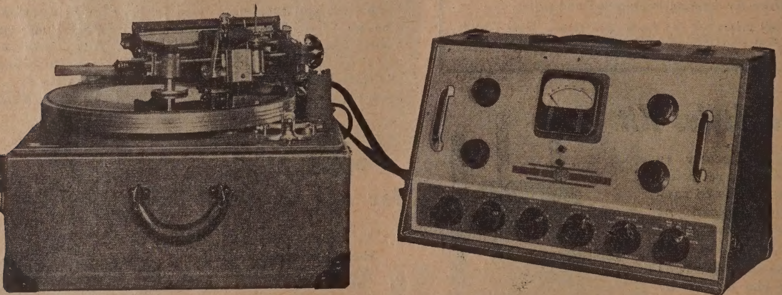
Standard Equipment: The 64-A transcription turntable includes the electro-mechanical gear drive, turntable and cabinet. A reproducer and network is not included.

Speed Accuracy: No deviation from 33-1/3 and 78.26 rpm.

Noise Level: Mechanical noise originating in the equipment over 50 db below program level.

Power Requirements: Approximately 75 watts from a 115 volt, 60 cycle line. Motors are of the 1800 rpm synchronous type and are available for other voltages and frequencies at additional cost.

Mounting: Turntable and gear drive mounted in heavy wood cabinet with inlaid linoleum top is 24 x 24 x 33 inches (61 x 61 x 84 cm.) List Price, $495.00



PRESTO 6-N RECORDER AND 90-B AMPLIFIER

The PRESTO 6-N Recorder and 90-B Amplifier is the ideal recording equipment for portable or stationery operation.

The 6-N Recorder is outstanding in its suitability for brodcast stations because it offers all the qualifications for good recordings, including master records, at the most economical price. It is ideal for the station requiring delayed broadcast of network programs, and for reference recordings.

The 6-N standard equipment includes the Presto 1-D cutting head, spiraling feed screw, vertical damper, time scale and pick-up. It is available for microgroove recording at addition cost.

The Presto 90-B recording amplifier contains all the facilities necessary for operation on remote assignments, but with all overall performance found only in high-fidelity studio equipment.

It consists of three preamplifiers with individual gain controls, a mixer circuit, a master gain control and recording amplifier. Provision is made for connecting the Presto 161-A automatic equalizer (radius compensator).

A five-position selector switch provides the following characteristics: 1—flat response, 30 to 15,000 ±1 db; 2—NAB 33⅓ rpm recording; 3—present day 78-rpm recording; 4—NAB playback, and 5—automatic equalization. The flat response can be modified by variable bass and treble controls, giving emphasis up to a maximum of 20 db at 100 and 7,500 cycles per second or 20 db de-emphasis at 7,200 cycles per second.

Noise is 55 db below recording level and distortion at maximum output is less than 1.5%.

The use of input and output selector switches makes the 90-B amplifier unusually flexible. It permits combining the signals of three microphones or of two microphones and either one of two pick-ups. By using the "Line" position, recordings can be made from an incoming program line. The output selector has three positions; playback (public address), continuous recording and simultaneous recording. While recording, the line jack provides a monitoring outlet or permits feeding a program line at the correct level.

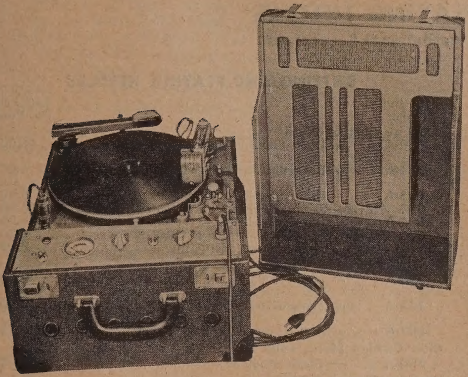
The correct level is monitored by means of a Weston Type 30 VU indicator with illuminated scale and its closely controlled electrical and dynamic characteristics make it an ideal volume indicator for recording.

List Price of 6-N	$735.00
List Price of 90-B	595.00

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO K-10 RECORDER FOR MICROGROOVE AND REGULAR RECORDING



The PRESTO K-10 Recorder, formerly known as the K-8, the foremost machine of its kind to be used in schools for speech, voice, languages, dramatics, music., etc., is now offered for MICROGROOVE (long-playing) recording as well as the standard method.

Note these features:

- Cutting pitches of 112 lines per inch Outside-in, 112 lines Inside-out, 224 lines per inch Outside-in and 224 lines per inch Inside-out.
- Standard unit is equipped for two speeds, 33⅓ and 78 rpm. Available for three speeds, 33⅓, 45 and 78 rpm at additional cost.
- The cutting head is equipped with an advance ball which regulates the depth of the groove more accurately than a counter spring.
- Two interchangeable pick-up arms, one containing the MICROGROOVE head and the other containing the regular head. Each head is complete with a permanent sapphire stylus.
- A single control permits instant choice of recording, playback, or public address. Amplifier also contains radio and monitor jacks.

The PRESTO K-10 will, when set for MICROGROOVE, record 6¾ minutes on every inch of disc used. This means that a 15-minute recording with good fidelity can be put on one side of a 12" disc! And a half-hour can be put on one side of a 13¼" disc. Seven minutes can be recorded on one side of a 6½" disc.

Price of **K-10**, less microphone and stand, **$348.00***.

No increase over K-8.

***$5.00** additional for 45 rpm pulley and record adapter.

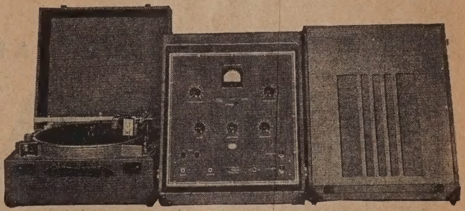
PRESTO "Y" RECORDER FOR MICROGROOVE AND REGULAR RECORDING

The PRESTO Y-5 is identical to the famous Y-4 but MICROGROOVE has been added. The following feed pitches are included with the Y-3: 112 lines per inch Outside-in, 112 lines per inch Inside-out, 224 lines per inch Outside-in, and 224 lines per inch Inside-out.

Other features are:

- Two interchangeable Pickering sapphire cartridges — for MICROGROOVE and regular recording.
- Advance ball on cutting head to accurately control depth of groove.
- 16" turntable — will take 17¼" masters.
- Standard unit is equipped for two speeds, 33⅓ and 78 rpm. Available for three speeds, 33⅓, 45 and 78 rpm at additional cost.
- Amplifier has connections for two microphones and two turntables. Output is 10 watts. Both high and low frequency manual equalizers are included.
- Ten-inch PM speaker and baffle are built into cover of amplifier.
- Presto high-fidelity 1-D cutting head.

When set for MICROGROOVE the Y-5 will record for 6¾ minutes on each inch of disc used. A fifteen-minute program can be put on one side of a 12" record. A half-hour on one side of a 16" record. Forty minutes can be recorded on one side of a 16" record by cutting to minimum diameter.



The price of the Y-5 is $771.00*

Microphone and stands are not included as regular equipment.

***$10.00** additional for 45 rpm pulley and record adapter.

3-SPEED MICROGROOVE & STANDARD PLAYBACK TURNTABLE Type 15-GCP-2

The Presto Type 15-GCP turntable is an unusually high quality unit for the reproduction of recordings at 33⅓, 45 and 78 rpm. The design provides an instantaneous speed selection with a very convenient control arrangement.

FEATURES:

- Heavy cast aluminum 12" turntable accurately machined and balanced.
- Precision idler wheels and motor pulley.
- Good speed regulation—minimum "wow."
- Performance comparable to transcription equipment.
- Two pickups included—1 standard and 1 microgroove. Sapphire stylii.
- May be connected to any radio or audio amplifier.

List Price complete	**$94.00**
Chassis only	**49.50**

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO LACQUER COATED ALUMINUM DISCS CUTTING AND PLAYING NEEDLES

(For Professional and Institutional Recording)

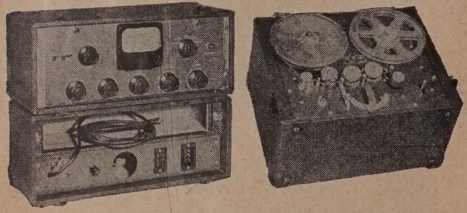
Type	Size	Thickness	List Price Each
PRESTO GREEN LABEL DISCS			
Packed 25 per box, except 13¼″ are 30 per box.			
610-A	10″	.050	$1.30
611-A	11⅞″	.050	2.05
613-A	13¼″	.050	2.60
616-A	16″	.050	3.75
PRESTO BROWN LABEL DISCS			
Packed 25 per box, except 13¼″ are 30 per box.			
811-B	11⅞″	.050	1.60
813-B	13¼″	.050	2.05
816-B	16″	.050	3.00
PRESTO DOUBLE SIDED MASTERS			
Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
621-A	11⅞″	.050	2.05
623-A	13¼″	.050	2.60
627-A	17¼″	.064	5.60
PRESTO SINGLE SIDED MASTERS			
Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
821-B	11⅞″	.050	1.60
823-B	13¼″	.050	2.05
827-B	17¼″	.064	4.10
PRESTO ORANGE LABEL DISCS			
Packed 50 per box.			
306-A	6½″	.039	.40

NOTE: All other sizes of Presto Orange Label discs will be unavailable for an indefinite period.

CUTTING AND PLAYING NEEDLES

Type and Number		List Price Per Needle
Sapphire Cutting Stylii		
320-A	—Brass Shank—Short, (Box of 6)	$6.00
321-A	—Brass Shank, Long, (Box of 6)	6.00
603-A	—Dural Shank—Short, (Box of 6)	8.00
603 MICRO	—Same as above for MICROGROOVE	8.00
604-A	—Dural Shank—Long, (Box of 6)	8.00
604 MICRO	—Same as above for MICROGROOVE	8.00
	Resharpening Sapphire	2.00
Stellite Cutting Stylii		
330-A	—(Box of 6)	2.00
331-A	—(Box of 6)	2.00
807-A	—Resharpening Stellite Point	.75
Steel Cutting Stylii, Long and Short		
350-A	—(Package of 3)	1.00
Sapphire Playing Needle		
420-A	—Sapphire Playing Needle	1.25
Transcriptone Playing Needle		
430-A	—Transcriptone Playing Needle	1.00
Red Shank Playing Needles		
440-A	—(Package of 25)	.25
440-B	—(40 Packages of 25)	10.00

PT-900 TAPE RECORDER



TYPE 900-A2 TYPE 900-R1

PT-900 COMPLETE IN CARRYING CASES

SPECIFICATIONS

Frequency response 50-15,000 cps at 15″/sec. tape speed and 50-75,000 cps at 7½″/sec.

Signal to noise ratio is 50 db with 2% distortion at 400 cps.

Instantaneous speed variations at 15″/sec. is not more than 0.25%.

Three microphone mixer with master gain control.
Microphone input impedance normally 250 ohms.
Output of both amplifiers 500 ohms, +20 db max.
Bridging input 20,000 ohms, unbalanced.

Weights: 900-R1—40 lbs.; 900-A2—35 lbs.

The PT-900 tape recorder has been developed for fully professional recording work and hence no compromise has been made with quality of materials and workmanship. The PT-900 has been designed especially for broadcast stations and recording studios and has found wide acceptance among colleges and universities as well.

This recorder consists of a mechanical drive system, separate erase, record, and reproduce heads and two separate amplifiers—one for recording and the other for reproducing. This arrangement permits instantaneous monitoring of the tape by using the separate record and reproduce channels simultaneously. The equipment takes standard RMA 7″ reels. Continuous recording with two mechanical sections (type 900-R1) and one amplifier section (900-A2) may be done by interconnecting the units through the SA-9 changeover switch.

The PT-900 may be had on standard 19″ relay rack mounting panels. Simply specify: "for rack mounting." Price same as in carrying cases.

PRICES

Complete PT-900	$799.00
900-R1	403.00
SA-9	46.00
900-A2	403.00

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

RC-10-24 TAPE RECORDER

The RC-10-24 is an extremely high quality rack mounting tape recorder for both RMA reels and NAB hubs. Maximum tape capacity is 2400 feet (nominal). This recorder incorporates a three-motor drive system with solenoid operated brakes and capstan pressure pulley. All functions are selected by push-button switch. The recorder may be completely connected to remote controls, either directly or by using relays.

The panel measures 19″ wide by 24½″ high and is normally rack mounted although the recorder will operate in any position. Separate recording and reproducing heads are provided so that the tape may be monitored during recording.

The 900-A2 or the 901-A1 amplifiers are for use with the RC-10-24.

The three-motor drive system eliminates the complex mechanical arrangements which require frequent adjustment. This system also makes possible very fast speeds forward and reverse. This recorder has proven to be exceptionally reliable and trouble-free even under continuous periods of operation.

SPECIFICATIONS

Reels 7″ and 10½″. Standard tape speeds 7½ and 15 in./sec.

Fast Speeds, forward and reverse: 250″/sec.

Frequency response 50-15,000 cps at 15″/sec. and 50-7,500 cps at 7½″/sec.

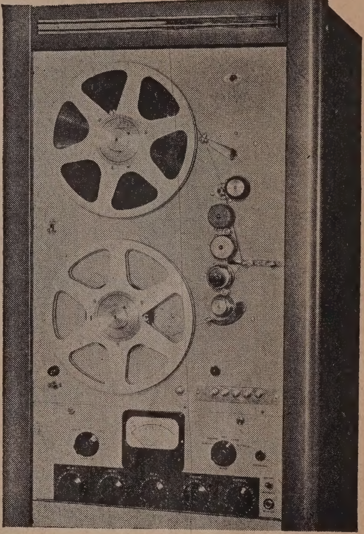
Dynamic range 55 db.

Instantaneous speed accuracy .15% at 15″/sec.

PRICES

RC-10-24 Recorder	$761.00
900-A2 or 901-A1 Amplifier	403.00

NOTE: Amplifier types 900-A2 and 901-A1 are generally similar except that the former is equipped with a low level 3-microphone mixer whereas the latter has a line-level input, either high impedance bridging or 500 ohm matching.



RC-10-24, in rack with 900-A2 Amplifier

RC-10-14 TAPE RECORDER

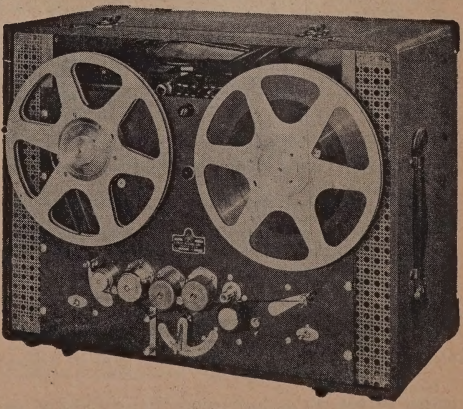
The RC-10-14 is similar in most respects to the RC-10-24, differing only in the panel size and the control switch arrangement, The panel is 19″ x 14″ and is frequently mounted in the CS-10 carrying case although the unit may be rack mounted also. The function switch is the rotary type and also mechanically operates the idler pressure pulley. The same three-motor drive and solenoid braking is used as on the RC-10-24.

The RC-10-14 recorder with the 900-A2 amplifier, in carrying cases, constitute portable equipment of the highest quality — equal in performance to the best studio recorders.

PRICES

RC-10-14 Recorder	$684.00
CS-10 Carrying Case	52.00
900-A2 Amplifier, in carrying case	403.00

See Page E-4



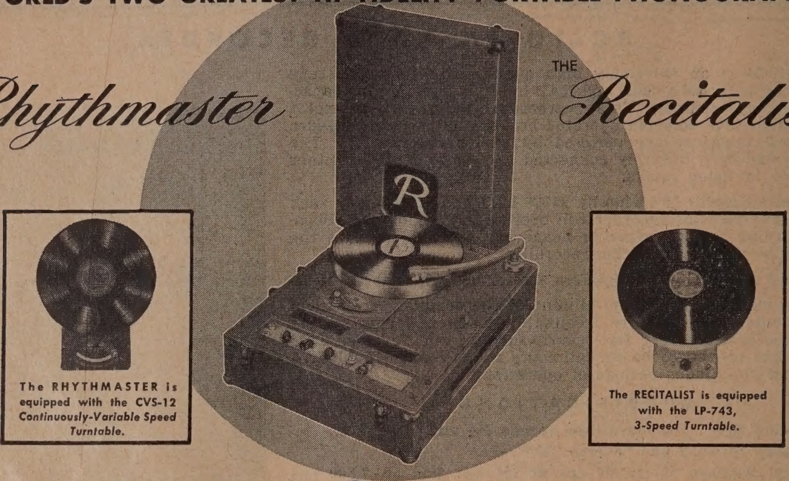
RC-10 in Carrying Case
900-A2 Amplifier is Separate Unit

REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

WORLD'S TWO GREATEST HI-FIDELITY PORTABLE PHONOGRAPHS

THE *Rhythmaster* THE *Recitalist*



The RHYTHMASTER is equipped with the CVS-12 *Continuously-Variable Speed Turntable.*

The RECITALIST is equipped with the LP-743, *3-Speed Turntable.*

BOTH OFFER 3 INSTRUMENTS IN ONE

★ PHONOGRAPH ★ P.A. SYSTEM ★ BROADCAST RECEIVER (used with FM Tuner)

Indispensable for Recreation Centers, Broadcast Stations, Advertising Agencies, Schools, Hospitals, Record Collectors, Musicians, Etc.

THE RHYTHMASTER AND THE RECITALIST are the only full-range portable phonographs that balance the response characteristics of amplifier, speaker and speaker enclosure. By carefully compensating the natural resonances of these three components, undesirable reverberations are eliminated, and **truly lifelike sound reproduction is achieved.**

THE POLYPHONIC SELECTOR, an exclusive Rek-O-Kut engineering triumph, found only in the Recitalist and the Rhythmaster, maintains the proper relationship between the highs and lows when the record is played **at any volume**, either very softly or very loud! Thus, the high notes of the violins, chimes, triangles, cymbals, etc., are always reproduced clearly and distinctly in all their original beauty and cannot be drowned out by the loud passages of the brasses and percussion instruments.

THE RHYTHMASTER'S PATENTED CONTINUOUSLY-VARIABLE SPEED TURNTABLE plays records not only at 33⅓, 45 and 78 R.P.M., but at **ANY speed variation** from 25 to 100 R.P.M. Not only will the CVS Turntable play your records back at the exact pitch and tempo they were recorded, but also at any increased or decreased tempo to fit a particular need: **★DANCING:**—Set the rhythm of your folk-dance, tango, rhumba to your own taste. **★PHYSICAL EDUCATION:**—Set the rhythm most suitable for teaching swimming, exercises, etc. **★MUSICIANS:**—(1) You can now set the pitch of your records to your own personal interpretation of any recording. (2) You can set the pitch of the record to match the pitch of your piano or other instrument for purposes of accompaniment. **★SCHOOLS:**—Invaluable tool for teaching music, band instruments, languages, typing, dancing, gymnastics, etc. **★RECREATION CENTERS, CAMPS, COMMUNITY CENTERS:**—Powerful amplifier and speaker afford undistorted volume to cover an assemblage of 500 people or more.

THE RHYTHMASTER AND RECITALIST ARE BOTH "FLEXIBLE" INSTRUMENTS. (1) A microphone input enables "mixing" of live music or voice simultaneously with a recording being played. **(2)** Can be used as a high fidelity public address system. **(3)** By connecting an AM or FM Tuner, these phonographs become superb broadcast receivers.

SPECIFICATIONS

TURNTABLE: 12″ cast aluminum, with hardened and ground shaft.

MOTOR: Constant-speed, 4 pole induction.

SPEAKER: 8″ PM type, built to our exacting specifications with heavy Alnico V magnet.

AMPLIFIER: Frequency response is controlled by **Polyphonic Selector.**

- **Position No. 1**—Uniform within 1 db from 50 to 15,000 cycles.
- **Position No. 2**—Bass up 4 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 3**—Bass up 6 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 4**—Uniform from 50 to 3,000 cycles, increasingly sharp cut-off, 14 db down at 10,000 cycles.

PICKUP: 16″ with dual stylus cartridge. Plays up to 16″ broadcast transcriptions, standard commercial pressings and micro-groove records.

POWER OUTPUT: 10 watts at less than 3% total harmonic distortion.

INPUT CHANNELS—THREE: High impedance microphone, radio, phono-pickup.

INPUT GAIN: Microphone, 120 db; phono-pickup, 80 db; radio, 80 db; magnetic pickup, 90 db.

OUTPUT IMPEDANCE: 6 - 8 ohms at speaker jack.

NOISE LEVEL: More than 50 db below rated output with all controls set at maximum.

CONTROLS: Microphone, radio-phono, Polyphonic Selector.

TUBE COMPLEMENT: (2) 6SL7, (2) 6V6GT, (1) 5Y3GT plus (1) 6SC7 for magnetic pickup.

POWER INPUT: 70 watts.

CASE: Sturdy Plywood, covered with rich grey leatherette.

DIMENSIONS: 17″ wide, 9½″ high, 21¼″ deep (Closed).

WEIGHT: 38 pounds.

Model	Description	Net Price
RP-43C RECITALIST	3 Speed, crystal pickup	**$229.95**
RP-43M RECITALIST	3 Speed, pre-amp., mag. pickup	**249.95**
RP-43VC RHYTHMASTER	Variable Speed, crystal pickup	**269.95**
RP-43VM RHYTHMASTER	Variable Speed, pre-amp., magnetic pickup	**289.95**

REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

Challenger De Luxe

PROFESSIONAL 13¼" DISC RECORDER FOR STANDARD AND MICRO-GROOVE RECORDING

The "Challenger," America's finest professional 13¼" disc recorder, is built to meet the respective needs of the Professional Recordist, Musician, Educator and Recording Enthusiast who wants to make permanent, professional recordings. The "Challenger" embodies the most advanced design, engineering and production techniques in the disc recording industry. The many exclusive operating features incorporated in the "Challenger" simplify and improve the art of disc recording.

SPECIFICATIONS:

1. **MOTOR:** Heavy duty Synchronous motor (TR-12H, described in detail on page E-8), fitted with lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
2. **RECORDING AREA:** Records from 6" up to 13¼" masters.
3. **SPEEDS:** Simple, finger-tip speed control for instantaneous selection of speed desired — 78, 45, or 33⅓ RPM.
4. **OVERHEAD RECORDING MECHANISM:**
   - (a) **"LIFTOMATIC SAFETY CAM"** prevents double cutting and damage to the stylus by automatically raising the cutter from the disc as it approaches the center of the record.
   - (b) **FACILITATES INTERCHANGING LEADSCREWS** for standard or micro-groove recording.
   - (c) **SPIRAL GROOVES:** Run-in, run-out and locked grooves are made with a simple, manual operation.
5. **PICKUP ARM:** 16" with dual stylus magnetic variable reluctance cartridge. Plays up to 16" broadcast transcriptions, standard commercial pressings and micro-groove records.
6. **TURNTABLE:** Precision machined aluminum fitted with hardened and ground shaft. Driven by two double-duty neoprene idlers running against the inside rim.
7. **SPEAKER:** 8" PM type. Custom-built to rigid REK-O-KUT specifications for extra power and wide range. Mounted into detachable cover of case.
8. **CASE:** Sturdy plywood covered with rich grey leatherette. Built to withstand rough usage.
9. **DIMENSIONS:** 25" x 22" x 12". Weight: 65 Lbs.

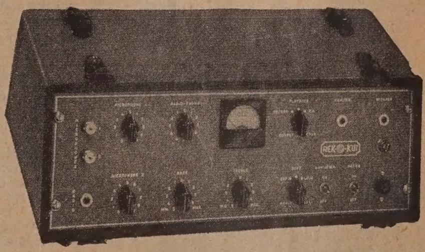
CHALLENGER DELUXE........$439.95

ACCESSORIES

M12-192	Micro-Groove Leadscrew	**17.95**
TR-103A	Idler and Adapter for 45 RPM, interchangeable with 33⅓ RPM idler	**7.00**

R-8A UNIVERSAL RECORDING AMPLIFIER
(as used in DeLuxe "Challenger")

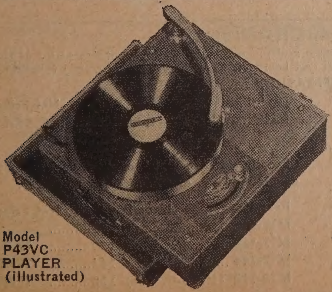
FREQUENCY RESPONSE: ±1 db from 30 to 20,000 cycles at normal setting of equalizer controls.
POWER OUTPUT: 13.5 watts at less than 3% total harmonic distortion into resistive load.
TREBLE EQUALIZER: Boost of 14 db and attenuation of 15 db above 8,000 cycles, continuously variable.
BASS EQUALIZER: Boost of 14 db and attenuation of 14 db below 50 cycles, continuously variable.
INPUT CHANNELS—FOUR: 2 high impedance microphones, phono channel compensated for G.E. or Pickering pickup, radio. Switch on rear of chassis changes phono channel for crystal pickup operation.
GAIN: Microphones—120 db; Phono—90 db; Radio—80 db.
OUTPUT IMPEDANCE: 4, 8, 15, 125, 250, 500 ohms for cutter and speaker.
OUTPUT SELECTOR: Three positions providing—recording, play-back and public address. Microphones are muted in play-back position.
MONITORING: A switch is provided giving three positions of monitor level—off, medium, loud. Speaker or headphones may be used. Meter on front panel indicates correct recording level.
HUM AND NOISE: 64 db below 13.5 watts with all controls turned for maximum hum and noise output.
CONTROLS: Microphone "1", microphone "2", radio-phone fader, output selector, treble equalizer, bass equalizer, monitor.
TUBE COMPLEMENT: (2) 6SJ7; (2) 6SL7; (1) 6SC7; (2) 6V6; (1) 5Y3.
POWER SUPPLY: 105-125 volts, 50-60 cycles.



POWER CONSUMED: 100 watts.
DIMENSIONS: Panel—19" x 6¼"; Chassis—17" x 8¾".

R-8A	For rack mounting, including tubes	**$149.95**
C-85	Portable Case (illustrated), additional	**22.95**

RECORD PLAYERS
3 SPEED • VARIABLE SPEED



Model P43VC PLAYER (illustrated)

The quality instruments of the playback field. Play through any amplifier, sound projector, recorder, radio or TV set. Recommended for dubbing your favorite records into ANY type of recorder—wire, tape or disc.

Model	Turntable (See Page E-9 for Detailed Descriptions)	Pick-up	Net Price
P-43C	LP-743, 3 Speed	16" Crystal, Dual Stylus	**$ 94.95**
P-43M	LP-743, 3 Speed	16" Dual Stylus, Magnetic Variable Reluctance	**99.95**
P-43VC	CVS-12 Continuously Variable from 25 to 100 RPM	16" Crystal, Dual Stylus	**124.95**
P-43VM	CVS-12 Continuously Variable from 25 to 100 RPM	16" Dual Stylus, Magnetic Variable Reluctance	**129.95**

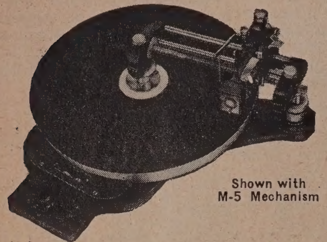
REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

MODEL V DELUXE DUAL SPEED 16" RECORDING TURNTABLES

The outstanding value in the recording field. Ruggedly constructed and precisely machined, the model "V" deluxe turntable will maintain the constant, wow-free speed and smoothness demanded in broadcast work.

The model M-5S Overhead Cutting Mechanism mounts to the "V" deluxe turntable in a matter of moments.



Shown with M-5 Mechanism

SPECIFICATIONS:

1. **MOTOR:** Synchronous type equipped with lamitex pulley for synchronous speed and maximum drive. Suspended in sheer shock mounts to prevent transmission of motor vibration to turntable or chassis.
2. **TURNTABLE:** Normalized aluminum alloy casting, lathe turned and balanced.
3. **CHASSIS:** Cast-iron ribbed L beam type with socket for instantaneous installation of M-5S recording mechanism.
4. **IDLERS:** Double-duty type made of Neoprene compound provides maximum traction. Will not glaze under operating conditions.
5. **OILING:** Shafts and bearings are self-oiling. Require infrequent periodic lubrication.
6. **SPEED CHANGE:** Mastermatic self-locking instantaneous speed shift.
7. **DIMENSIONS:** Length 20"; Width 20"; Height 2½" above motor board; 5" below motor board; Weight 28 lbs.

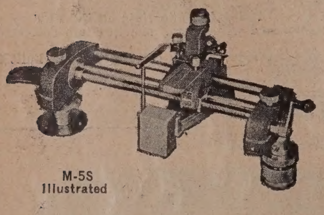
Model	Net Price
"V-Deluxe"	**$215.00**

ACCESSORIES

P-11—Portable case for "V" Deluxe recording table and M-5S cutting mechanism	**64.00**
C-7—Console cabinet, metallic grey finish, with record drawer for storing 100 transcriptions. 4 adjustable screw jacks. Built-in electrical outlets. Motorboard cutout	**129.95**
V103A—45 RPM Idler and record adapter interchangeable with 33⅓	**8.00**

MODEL M-5S MASTER-PRO 16" OVERHEAD RECORDING MECHANISM

A precise tool for professional work. Working surfaces and moving parts are hardened, ground and polished to a micro finish. The Master-Pro is a universal machine that can be readily attached to all 16" recording turntables as well as the Rek-O-Kut model "V" recording table.



M-5S Illustrated

SPECIFICATIONS:

1. **TILT AND LEVEL ADJUSTMENT:** Enables the operator to level and square his unit to disc in a matter of moments.
2. **DUAL CLUTCH SPIRALING CONTROL:** A fool-proof device which eliminates the danger of spoiling a record while the crank-handle is in motion.
3. **MICROMETER DEPTH ADJUSTMENT:** For positive depth control of the cutting head.
4. **LEADSCREW:** Stainless steel with matched bronze feednut.
5. **ANGLE OF CUT:** Is controlled by a simple micrometer adjustment.
6. **GEARS:** Drive gears completely enclosed to prevent fouling by loose chips.

Standard units are equipped with 8-ohm magnetic cutter and 120-line O.I. Leadscrews.

7. **DIMENSIONS:** Length 16"; Width 6½"; Height 9"; Weight 11 lbs.

Model		Net Price
M-5S	With spiraling device	**$215.00**
M-5S	Without cutter	**200.00**

EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
MS-105	105	**$ 37.50**
MS-120	120	**37.50**
MS-135	135	**37.50**
MS-210 (Micro-Groove)	210	**47.50**

MODEL TR-12H DUAL SPEED 12" RECORDING TURNTABLE

The first 12" dual speed recording turntable to feature a SYNCHRONOUS MOTOR. Design and construction of the model TR-12H is similar to the Rek-O-Kut 16" professional recording tables. The model M-12 overhead recording mechanism is mounted to the chassis in a few moments.

Shown with M-12 Mounted

SPECIFICATIONS:

1. **TURNTABLE:** Aluminum, lathe turned and balanced.
2. **CHASSIS:** Cast aluminum. Drilled and tapped for instantaneous mounting of the M-12 recording mechanism.
3. **MOTOR:** Heavy duty Synchronous, fitted with a lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
4. **SHAFTS:** Hardened, ground and polished to a micro-finish.
5. **DRIVE:** Internal rim. Drives through double-duty Neoprene idlers which insure free, smooth and quiet operation.
6. **SPEED CHANGE:** Instantaneous speed shift engages either the 78 or 33⅓ RPM idler.
7. **FINISH:** Beautiful grey wrinkle.
8. **DIMENSIONS:** Length 14½"; Width 16½; Height 1⅜" above motor board. 5" below motor board. Weight 17 lbs.

Model	Description	Net Price
TR-12H	With Synchronous Motor	**$129.95**
TR-12	With 4 pole induction motor	**99.95**

ACCESSORY

T-103A....45 RPM Idler and record adapter interchangeable with 33⅓	**7.00**

MODEL M-12 OVERHEAD RECORDING MECHANISM

The M-12 Overhead Cutting Mechanism is a truly professional machine for recording enthusiasts and professionals. It incorporates many of the features found only in 16" professional units. The M-12 records up to 13¼" master discs and can be mounted on any 12" recording turntable.

M-16 Illustrated

SPECIFICATIONS:

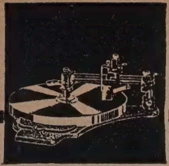
1. **SPIRAL GROOVE:** A run-in, run-out and locked groove made with a simple manual operation.
2. **LEADSCREW:** 108LPI stainless steel, lapped to a matched feednut which is in constant mesh.
3. **LIFT-O-MATIC:** Automatically lifts cutter from disc as it approaches end of leadscrew.
4. **MAGNETIC CUTTER:** 8 ohms, flat from 40 to 7,000 cycles.
5. **DIMENSIONS:** Length 11¼"; Width 4¼"; Height 6".

Model		Net Price
M-12	For 12" turntables	**$ 99.95**

EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
M12-108	108	
M12-120	120	**17.95**
M12-144	144	**17.95**
M12-192 (Micro-Groove)	192	**17.95**



REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

MODEL "G-2" DELUXE 16" TRANSCRIPTION TURNTABLES

The model "G-2 Deluxe" Transcription Turntable is acknowledged without reservation by the broadcasting industry to be the finest rim-driven turntable on the market. The rigid requirements for network programs are easily met by the "G-2 Deluxe."

OPERATING DATA:

1. **STARTING:** From standing start to 78 RPM ¾ of a turn. From standing start at 33⅓ RPM ¼ of a turn. Meets the NAB standard for speed variation and wow content.
2. **NOISE LEVEL:** 50 db below average recording level.
3. **CUEING:** 15¾″ turntable permits the record to overlap ⅛″ which enables the operator to cue from the rim of the disc.
4. **CONSTRUCTION:** (A) Precision lathe-turned balanced turntable. (B) Synchronous motor with Lamitex pulley for maximum drive. (C) Double-duty Neoprene idlers. (D) Cast-iron L beam no twist chassis. (E) Mastermatic self-locking instantaneous speed shift. (F) All shafts hardened, ground, polished to micro finish.
5. **DIMENSIONS:** Length 16″; Width 20″; Height 2½″ above motor board; 5″ below motor board. Weight 26 lbs.

Model	Description	Net Price
G-2 Deluxe	With Synchronous Motor, Mastermatic Shift	**$179.95**
G-2 Standard	With 4 pole Induction Motor and Manual Shift	**137.50**

ACCESSORY

G 103 A	45 RPM Idler and record adapter interchangeable with 33⅓	**8.00**

G-2 Standard Illustrated

MODELS T-12H and T-43H DUAL SPEED 12" TRANSCRIPTION TURNTABLES

The REK-O-KUT Models T-12H and T-43H are the only 12″ dual speed turntables that meet the standards for speed regulation and wow content specified by the National Association of Broadcasters. The construction, design and performance standards equal the REK-O-KUT 16″ broadcast models. The T-12H and T-43H are recommended for use with Hi-Fi amplifiers and speaker systems.

SPECIFICATIONS:

1. **NOISE LEVEL** (a) **T-12H—T-43H:** 50 db below average recording level.
   (b) **T-12—T-43:** 40 db below average recording level.
2. **MOTORS:** (a) **T-12H and T-43H**—Synchronous.
   (b) **T-12 and T-43**—4 pole induction, built to REK-O-KUT specifications.
   All motors, shock mounted, are fitted with lamitex pulleys, which are pressed on, and ground concentric to the motor shaft—an exclusive REK-O-KUT feature which insures smooth, rumble-free operation.
3. **COMPONENTS:**
   Turntable—Cast aluminum, machined and balanced.
   Chassis—Aluminum casting, cross ribbed, flush mount. Requires a rectangular cutout for mounting. Easily installed.
   Drive—Internal rim drive through double-duty Neoprene idlers insures free, smooth and quiet operation.
   Shafts—Hardened, ground and polished to a micro-finish.
4. **SPEED SELECTION:** Instantaneous speed shift engages either 78 or 33⅓ RPM idler without stopping turntable or removing disc.
5. **FINISH:** Grey Wrinkle.
6. **DIMENSIONS:** Length 12″; Width 15″; Height 1⅜″ above motor panel and 5″ below motor panel. Weight 13 lbs.

Model	Speeds	Net Price
T-12H	78 - 33⅓	**$119.95**
T-12	78 - 33⅓	**84.95**
T-43H	45 - 33⅓	**119.95**
T-43	45 - 33⅓	**84.95**

ACCESSORIES

T-103 A	45 RPM Idler, with record adapter, interchangeable with 33⅓	**7.00**
T-104	78 RPM Idler, interchangeable with 45 RPM	**6.50**

T-12H Illustrated

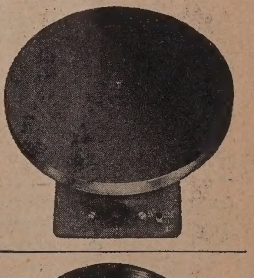
MODEL LP-743 — 3 SPEED 12" TRANSCRIPTION TURNTABLE

Here is the outstanding value for the discriminating buyer who seeks a quality three-speed turntable, at a moderate price. The LP-743 meets the growing demand for a good turntable which is priced between deluxe models and ordinary phono motors. Designed and dimensioned for easy replacement of obsolete motors in average consoles.

SPECIFICATIONS:

1. **NOISE LEVEL:** 30 db below average recording level.
2. **TURNTABLE:** Lathe-turned and balanced. Made of laboratory tested aluminum casting.
3. **MOTOR:** Induction type, designed for smooth, quiet, vibration-free operation, fitted with a Lamitex motor pulley.
4. **SHAFT:** Turntable shaft hardened, ground and polished.
5. **SPEED CHANGES:** Instantaneous without stopping turntable or removing disc.
6. **FINISH:** Grey hammertone.
7. **DIMENSIONS:** Length 12″; Width 15″; Height 1⅜″ above motor panel; 5″ below motor panel. Weight 10 lbs.

Model		Net Price
LP-743	3 Speeds: 78 - 45 - 33⅓	**$54.95**



MODEL CVS-12 — CONTINUOUSLY VARIABLE-SPEED TURNTABLE

Plays at any speed from 20 to 100 RPM without distortion or warble

Operates on 50 or 60 cycles. Just plug in . . . no more changing of motor pulley or idler to convert from 50 to 60 cycles, or vice versa. Speeds are regulated by a simple movement of the lever to compensate for any fluctuations in line voltage or frequencies. Plays all standard and microgroove records as well as 16″ professional broadcast transcriptions. Excellent for broadcast stations, disc jockeys, schools, dance studios, musicians, singers, record collectors, gymnasiums, etc. The only turntable to use in areas of fluctuating line voltage, frequency, or with portable power plant.

SPECIFICATIONS:

1. **SPEED RANGES: Continuously Variable.**
   (a) 110V-60 cycles, Range: 25 to 100 RPM.
   (b) 110V-50 cycles, Range: 20 to 85 RPM.
2. **MOTOR:** Constant speed, 4 pole, with cone pulley.
3. **DRIVE:** Exclusive VARI-CON* self-seating rim drive.
4. **TURNTABLE:** 12″ cast aluminum, with hardened and ground shaft.
5. **NOISE LEVEL:** 30 db minimum below average recording level.
6. **DIMENSIONS:** 16″ long, 12″ wide, 1½″ above chassis, 5″ below chassis.

*Patent Pending.

Model		Net Price
CVS-12	Variable Speed, 25-100 RPM	**$84.95**

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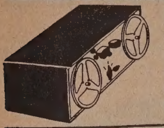
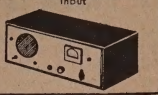
RECORDERS — P T 6 SERIES — AMPLIFIERS



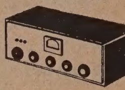
PT6-A basic recorder in portable carrying case. Includes 15" and 7½ ips capstans and pressure rollers. Four mounting bolts. Oscillator tube. One empty reel. No connector cables.	300.00
PT6-AX Same as above, less case.	283.00
PT6-AH Same as PT6-A, plus HI-SPEED FORWARD for fast cueing in. Complete with case.	316.00
PT6AHX Same as above, less case.	299.00

3 SPEEDS: PT6 recorders also available for three speed operation (15-7½-3¾) Add $30 to above prices and specify PT6-A2, PT6-A2X, PT6-A2H or PT6-A2HX. For 3¾ equalizer, order 91-S-133 (Net price: $21.00).

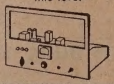
Single microphone input



Three channel low-level mix

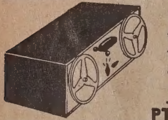


Rack-mount line level



PT6-J combination record/playback amplifier with 10w of audio. Includes all tubes and connector cables. Specify either 7½ or 15 "/sec. equalizer.	248.00
PT6-JX Same, less case.	232.00
PT6-P combination record/playback amplifier with small monitor amp. Includes tubes, case, connector cables. Specify 15" or 7½ "/sec. equalizer.	462.00
PT6-P250 for 250 ohm inputs.	486.00
PT6-R record/playback amplifier, Zero in, Zero-out. Head phone jack. Includes all tubes and connector cables. Specify either 15" or 7½ inches per sec. equalizer.	383.00
PT6-JA Portable Recorder and Single Channel amplifier. (Combination of PT6A and PT6-J as shown above.) Includes connector cables, tubes, cases, 7½" and 15" sec. capstans, and all components as shown above.	548.00

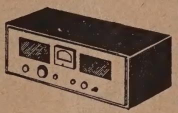
RECORDERS — P T 63 SERIES — AMPLIFIERS



PT63-A same as PT6-A but has three heads for monitoring from the tape. Separate erase, record and playback heads. One empty reel. No connector cables.	334.00
PT63-AX Same as above less case.	317.00
PT63-AH Same as 3-head PT63-A plus HI-SPEED FORWARD.	350.00
PT63-AHX Same, less case.	333.00

3 SPEEDS: PT 63 also available with three speeds. (15-7½-3¾) Add $30.00 to above prices and specify PT63-A2, PT63-A2X, PT63-A2H or PT63-A2HX. For 3¾" plug-in equalizer, order 91-S-133 ($21.00 net).

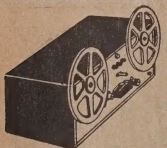
Single microphone input



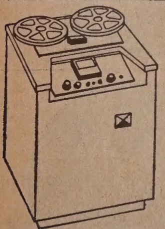
PT63-J has separate record and playback amplifiers, plus 10w audio. Switch for equalization of 7½-15 "/sec. Switch for record, playback bias reading. Includes tubes, case and connector cables.	387.00
PT63-JX Same, less case.	370.00

PT7 amplifiers can also be used with the PT63-A. For single microphone operation of PT7-A, use this PT63-J amplifier.

RECORDERS — P T 7 SERIES — AMPLIFIERS



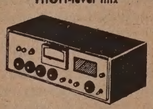
PT7-A Accommodates 10½" NAB reels. 3 heads—positive timing drive. Switch for 2 speed change (7½-15). Push button controls. Hi-speed forward. Includes 4 mounting bolts, oscillator tube, adapter hubs for 10½" reels. No connector cables.	468.00
PT7-AX Same as above, less case.	452.00



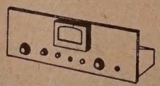
COMPLETE CONSOLE Combination $950

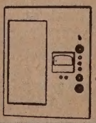
PT7-CC Includes PT7-AX recorder mechanism, PT7-C console line-level amplifier and cabinet. Black enamel finish with burn-proof Formica top. Chrome trim. 38" high x 25" wide x 23½" deep.	950.00
Cabinet only.	164.00

Three channel HIGH-level mix



Console mount line-level





RACK MOUNT LINE LEVEL

PT7-P has separate record and playback amplifiers plus 10w audio. Switch for 7½-15 equalizer. Switch for record, playback or bias readings on 4" VU meter. Includes tubes, case, connector cables.	440.00
PT7-C has separate record and playback amplifiers. Headphone jack. Can be rack mounted. Includes tubes and connector cables. Switch for 7½-15 equalization. Switch for record, playback or bias reading on 4" VU meter.	334.00
PT7-R same as PT7-C with adapter panel for vertical mounting of PT7-A to eliminate overlap of 10½" reels on adjacent rack. Complete with tubes, connector cables.	353.00

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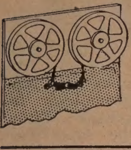
PROFESSIONAL TAPE RECORDER . . . . .

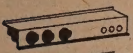
STANDARD MAGNECORD SPECIFICATIONS

- **Frequency Response:** Flat from 50 to 15,000 cps, ± 2db at 15″ per second tape speed and flat from 50 to 7500 cps, ± 2db at 7½″ per second tape speed when using Magnecorder equalizers selected for specific speed used. 50 to 4000 cps, ± 2db at 3¾″ per second tape speed.
- **Signal to Noise Ratio:** Exceeds 50 db with less than 2% harmonic distortion.
- **Maximum Flutter:** Less than 0.3% peak-to-peak.
- **Finish:** Gray hammered panels—Leatherette cases.
- **Power:** 117 volt, 60 cycle, AC (singlephase).

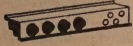
ACCESSORIES AND MODIFICATION KITS



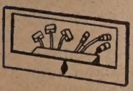
PT6-M AUXILIARY SPOOLING Mechanism accommodates 10½" NAB reels—Doubles record and playback time. 19" wide x 10½" high for rack mount or portable. Separate rewind and take-up motor. No reels included. **128.00**



PT6-IM3 THREE CHANNEL INPUT MIXER (Low-level) 17" long. 30/50 ohm microphones. **67.50**

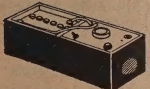


PT6-IM4 FOUR CHANNEL INPUT MIXER (Low-level) 17" long. 30/50 ohm microphones. **74.50**



PT6-HT PANEL AND THROW-OVER Switch provides selective switching for two recorders. Permits continuous operation using single amplifier. Panel 19" for rack mounting. For PT6 equipt. **36.00**

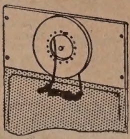
PT6-T Same as above less rack panel. For portable use. **32.00**



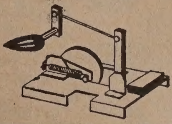
PT6-S PORTABLE POWER SUPPLY 117v 60 cycle AC from 12v DC self-contained airplane-type battery. Includes battery, genemotor, frequency meter, and frequency control. Runs PT6-A, PT6-J or P for 1 hour. **251.00**

TAPE SPEED EQUALIZERS

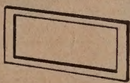
91-6910	15"/sec. EQUALIZER Plug-in type. 15,000 cps.	17.60
91-6911	7½"/sec. EQUALIZER Plug-in type. 7,500 cps.	17.60
91-S-133	3¾"/sec. EQUALIZER Plug-in type. 4000 cps.	21.00



PT6-EL CONTINUOUS LOOP MECHANISM Eliminates rewinding tape. Holds up to 600 ft. (15 min. at 7½ "/sec.) Use with PT6AX and PT6 amplifiers. 19" wide x 10½" for rack mount or PC-MA portable case. Gray finish. Mounting bolts. **64.50**



93-6298 HI-SPEED FORWARD Adapter kit to convert present PT6-A to PT6-AH. All parts assembled and ready for installation. Instructions included. **14.15**



PT6-H RACK ADAPTER PANEL 19" x 8¾" high. For rack mounting of PT6-AX or PT6-J amplifier. Finished in Gray Hammerloid. Does not include knurled mounting screws. **7.00**

KIT 101 Converts PT6 equipt. to monitor directly from tape. Consists of 3 head unit (erase, record and reproduce heads) and headphone or line level output Amplifier with power supply. **165.90**

93X5 Amplifier/power sply only **84.30**

91X121 Three head unit only **81.60**

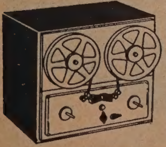
HEAD RECONDITIONING CHARGES

ERASE head (91A48) in 3 head unit.	15.10
RECORD head (91x74) in 3 head unit.	11.25
REPRODUCE head (91x73) 3 head unit.	11.25
ERASE head (91-6017) in PT6 equipment. (RECONDITION)	15.10
(NEW)	22.50
RECORD/REPRODUCE head (91-6016) in PT6 equipment.	11.25
(NEW)	37.10

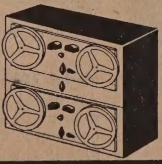
PORTABLE CARRYING CASES WHEN ORDERED SEPARATELY

PC-6A	for PT6 or PT63 basic recorder mechanism.	28.50
PC-6J	for PT6-J portable single input amplifier.	24.00
PC-6P	for PT6-P portable three channel amplifier.	24.00
PC-63	for PT63-J portable record and monitor amplifier.	28.50
PC-7A	for PT7-AX basic recorder mechanism.	30.00
PC-7P	for PT7-P three channel hi-level mix amplifier.	30.00
PC-MA	for portable operation of PT6-M, PT6-EL, etc.	34.00
PC-HTA	for portable use of 2 PT6-AX or 2 PT63-AX. —As shown below in PT6-HTA.	34.00

PORTABLE P T 6 LONG-PLAYING RECORDER COMBINATIONS



PT6-MA One PT6-AX and PT6-M unit mounted in portable case. Includes "H" panel to accommodate PT6-AX. Overall size: 20½" high x 20" wide x 15" deep. PT6-M includes adapter hubs for 10½" NAB reels. Use with PT6-J or PT6-P amplifier. **452.00**



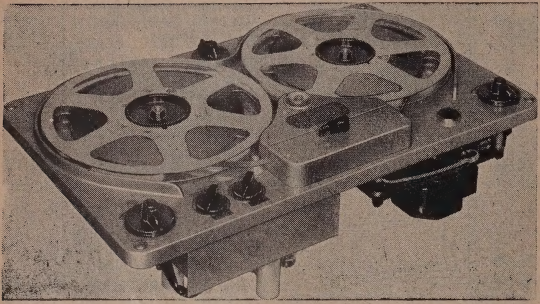
PT6-HTA Includes 2 PT6-AX, One PT6-HT, One PT6-H adapter panel and portable case: 20½"H x 20"W x 15" deep. Use with PT6-J or PT6-P amplifier. For continuous record or playback operation. **643.00**

WRITE FOR COMPLETE NEW CATALOG OF EQUIPMENT:
MAGNECORD, INC., 360 N. MICHIGAN AVE., CHICAGO, ILL.

Net

Concertone

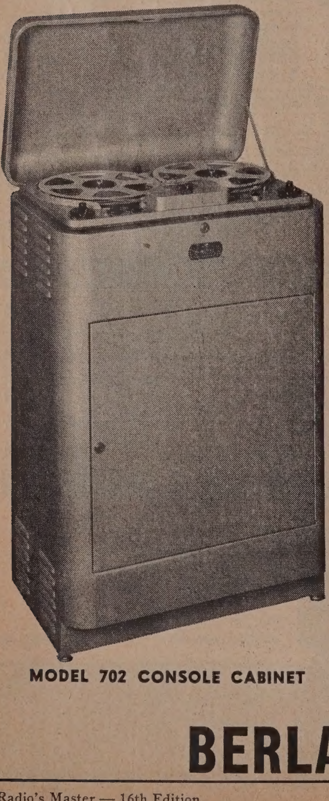
MAGNETIC TAPE RECORDER



MODEL 1401 BASIC RECORDER

FEATURES

Broadcast studio quality complies with NAB standards — Separate heads for high frequency erase, record and playback — Simultaneous monitoring from the tape while recording — Prealigned heads quickly interchanged for single or dual track — Instantaneous choice of 7.5 or 15 inch per second tape speeds — Plays standard 5 inch, 7 inch and NAB 10½ inch reels — High speed rewind, forward and reverse, 2500 feet in one minute — Three dynamically balanced motors for dependable performance — Automatic idler wheel release to prevent flat spots — Self balancing push-pull power pentode erase circuit — Independent lateral adjustment, while running, for each head — All controls interlocked to prevent spilling or tearing tape — Record level indicator permits maximum signal without overloading — Relief of tape pressure during rewind reduces wear of heads — Self contained switching simplifies installation. **Available with hysteresis synchronous motor on special order.**



MODEL 702 CONSOLE CABINET

SPECIFICATIONS:

Size: 22"x 14"x 5" mounting depth below panel. **Recording speeds:** 7.5" and 15" per second. **Rewind speeds:** 10½" NAB reel in 1 minute. **Frequency response:** ± 2 db from 50 to 15,000 cycles at 15"/sec. ± 2db from 50 to 9,000 cycles at 7.5"/sec. **Flutter and wow:** 0.1% at 15"/sec.; 0.3% at 7.5"/sec. **Signal to noise ratio:** Better than 50 db. **Total harmonic distortion:** Less than 2% at normal maximum signal level. **Input and output impedance:** 5 megohm. **Minimum input signal:** 5 millivolts. **Output signal:** Audio—1 volt. **Playing time, single track:** 7" reel; 16 min. at 15"/sec.; 32 min. at 7.5"/sec., 10½" reel: 33 min. at 15"/sec.; 66 min. at 7.5"/sec. Double above times for dual track recording. **Power requirement:** 150 watts, 117V. 60 cycle single phase.

Model 1401 — Basic Recorder

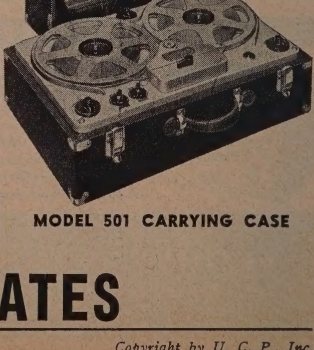
Ready for custom installation. Includes drive mechanism, power supply, erase, record and playback preamplifiers, all mounted on rigid base plate. **Professional Users Net Price,** dual or single track heads $345.00

Model 501 — Carrying Case

Complete with monitoring amplifier, high fidelity 8" speaker, and all connections for portable system. **Professional Users Net Price** $82.50
Without monitoring amplifier and speaker, for professional usage **$47.50**

Model 702 — Console Cabinet

All metal construction. Features rack panel set-up for mounting a complete sound system. Completely enclosed. **Professional Users Net Price**.................... $97.50

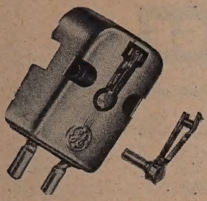


MODEL 501 CARRYING CASE

Manufactured by

BERLANT ASSOCIATES

GENERAL ELECTRIC



GENERAL ELECTRIC VARIABLE RELUCTANCE CARTRIDGE WITH REPLACEABLE STYLUS

STANDARD RECORDS (3 mil tip radius)
Catalogue No. RPX-040
MICRO-GROOVE RECORDS (1 mil tip radius)
Catalogue No. RPX-041

Performance engineered at Electronics Park, these cartridges provide record reproduction unsurpassed in quality. Low needle talk and needle scratch. Minimum distortion. Retracting stylus. Low record wear due to flexible suspension and low stylus pressure. Virtually unaffected by normal temperature or humidity variations.

Shipping Weight—1½ ounces........................List Price $9.95

Also available in a Professional model (RPX-046) with low impedance to match broadcast equalizers. Furnished less stylus.

Shipping Weight—1½ ounces......................List Price $11.45

G-E REPLACEMENT STYLI

Catalogue No.	Stylus	Tip Radius in Inches	List Price
RPJ-001	Sapphire	.003	$ 3.50
RPJ-005	Sapphire	.001	3.50
RPJ-006	Sapphire	.0025	3.50
RPJ-002	Diamond	.0025	27.50
RPJ-003	Diamond	.003	27.50
RPJ-004	Diamond	.001	27.50

GENERAL ELECTRIC TRIPLE PLAY CARTRIDGE

Catalogue No. RPX-050

The RPX-050 plays 33⅓, 45 and 78 RPM records without changing its position in the tone arm. Uniform stylus pressure of 6 to 8 grams for all 3 types of records. This, plus the low mass, is valuable in minimizing record wear. Retaining the unexcelled frequency response characteristics of previous G-E Variable Reluctance Cartridges, the RPX-050 is also notable for low needle talk and needle scratch. Output impedance is the same as RPX-040 and RPX-041.

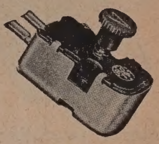
Shipping Weight—2 ounces....................................List Price $13.95

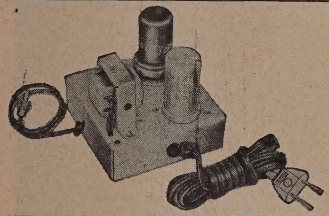
Replacement Styli RPJ-010 (1 mil & 3 mil Sapphire)
List Price 5.95

Also available in a Professional model (RPX-047) with low impedance to match broadcast equalizers. Furnished less stylus.

Shipping Weight 1½ ounces..................................List Price $15.45

Catalogue Number	Stylus	Tip Radius in Inches	List Price
RPJ-007	Sapphire	.001 & .0025 combination	$ 5.95
RPJ-010	Sapphire	.001 & .003 combination	5.95
RPJ-011	Diamond	.001 & .0025 combination	49.95
RPJ-012	Diamond	.001 & .003 combination	49.95





GENERAL ELECTRIC PREAMPLIFIER WITH RECTIFIER

Catalogue No. UPX-003

The UPX-003 Phono Preamplifier, which operates directly from a 105-125 volt, 50-60 cycle AC power line, is designed for use with the General Electric Variable Reluctance Cartridges. It provides sufficient amplification and the necessary low frequency equalization to enable Variable Reluctance Cartridges to be used with standard receivers and amplifiers.

Shipping Weight—1½ lbs.............List Price $17.95

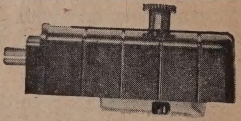
Also available without rectifier as SPX-001, designed to take its power requirements (6.3 volts AC, 100 DC) from the receiver or amplifier with which it is used. Leads and jacks provided for attachment to chassis and Variable Reluctance Cartridge.

Shipping Weight—1 lb...................List Price $11.90

NEW GENERAL ELECTRIC PLUG-IN HEAD WITH THE FAMOUS G-E TRIPLE PLAY CARTRIDGE

Specially adapted to Webster Changers, the UPX-111 features the General Electric Triple Play Cartridge in an attractive plastic plug-in head. The Triple Play Cartridge, RPX-050, is equipped with the famous Baton Stylus. No longer is it necessary to change heads to play different speeds; a simple twist of the handy positioning knob selects the proper stylus for any of the three commercially available record speeds. Just plug the UPX-111 into a Wesbter tone arm and discover what brilliance the Baton Stylus can bring out in your 33⅓, 45 or 78 rpm records.

Shipping weight 2 ounces.........................List Price $15.95



Catalogue No. FA-21-A

GENERAL ELECTRIC TRANSCRIPTION ARM

The General Electric Transcription Arm, designed to mount the G-E Variable Reluctance Cartridges, is for use by those desiring the utmost in quality reproduction of lateral transcriptions and records.

The G-E Transcription Arm is designed for optimum performance of lateral transcription and recordings only. It contains no design compromise such as are necessary if provision for vertical reproduction is also incorporated.

The mass of the transcription arm has been reduced to the ultimate point by careful mechanical design and the use of magnesium alloy for the moving parts. Very low bearing friction in both the lateral and vertical planes is assured by precision, hand-adjusted cone type bearings.

Shipping Weight—2½ lbs.
Suggested professional user's price $41.00

An arm counterweight, Catalogue No. RWP-001, is available to adapt the FA-21-A for long-playing records.

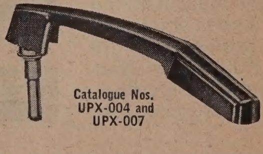
GENERAL ELECTRIC TONE ARMS FOR STANDARD AND NARROW GROOVE RECORDS WITH THE FAMOUS VARIABLE RELUCTANCE CARTRIDGES

Catalogue Nos. UPX-004 and UPX-007

These two G-E arms are designed specially to bring out the full value of the distinguished General Electric Variable Reluctance Cartridges. Use the UPX-004 for narrow groove records and the UPX-007 for standard groove records. Skillful design provides a wide range response free from undesirable resonances.

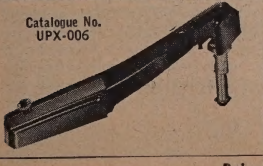
Both arms have a small hole on top through which a wire or paper clip may be inserted to push out the old stylus. Thus, stylus replacement requires only a few seconds. A special lightweight alloy and the efficient size of the arm reduce tone arm mass to a minimum. Ball bearings insure smooth lateral movement. Spring tension is factory adjusted to 6-8 grams pressure for the narrow groove arm and 12-14 grams for the standard groove arm. Positioning of arms and arm rests is simplified by a mounting template which is supplied with the arm. Mounting requires only a ½″ diameter hole for the arms and a $\frac{3}{16}$″ diameter hole for the tone arm rest. Finished in Navajo brown.

Shipping weight 3 lbs.........................List Price $15.95



Catalogue Nos. UPX-004 and UPX-007

Catalogue No. UPX-006



NEW GENERAL ELECTRIC TONE ARM FOR STANDARD AND LONG PLAYING RECORDS WITH THE FAMOUS G-E TRIPLE PLAY CARTRIDGE

Catalogue No. UPX-006

This new G-E tone arm, designed at Electronics Park to feature the General Electric Triple Play Cartridge, can bring all the beauty of quality reproduction to ordinary phonographs. Now—all three speeds, 33⅓, 45 and 78 rpm, can be played by a single cartridge without changing its position in the arm. A selector knob at the top of the arm makes it possible to place either stylus in playing position with a single twist.

The tone arm mass is kept to a minimum by skillful design and a special lightweight alloy. Light stylus pressure of 6-8 grams for all three speeds reduces record wear to a minimum. The tone arm is equipped with ball bearings to insure smooth lateral movement. Navajo brown finish.

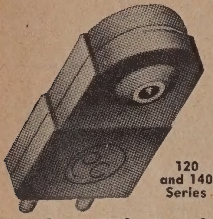
Shipping weight 3 lbs............................List Price $19.95

Prices and Specifications Subject to Change Without Notice

PICKERING HIGH QUALITY AUDIO COMPONENTS FOR RECORD REPRODUCTION

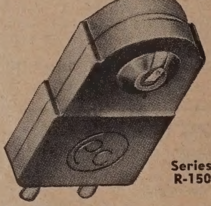
THE PICKERING CARTRIDGE

There is a Pickering Cartridge Reproducer for every record playing and transcription use . . . Professional, Laboratory and Home Phonograph.



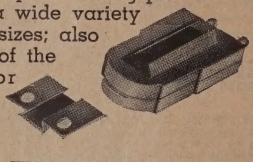
Models D-120M, S-120M, D-140S and S-140S, with diamond or sapphire stylus, are without equal; they produce the finest quality reproduction of lateral recordings; they are the choice of professional audio engineers.

MODELS D-120M AND S-120M are for playing standard records and transcriptions requiring 2.5 mil styli. MODELS D-140S AND S-140S are for long playing, microgroove records; 33⅓ and 45 RPM.



Model R-150, featuring a replaceable diamond or sapphire stylus is specifically designed to produce optimum quality record response with standard home record playing phonographs. The R-150 is designed for 78 RPM shellac records. The high frequency response is attenuated by mechanical means above 8000 cycles.

All Pickering Cartridges will fit practically any arm made for a standard pickup. Their ingenious "Keystone Clip" mounting permits adaptation to a wide variety of arm shapes and sizes; also permits adjustment of the stylus position for minimum tracking error. Special adapter-clips are available for Webster-Chicago and Garrard changers.



PICKERING CARTRIDGES ARE UNCONDITIONALLY GUARANTEED

Model S-120M with .0027" Sapphire stylus . . .

Model D-120M with .0025" Diamond stylus . . .

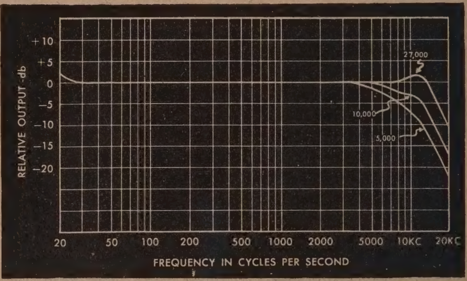
Model S-140S with .001" Sapphire stylus for long-playing MICROGROOVE recordings .

Model D-140S with .001" Diamond stylus for long-playing MICROGROOVE recordings .

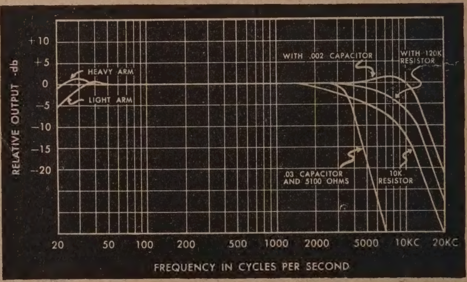
Model R-150 without stylus for home phonographs . .

Styli for Model R-150 Cartridge Reproducer

S-20 —	.002"	Sapphire	**D-20** —	.002"	Diamond
S-25 —	.0025"	Sapphire	**D-25** —	.0025"	Diamond
S-30 —	.003"	Sapphire	**D-30** —	.003"	Diamond



The frequency response characteristics with various load impedance values are shown in the accompanying curves. Series 140 and 120 above and R-150 below.



With the exception of the stylus point, all Pickering Cartridges are covered by an unconditional guarantee, provided the cartridge has not been opened nor subjected to extraordinary abuse. Every Pickering Cartridge, before leaving the factory, is carefully tested for FREQUENCY RESPONSE, WAVEFORM DISTORTION, OUTPUT LEVEL, TRACKING PRESSURE, and in addition, optical inspection of the stylus polish and shape, mechanical inspection of moving parts and electrical inspection of the pickup coil are made on each unit. Reports from users reveal absolute stability, amazing ruggedness and complete insensitivity to the effects of temperature and humidity.

Pickering
& Company, Inc.

Oceanside, Long Island, N. Y.

PICKERING HIGH QUALITY AUDIO COMPONENTS

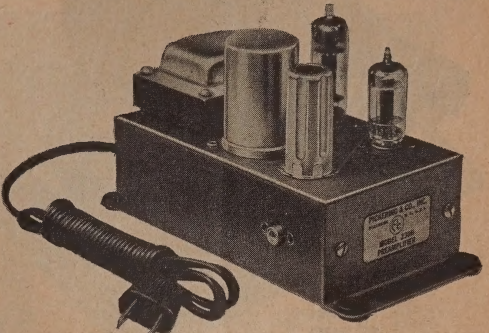
PREAMPLIFIER MODEL 230H

EQUALIZES THE BASS RESPONSE OF RECORDS AND TRANSCRIPTIONS AND PROVIDES THE NECESSARY GAIN FOR HIGH-QUALITY MAGNETIC PICKUPS.

The Pickering 230H Preamplifier is designed to operate with any high-quality amplifier having a high impedance input. It is self-powered, operates from the 115 volt AC line, and is installed by simply plugging in.

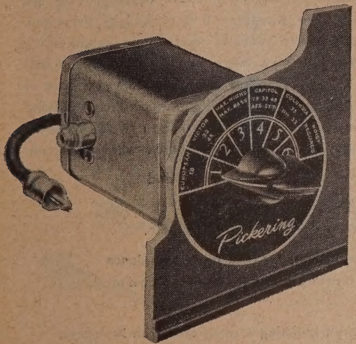
Model 230H is unique in its accuracy of equalization, being superior to most broadcast station equipment in this respect. Further, the intermodulation and harmonic distortion is lower than good engineering practice requires in professional equipment.

The 230H Preamplifier represents the most advanced design ever achieved in phonograph preamplifiers, and like all Pickering Audio Equipment, symbolizes maximum performance.



TECHNICAL SPECIFICATIONS

FREQUENCY RESPONSE: Within 2 db from 40 — 20,000 cps. Compensates for 6 db per octave loss below 500 cps. . . . OUTPUT: High impedance, 2 volts average from phonograph records. (For 500/600 ohm output at –10 dbm use Pickering 600G transformer, available as accessory equipment.) . . , DISTORTION: Not more than 0.2 percent intermodulation at normal output level. Not more than 0.4 percent intermodulation at +10 db over normal level. Not more than 1.7 percent intermodulation at +20 db over normal level. . . . HUM LEVEL: –56 db below maximum signal. . . . INSTALLATION: Unit furnished with 6 ft. approved cord which can be connected to wall socket or amplifier. Input socket — standard type; matching plug furnished with unit. Output — terminal strip. Rubber shock mounts provided. . . . DIMENSIONS, WEIGHTS AND TUBES: Size of preamplifier: 7½ inches long, 3½ inches deep and 4⅝ inches high. Weight: 2 lbs. 6 oz. Tubes: 6C4, 6x4, 6AU6 (any good, standard brand).



RECORD COMPENSATOR MODEL 132E

Provides the flexibility required to properly equalize for the different recording characteristics used by various record manufacturers.

The Pickering Record Compensator permits proper equalization of the amplifier system to produce optimum reproduction of individual records; because all linear circuit elements are used it has no inherent distortion. This Compensator permits each individual record to offer all of its quality without compromise . . . permits getting the maximum use out of scratched and worn records. Its six positions correctly equalize for all of the established recording characteristics including microgroove and standard records, domestic and foreign.

The Pickering Record Compensator is a most important addition to any record player equipped with an amplifier system having a high gain preamplifier, such as the Pickering 230H. It is easily installed, and like all Pickering Audio Equipment, symbolizes maximum performance.

SWITCH POSITIONS

1 — EUROPEAN RECORDS, this group covers HMV, English Decca, FFRR 78's, and American pressings of European recordings. 2 — VICTOR, 33⅓ and 45 rpm recordings. 3 — VICTOR 78, no high frequency roll-off, 500 cycle turnover. 4 — CAPITOL, and for most 78 rpm domestic records, including Columbia, Decca, MGM, etc. 5 — COLUMBIA, and for most makes of 33⅓ rpm microgroove recordings. 6 — NOISY RECORDS, this position permits playing of old noisy records with objectionable hiss removed.

TECHNICAL SPECIFICATIONS

INPUT: High impedance magnetic cartridge . . . OUTPUT: To feed into high-gain amplifier which has 6 db per octave rise below 500 cycles per second, and which has an input resistance of 47,000 ohms . . . INSTALLATION: Unit can be mounted in any position (on panels up to ⅜ inch thick) by means of threaded bushing. Since no power is required to operate the Record Compensator only a single connection has to be made to a suitable preamplifier. Input connection — standard socket. Matching plug furnished with unit. Maximum distance between record compensator and preamplifier input 20 inches, cable supplied . . . DIMENSIONS AND WEIGHT: Size of unit: 1⅞" square by 3⅛" overall, less switch shaft. Weight: 6½ oz.

Pickering
& Company, Inc.

Oceanside, Long Island, N. Y.

Model
12300

ENTIRELY NEW

The 3 Speed
MILWAUKEE
"MAESTRO"
Automatic Record Changer

Equipped With The Newest And Most Reliable Multi-Speed Motor

Check These MILWAUKEE *"Exclusives"*

- ✓ EXCEPTIONALLY FAST CYCLE CHANGE TIME
- ✓ PATENTED ANTI-SKATE DEVICE ELIMINATES NEEDLE SKATE OR SKID WHEN LANDING
- ✓ VERTICAL AND LATERAL TONE ARM FRICTION REDUCED TO A BARE MINIMUM
- ✓ PATENTED COMPENSATING COUNTER-BALANCE ASSURES UNIFORM NEEDLE PRESSURE ON ONE RECORD OR A FULL STACK
- ✓ ALL NORMAL ADJUSTMENTS MADE FROM TOP SIDE OF CHANGER

LIST PRICE $46.50 West of the Rockies **$48.50**

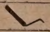
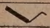
ATTRACTED by the performance and efficiency of the completely new MILWAUKEE "MAESTRO" 3-Speed Automatic Record Changer, foremost manufacturers of phono-combinations are specifying this dependable equipment in volume quantities. It is backed by the extensive production facilities and fifteen years of research and engineering experience of the Milwaukee Stamping Company. Use this 3-Speed unit to replace obsolete 1 and 2 speed changers. Also furnished with base or pan with proper A-C cord and sound cord to play through the amplifying system of any T-V set or radio. When we say that the new MILWAUKEE "MAESTRO" Record Changer "has everything," here's what we mean:

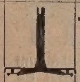
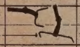
- Shuts off automatically after playing last record and returns tone arm to rest.
- Records shuttle from newly developed center spindle.
- Records supported at two points for ease and convenience of loading—minimizes record center hole wear—no cumbersome arms or bars.
- New quick-acting velocity trip-timing is integrated with turntable.
- Single switch control action.
- Extremely simple setting arrangement to play various size records. Automatic and "fool-proof".
- Minimum mounting Space 12¾" x 13¾"
- Height above mounting plate 5⅝"
- Height below mounting plate 3 3/16"

MILWAUKEE RECORD CHANGER CORP.

NEW YORK 7, N. Y.

Jensen NEEDLES for the replacement trade

CARTRIDGE MFG	CART MFG NEEDLE NO	JENSEN NEEDLE NO	ILLUSTRATION (Actual Size)	CARTRIDGE NUMBERS	POINT MATERIAL	POINT SIZE
Astatic	Q(M)	A-80		QT-M; QT2-M; QT3-M; LQD; LQD-1	Osmium	Standard
Astatic	Q-33(M)	A-80-LP		QT-33-M; CQ-M; LQD; LQD-1	Osmium	Micro-Groove
Astatic	Q-AG(M)	A-802		CQ-AG-M; CQ-AG-J	Osmium	All Groove
Astatic	Q(J)	A-81		QT-J; QT2-J; QT3-J; LQD; LQD-1	Sapphire	Standard
Astatic	Q-33(J)	A-81-LP		QT-33-J; CQ-J; LQD; LQD-1	Sapphire	Micro-Groove
Astatic	D(M)	A-83		LT-30; LT-40; LT-401; MD	Osmium	Standard
Astatic	D-33(M)	A-83-LP		LTD-30; LT-4; LT-40; LT-401	Osmium	Micro-Groove
Astatic	D-AG(M)	A-832		LT-4-AG	Osmium	All Groove
Astatic	G-78(M)	A-84		GC-78-M; MG-78-M	Osmium	Standard
Astatic	G(M)	A-84-LP		GC-M; GE-1M; MG-1M	Osmium	Micro-Groove
Astatic	G-AG(M)	A-842		GC-AG-M; MG-AG-M	Osmium	All Groove
Astatic	T(M)	A-86		LT-1M; LT-2M; LT-3M	Osmium	Standard
Astatic	T-33(M)	A-86-LP		LT-33	Osmium	Micro-Groove
Astatic	C-3(M)	A-87		MD-3	Osmium	Standard
Astatic	C-1(M)	A-87-LP		MD-1	Osmium	Micro-Groove
Astatic	U-78(M)	A-88		U-78-M	Osmium	Standard
Astatic	U(M)	A-88-LP		UM	Osmium	Micro-Groove
Astatic	C-3(J)	A-89		MD-3	Sapphire	Standard
Astatic	C-1(J)	A-89-LP		MD-1	Sapphire	Micro-Groove
Astatic	A-3(M)	A-85		AC-78; ACD Series	Osmium	Standard
Astatic	A-1(M)	A-85-LP		AC; ACD Series	Osmium	Micro-Groove
Astatic	A-AG(M)	A-852		AC-AG-M; AC-AG-J	Osmium	All Groove
Astatic	Nylon 1-M	A-82		Nylon 1J; Nylon 1M	Osmium	Standard
Shure	A62A	JP-30		P-30; P-37; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22AB; W-23B; W-60B; W-60HS; W-60PN; W-61B; W-65B Admiral 409A11	Osmium	Standard
Shure	A-63MG	JP-30-LP		Admiral 409A11; P-73; P-74AD; P-72V; P-76V	Osmium	Micro-Groove
Shure	A-66U	JP-312		Admiral 409A13-1; P-71; P-81; P-37	Osmium	Unipoint
Shure	A-61A	JPS-30		P-30; P-37; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22A; W-23A; W-60A	Sapphire	Standard
Shure	A-35MG	JPS-30-LP		P-73; P-74AD; P-72V; P-76V; W-21A; W-21AR; W-22A; W-22AB	Sapphire	Micro-Groove
Shure	A67U	JPS-312		P-71; P-81; P-37	Sapphire	Unipoint
RCA	72345	M-70		70338; 70339	Sapphire	Standard
RCA	74068	M-70-LP		74067	Sapphire	Micro-Groove
RCA	75046	M-71		70338; 70339	Osmium	Standard
RCA	75045	M-71-LP		74067	Osmium	Micro-Groove
RCA	39863	M-72		72551; 9890; 39919; 39550; 38598; 70332; 39851	Sapphire	Standard
RCA	38449	M-73		72551; 9890; 39919; 39550; 38598; 70332; 39851	Osmium	Standard
RCA	75497	M-74		75475	Sapphire	Standard
RCA	75496	M-74 LP		75475	Sapphire	Micro-Groove
RCA	75497	M-75		75475	Osmium	Standard
RCA	75496	M-75 LP		75475	Osmium	Micro-Groove
Electro-Voice	S-3	E-90		M12-S; H12-S; L12-S	Sapphire	Standard
Electro-Voice	S-1	E-90-LP		14-S; 22-S; 34S	Sapphire	Micro-Groove
Electro-Voice	S-13	E-91		16TT; 22TT	Sapphire	Twin Point
Electro-Voice	O-13	E-93		16TT; 22TT	Osmium	Twin Point
Electro-Voice	O-3	E-95		M12; H12; L12	Osmium	Standard
Electro-Voice	O-1	E-95-LP		14; 34;	Osmium	Micro-Groove
Electro-Voice	O-2	E-962		33; 335	Osmium	All Purpose
Columbia	101	M-60-LP		45-1609	Sapphire	Micro-Groove
Columbia	102 & 103	A-81-LP		CQ	Sapphire	Micro-Groove

CARTRIDGE MFG	CART MFG NEEDLE NO	JENSEN NEEDLE NO	ILLUSTRATION (Actual Size)	CARTRIDGE NUMBERS	POINT MATERIAL	POINT SIZE
Webster-Electric	M	W-02		M-1	Osmium	Standard
Webster-Electric	F-14	W-05		F14; F14-1; F14-2; F14-3; F14-4	Osmium	Dual
Webster-Electric	A3S	W-14		A1; A8	Sapphire	Standard
Webster-Electric	A1S	W-15		A1; A2; A3; A4; A5; A6; A8	Sapphire	Micro-Groove
Webster-Electric	A3O	W-16		A1M; A1M-1; A5M; A6M	Osmium	Standard
Webster-Electric	A1O	W-17		A1M; A1M-1; A2M; A5M; A6M	Osmium	Micro-Groove
Webster-Electric	Q1	W-30		Q1	Osmium	Standard
Webster-Electric	G3	W-36		G3M	Osmium	Standard
Webster-Electric	G1	W-36-LP		G1M	Osmium	Micro-Groove
Webster-Electric	G2	W-362		G2M	Osmium	All Purpose
Webster-Electric	WS	W-37		WS	Osmium	Standard
Webster-Electric	AJ	W-37-LP		AJ4	Osmium	Micro-Groove
Webster-Electric	A9	W-38		A9M	Osmium	All Purpose
Webster-Electric	A2	W-412		Q3; A9; F-13	Osmium	All Purpose
Webster-Electric	C9	W-422		C9	Osmium	All Purpose
Webster-Electric	Q2	W-49		Q2	Osmium	Standard
Webster-Electric	F16-3	W-72		F16; F16-1; F16-2	Osmium	Standard
Webster-Electric	F16-1	W-73		F16; F16-1; F16-2	Osmium	Micro-Groove
Webster-Electric	F15-3	W-81		F15; F15-1	Osmium	Standard
Webster-Electric	F15-1	W-82		F15; F15-1	Osmium	Micro-Groove
Webster-Electric	F7	13-LP		F7; F7-1; F7-2; Q2; F15	Osmium	Micro-Groove
Webster-Electric	F10	JP-30		F10; F11; F11-1	Osmium	Standard
Webster-Electric	F10-1	JP-30-LP		F11; F11-1	Osmium	Micro-Groove
General Electric	RPJ-001	GE-10		RPX-040; RPX-041; RPX-046	Sapphire	Standard
General Electric	RPJ-008	GE-10-LP		RPX-040; RPX-041; RPX-046	Sapphire	Micro-Groove
General Electric	RPJ-010	GE-11		RPX-050	Sapphire	Dual
Philco	45-1596	PH-10		Dynamic Reproducer 76-1622	Sapphire	Standard
Philco	45-1613	PH-11		45-1609	Osmium	Micro-Groove
Philco	35-2693	PH-12		76-4649	Osmium	Dual
Philco	45-1613	M-60-LP		45-1609	Sapphire	Micro-Groove
Philco	45-1597	PH-14		35-2671	Osmium	Standard
Philco	45-1651	PH-15		35-2671	Sapphire	Standard
Webster-Chicago	NE-215	NE-215		21P247; 21P402; 21P403	Osmium	Dual
Webster-Chicago	NE-316	NE-368		21P404	Osmium	Dual
American Microphone	S-1	AM-20		S-1; S-1A; S-2; S-2A	Osmium	Standard
American Microphone	CO-3	AM-21		C-3	Osmium	Standard
American Microphone	CO-1	AM-21-LP		C-1	Osmium	Micro-Groove
American Microphone	CO-2	AM-212		C-2	Osmium	All Purpose
Crosley	145720	C-99		145749	Sapphire	Standard
Magnavox	560102	M-02		560101	Osmium	Standard
Magnavox	560138	M-46		560133	Osmium	Twin Point

Free! Send for your free Wall Chart (above), which shows in actual size all Jensen Replacement Needles.

JENSEN NEEDLES FOR ALL RECORD PLAYERS

ROYAL JEWEL

A long life top quality needle with a genuine sapphire tip; 13 needles to a display.

NYLON

The finest Nylon Needle with either sapphire or osmium tip for any record player.

Jensen
SWEET
WORLD'S FINEST

SWEET

High in quality, low in cost with genuine osmium tip, straight shank notched.

CLASSIC

Osmium tipped needle with an exclusive spring action that absorbs needle noise and reduces shock.

LONG PLAYING

A needle with either sapphire or osmium tip for 33⅓ and 45 RPM record players.

FIFTY

Jensen's lowest priced quality needle with osmium tip. Twelve needles to a display card.

CONCERT

A popular priced needle with osmium tip and exclusive flexible shank that protects records.

ALL PURPOSE

Plays micro-groove as well as regular at all three speeds; 33⅓, 45 and 78 RPM.

COIN MACHINE NEEDLES

Assure long satisfactory playing. Available with either curved or straight shank, sapphire or osmium tip.

new JENSEN ACOUSTIC TAPE

Jensen's latest development . . . Magnetic Recording Tape, available with either plastic or paper base on 150, 600 and 1200 ft. plastic reels. An outstanding tape made to exacting specifications.

Acoustic Tape
Jensen

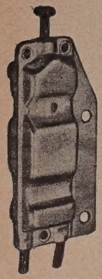
To round out the line Jensen offers the Symphonette Steel Needle, packaged 30 needles to an envelope, 50 envelopes to a counter display carton. Handle the complete line of Jensen Needles and be assured of never losing a sale.

Jensen INDUSTRIES, INC.
Chicago 12, Ill.

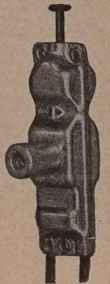
WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin. Established 1909

CRYSTAL CARTRIDGES


Flange Mount
MODEL C2

Clamp Mount
MODEL C8

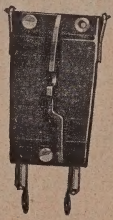

Stud Mount
MODEL C4

For 78 RPM
Records
MODELS
F1, F2, F7

For 33⅓-45
Records
MODEL F13

For
33⅓-45-78
Records
MODELS F15, F16

D SERIES


A SERIES
Plays 33⅓-45-78
RPM Records

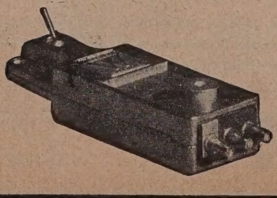
Q SERIES
Retractable
Cartridge

FEATHERIDE CARTRIDGES are manufactured to exceptionally high standards of precision. Each cartridge is individually tested and packed in Dri-Pack containers before release, assuring flawless performance and maximum customer satisfaction. The range of characteristics described below permits replacement of crystal cartridges in record-players, record changers and radio-phonograph combinations. See your radio parts jobber or write direct for bulletin RC156A Replacement Chart.

CHARACTERISTICS AND LIST PRICE

Model No.	Average Output at 1000 C.P.S. Volts		Minimum Tracking Pressure R.P.M.		Aprox. Cut-off frequency C.P.S.	Net Weight	Needle Information	List Price
	R.P.M. 33⅓-45	R.P.M. 78	Gram 33⅓-45	Gram 78		Gram	(See Note)	
DUAL PURPOSE CARTRIDGE MICROGROOVE AND STANDARD (33⅓, 45 AND 78 R.P.M.) AND MICROGROOVE (33⅓ AND 45 R.P.M.) ONLY.								
A1	.75	1.00	7.0	7.0	5,000	5.0	1MS & 3MS	$8.50
A1M	.75	1.00	7.0	7.0	5,000	5.0	1MO & 3MO	7.50
A2	.75	——	7.0	——	5,000	5.0	1MS	6.50
A2M	.75	——	7.0	——	5,000	5.0	1MO	6.00
A7-1	.75	1.00	7.0	7.0	5,000	5.0	1MS & 3MS	9.00
A7M1	.75	1.00	7.0	7.0	5,000	5.0	1MO & 3MO	8.00
A9-1	.75	1.00	7.0	7.0	5,000	5.0	2MS	6.50
A9M1	.75	1.00	7.0	7.0	5,000	5.0	2MO	6.00
F13M	.85	——	7.0	——	6,000	8.0	1MO	6.50
F15M	.85	1.70	7.0	21	6,000	10	1MO & 3MO	8.50
F18M	2.0	2.0	10.0	10.0	4,000	10	1MO & 3MO	8.50
Q3	2.0	3.0	12	12	5,000	23	2MO	7.50
PAX	**1.0**	**1.5**	**7**	**7**	**5,000**	**13**	1MO & 3MO	**8.25**
STANDARD (78 R.P.M.) ONLY								
				Ounce				
A3	——	1.00	——	.25	5,000	5.0	3MS	6.50
A3M	——	1.00	——	.25	5,000	5.0	3MO	6.00
C2	——	3.40	——	2.50	5,000	16	——	4.50
C4	——	2.50	——	2.50	5,000	16	——	4.50
C8	——	4.00	——	1.50	5,000	16	——	4.50
D2	——	2.50	——	2.50	5,000	25	——	5.40
D3	——	.70	——	1.25	6,000	25	——	5.55
F1P	——	1.25	——	1.00	5,000	8.0	——	5.00
F2P	——	1.25	——	1.00	5,000	18	——	5.00
F7P	——	1.20	——	1.00	8,000	18	3MO	7.50
F7P 2	——	2.25	——	1.50	5,000	8.0	3MO	6.50
Q1	——	1.00	——	1.00	8,000	23	3MO	8.50
Q2	——	2.00	——	1.50	6,000	23	3MO	7.50
WS	——	**1.50 or 4.00**	——	**.75**	**5,500**	**25**	**3 MO**	**5.50**

Note: 1MS = 1 Mil Sapphire tip; 1 MO = 1 Mil Osmium tip; 2 MO = 2 Mil Osmium tip; 3 MS = 3 Mil Sapphire tip; 3 MO = 3 Mil Osmium tip; DO = Dual tip 1 Mil Osmium and 3 Mil Osmium. Symbols indicate number of needles furnished. See your jobber or write direct for price bulletin on Featheride needles.



NEW MODEL WS FOR ALL 78 RPM SERVICE JOBS

1. Three-terminal construction provides either 1.5 volts or 4.0 volts at ¾ oz. tracking pressure.
2. Installs in any ½" standard RMA tone arm.
3. Replaceable osmium needle furnished.
4. Dri-Seal Crystal sealed against moisture.

WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin. Established 1909

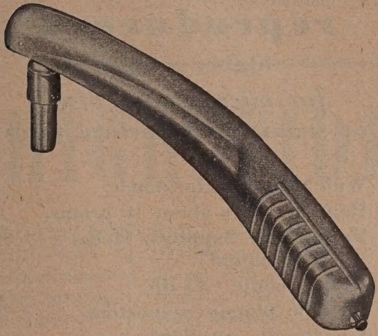
TONE ARMS

Featheride tone arms are manufactured to the same exceptionally high standards of precision as the Featheride crystal cartridge.

Featheride tone arms are provided to play any of the current speeds, 33⅓, 45 or 78 R. P. M., and will accommodate 7″, 10″ or 12″ records.

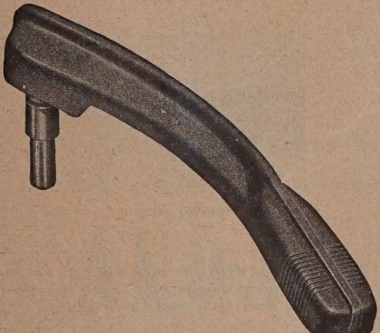
The precision matched components assure you that resonance, distortion and microphonic feed back have been reduced to the minimum.

All models are single hole mounting and are supplied with arm rests and mounting base brackets.



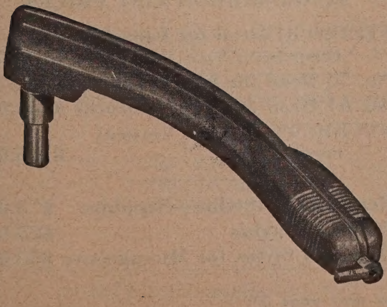
T Series: A competitive, light weight low-inertia tone arm constructed of stamped aluminum, attractively fluted and internally braced. This arm will give you long carefree service.

Model T1AC8	List Price $6.50
Model TQ2	List Price $9.75
Model T1Q3	List Price $9.75



V Series: A new tone arm which combines beautiful styling with exceptional rigidity, incorporating a high lateral ridge as an integral feature of design. This tone arm will enhance the appearance and quality of any record player.

Model VF7	List Price $11.50
Model VQ1	List Price $12.50
Model V1Q3	List Price $11.50
Model VQ2	List Price $11.50



V Series Twist Arm: The beautiful styling and exceptional rigidity combined with the new twist feature allows this arm to be used on any application where it is desirable to play all three popular speeds (33⅓, 45 or 78 R. P. M.) records. This arm is built to give years of service and may be used to advantage when converting present equipment to modern three speed use.

Model V1A8	List Price $12.50
Model V1F16	List Price $12.50

Audax

Pickups for *facsimile* Reproduction

"The Standard by Which Others Are Judged and Valued"

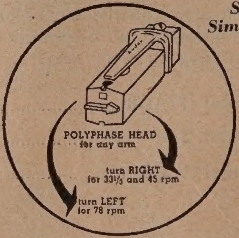
POLYPHASE

reproducers

In One Single Magnetic Unit —
33-1/3 – 45 – 78 rpm

Never before such
EAR-QUALITY,
such
FAITHFUL
REPRODUCTION

So Simple



POLYPHASE LIST PRICES

L-6 Head, for all lateral records	$34.50
L-6-G—for Garrard Changer (Plug-in)	$39.00
L-6-W—for Webster Changer (Plug-in)	$39.00
R-2-Head, for all lateral records	$24.50
R-2-G—for Garrard Changer (Plug-in)	$29.00
R-2-W—for Webster Changer (Plug-in)	$29.00
VL-9—A Vertical-Lateral Head	$69.50
Replacement Stylus—Sapphire	$ 3.50
Diamond Stylus	$25.00
Diamond Stylus for Microgroove	$35.00
Diamond Stylus for Vertical	$35.00

L-6 with 12″ arm (16″ same style)

- Sapphire styli (or diamond) replaceable individually.
- Output about 20 m.v.
- Response 20 to over 10,000 cps.
- Needle-talk at vanishing point.
- Tracking phenomenal.
- EAR QUALITY, par excellence.
- High or low impedance.
- Flexible plug-in connectors.

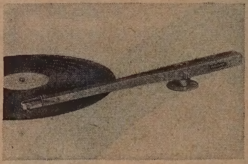
TUNED-RIBBON

reproducers

higher output

for microgroove discs
or standard or vertical discs

- Wide range performance.
- Point-pressure about 18 grams.
- Replaceable Sapphire Stylus (or diamond).
- Output about –25 db.
- Flexible plug-in connectors.
- Ear Quality excellent.



Studio Arm

> *There is an AUDAX pick-up for every purse and every purpose . . . each superlative in its own field and price group.*

TUNED-RIBBON LIST PRICES

STUDIO 81 Head for lateral records	$116.00
No. 73 Head for lateral records	$ 60.70
No. 61 Head for lateral records	$ 43.90
STUDIO 99 Head for Vertical records	$146.00
Replacement Stylus—Sapphire	$ 3.00
Diamond Stylus	$25.00
Diamond Stylus for Microgroove	$35.00

For AUDAX Sensitized Tone Arms, see next page →

Audax

Cutters for *facsimile* Recording

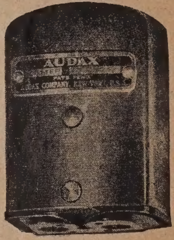
"The Standard by Which Others Are Judged and Valued"

PLAY-BACK EQUALIZER No. 8199—200 to 500 ohms output—affording NAB (LP), Orthacoustic, Vertical, 78 RPM—and Filter positions.
List Price $83.00

HIGH FIDELITY CUTTERS

AUDAX CUTTER H-5 — Substantially FLAT to 10,000 cycles, Distortion about 1.2% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms.
List Price $185.00

AUDAX CUTTER H-4 — Substantially FLAT to 8,000 cycles. Distortion about 1.7% at 1000 cycles. Fully modulates groove with input of about 16 db with 96 lines. Impedances up to 500 ohms.
List Price $125.00



AUDAX CUTTER H-3 — Substantially FLAT to about 7500 cycles. Distortion about 2.1% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 4000 ohms.
List Price $83.00

AUDAX Cutters are readily interchangeable on most recording machines

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AUDAX TONE-ARMS

The new AUDAX COMPASS-PIVOTED ARMS are sensitized to the *n*th degree in order to meet the extremely high requirements of modern discs.

• Only 3 parts • Highest tracking efficiency • No restraint to stylus travel • Frontal oscillations nil • No springs • No fatigue • Maintains original point-pressure permanently — regardless of climatic changes • Unquestionably the simplest and most efficient arm yet devised.

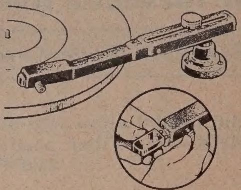
List Price		
No. 12 arm	**to 12″ records**	**$23.00**
No. 16 arm	**to 16″ records**	**$33.00**
STUDIO arm	**to 16″ records**	**$65.00**

AUDAX instruments are NOT affected by temperature or atmospheric changes

CLARKSTAN CORPORATION

MANUFACTURERS OF
FINE ELECTRONIC & INDUSTRIAL EQUIP.

BEST FOR LP MICROGROOVE AND STANDARD DISCS



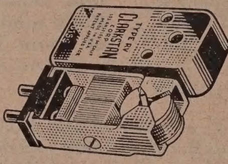
MODEL 213 — The new Clarkstan 12″ record arm offers the best in standard disc and microgroove reproduction. Heavy aluminum casting eliminates audible resonance point. The slide-in cartridge holder allows instantaneous mounting of all types of standard cartridges. Silver-plated, spring loaded plungers maintain positive electrical contact without necessity of soldering. Quick acting weight adjustment is positive and accurate for change from microgroove to standard records. Arm has adjustable height, fits all standard turntables. Vertical roller bearing and thrust ball bearing minimize cramping — no mechanical bias on the pickup. Finish grey wrinkle and brushed chrome. **Net price arm only $18.90.**

MODEL 213G — Same arm slotted to accommodate G.E. cartridge RPX-050. **Net price arm only $18.90.**

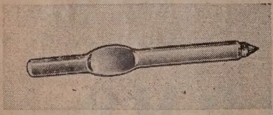
MODEL 212 — 16″ Transcription arm. This high quality professional arm is built on same proven engineering principles as the above Model 213. Has slide-in cartridge holder and quick adjusting weight for accurate needle force. Accommodates both LP microgroove and standard records — any size up to 17″ diameter. Overall length of arm is 14⅜″. Has adjustable height for all turntable conditions. Vertical roller bearings and ball thrust bearings eliminate mechanical bias on the pickup. Attractively finished in grey wrinkle and brushed chrome. **Net price arm only $19.90.**

MODEL 212G — Same arm slotted to accommodate G.E. cartridge RPX-050. **Net price arm only $19.90.**

WIDE RANGE RV PICK-UP



MODEL 201 — Clarkstan RV wide range variable reluctance cartridge for best reproduction of LP microgroove and standard records. Instantaneously replaceable and interchangeable needles. Frequency velocity responsive to above 12,000 cps. Needle force 5-7 grams for LP microgroove, as low as 10 grams for conventional records. Output 60 millivolts. High impedance — 5 - 50 - 250 and 500 ohm models available. ½″ mounting centers. Supplied with sapphire stylus. Specify .0012″ for LP microgroove or .0030″ tip radius for standard records .0015″ - .0022″ - .0025″ tip radii also available. (Can also be supplied with diamond stylus of any of above tip radii. **Net price (cartridge only with standard sapphire stylus) $15.00.**



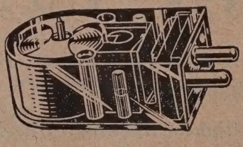
SAPPHIRE & DIAMOND STYLI

Extra styli (tubular shank) for Clarkstan Pickups:

Sapphire No.	Diamond No.	Ball Point Radius
251.10	254.10	.0012″
251.15	254.15	0015″
251.2	254.2	.0022″
251.5	254.5	.0025″
251.3	254.3	.003″

Net Price Sapphire stylus only $2.40. Diamond stylus only $18.00.

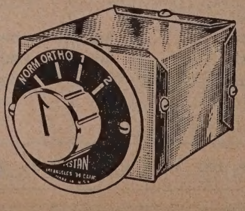
CLARKSTAN MAGNETIC PICKUP



MODEL 204 "RV-Jr." variable reluctance pickup has a removable and replaceable stylus. It weighs only one-half ounce and plays all popular makes of record changers having standard mounting holes ½″ between centers. It is 1½″ overall length. This magnetic pickup with balanced armature is velocity responsive (flat ± 2 db) from 50 cps to 10,000 cps. It delivers .030 volt from the average record.

#204 "RV-Jr." Cartridge only (with 1 sapphire needle)........................**Net price $5.40**
#204D "RV-Jr." Cartridge only (with 1 diamond needle)....................**Net price $21.00**
(Specify whether .0012″ or .0030″ radius needle desired.)

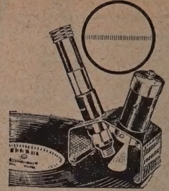
FOUR-POSITION EQUALIZER



MODEL 221 — Clarkstan 4-position equalizer. A high impedance input and output — adjustable network, without amplification, for use with magnetic pick-ups. Has one position for correct NAB or orthacoustic roll-off required for finest reproduction of LP microgroove records. Also two positions for sharp high frequency cutoff for standard records. Will give proper response when used in normal high gain microphone input of amplifier. Turn-over frequency is 500 cps. Panel mounting on 2½″ centers, ⅜″ diameter center hole. Furnished with Clarkstan hand machined superfine knob and attractive dial plate. **Net price $12.60.**

(All prices subject to change without notice.)

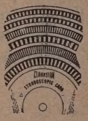
MICROSCOPE GROOVE ANALYZER



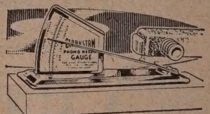
MODEL 231 — Low-cost, medium power microscope with built-in light and reticle. Designed expressly for the phono record recorder. The illumination is optimum for observing the condition of the groove and the number of lines per inch and depth of cut. Has flat field, excellent optics — can be used with glasses (eyepoint is 1″ above top). Both 20x and 40x provided in one microscope. Reticle for direct measurement by .0020″. Complete with lacquered wooden carrying case with sliding cover. Focusing is accomplished by means of friction sliding tube. Is easy and positive. **Net price $22.50.**

STROBOSCOPIC CARD #610

FOR 33-1/3 RPM
45 RPM AND 78 RPM



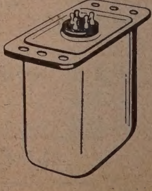
MODEL 610 — New stroboscopic card for checking turntable speed of microgroove and standard records. Includes replaceable punch-out for new 1½″ center hole for 45 RPM records. Printed on quality enameled stock. **Net price $0.15.**



NEEDLE FORCE GAUGE

MODEL 301 — Clarkstan Gauge for phono needle force. This professional device has a calibrated dial to read in grams for use with LP microgroove records. Easily read to less than 1 gram. Also has scale in ounces. **Net price $1.50.**

PICK UP-TO-LINE TRANSFORMER



MODEL 225 — Clarkstan pick-up-to-line transformer. A high quality transformer to be used wherever the signal is to be introduced to 30/50, 200/250, 500/600 ohm lines. May also be used as a line to grid transformer.

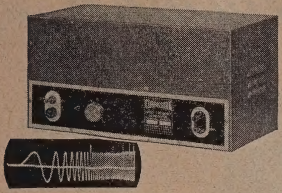
Net price $19.50.

CLARKSTAN CORPORATION

MANUFACTURERS OF
FINE ELECTRONIC & INDUSTRIAL EQUIP.

REPRODUCTION AND TEST EQUIPMENT

AUDIO SWEEP FREQUENCY GENERATOR



MODEL 125 — Clarkstan Audio Sweep Frequency Generator. A Clarkstan development for testing the behavior of audio and other alternating electrical apparatus with respect to frequency and associated phenomena. The generator operates in the audio range from 40 cps. to 10,000 cps. The complete frequency range is regularly recurrent so that the signal may be used in conjunction with an oscilloscope. The sweep frequency is governed by 20 synchronizing pulses per second. Provides an instantaneous evaluation of the performance of amplifiers at various settings of tone control and pick-up correction networks, wire recorders, film recorders, broadcast and aircraft receivers, motion picture sound equipment, loud speakers, microphones, transformers, filters, pickups, pre-amplifiers and cutting heads. **Net price Model 125 complete with scanning disc $165.00.**

MODEL 130.1 — Scanning disc, 40 cps. to 10 kc. disc only. **$12.20 net price.**

MODEL 130.2 — Scanning disc 40 cps. to 7500 cps. disc only. **$12.20 net price.**

GRAPH SHEETS

Four extremely useful tools for the audio engineer. These specially designed graph sheets save endless time:

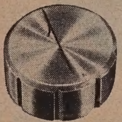
601 — Reactance-Freq. Graph. The elements of reactance, capacitance, and inductance all related in one simple graph. **Net price $1.00 pad of 50 sheets.**

602 — dbm — Impedance Graph. The four variables: power (W), voltage (V), current (ma), and Impedance or Resistance (Ω) are acquainted in such a manner that given any two of these electrical quantities the other two may be graphically determined. A decibel scale in dbm (decibels below or above 1 milliwatt) parallels the power ordinate. **Net price $1.00 pad of 50 sheets.**

603 — Attenuator-Design Graph. In this universal pad design chart here presented for the first time, the resistance in ohms for each branch of the pad may be determined by multiplying the values found at the lower horizontal scale by the impedance of the line into which the pad is to be inserted. It covers balanced and unbalanced T and Pi pads. **Net price $1.00 pad of 50 sheets.**

604 — Semi-log, 3-cycle Graph. Designed expressly for the audio range. It has the unique virtue of starting at 20 cps. and covering three logarithmic cycles to 20,000 cps. On the vertical scale are 10 divisions per inch over 7 inches. **Net price per pad 50 sheets $1.00.**

CLARKSTAN KNOBS



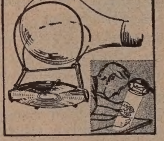
Attractive one-piece knobs accurately machined from DURAL add the professional appearance to control panels. All knobs have fluted sides and have screw-type mounting for round or flat shafts to fit standard ¼″ shafts. Back of all knobs recessed ¾″ dia. by 5/64″ deep to accommodate panel bushing nut. Supplied with or without pointer.

Model	Knob Dia.	Height	Net Price
275-1B	1″	5/8″	.90
275-12B	1¼″	21/32″	.96
275-2B	1½″	11/16″	.99
275-3B	2″	3/4″	1.53
275-4B	2½″	13/16″	1.77

ALPHA COUNTER

This newly developed nuclear instrument is a practical tool for nuclear physicists, assayers, etc. An optical instrument which gives a clear visual statistical count of alpha particles from any source. Complete with quencher, carrying case, radioactive samples and instructions for use. **Net price: $5.00.**

Light Concentrator

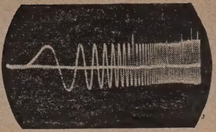


Provides bright spot illumination for close work. Lens clips easily on regular 40 to 100 watt frosted bulb, concentrating light in a 4″ diameter at 12″ from bulb. Steps up light intensity by 5 times. A Fresnel type lens ⅛″ thick by 2½″ dia., does the work of a much thicker ordinary type lens. Effective focal length 2½″. **Net $1.00 each.**

OTHER CLARKSTAN PRODUCTS

Industrial Microscope for inspection work in shops, laboratories. Rubber Hardness Gauge to measure the Shore (Durometer) hardness of all rubber and other elastomers. Accurately measures rubber hardness within any of the commercial manufacturing tolerances.

AUDIO SWEEP FREQUENCY TRANSCRIPTION



The Sweep Frequency Transcription is a new method of making instantaneous frequency response runs. It has been designed with all correction factors included in the original recording, therefore, no charts or graphs are needed. Before the development of the Sweep Frequency Transcription, the tone record was used for frequency response measurements on playback systems. This method was both time consuming and laborious. If adjustments were required, a new frequency run was required after each adjustment. Now all that is needed is a cathode ray oscilloscope and a Sweep Frequency Transcription for instantaneous response measurements. Only a few quick adjustments on the equalizer circuits and the job is done. For complete frequency checking of all broadcast transmission equipment and components for production testing of phonographic reproducers, filter networks, audio amplifiers, preamplifiers, tone control systems and components.

MODEL 1000A — 12″ Vinylite transcription, 78 RPM, 70 to 10,000 cps. recorded flat ± 1 db. **Net price $6.60.**

MODEL 1000D — 12″ Vinylite transcription, 78 RPM, 5 KC to 15 KC, recorded flat ± 1 db. **Net price $6.60.**

MODEL 100A — 16″ Vinylite transcription, 33-1/3 RPM, 60 to 10,000 cps. recorded with NAB curve. **Net price $10.00.**

MODEL 102M — 12″ Vinylite, for microgroove testing, 33-1/3 RPM, 70 to 10,000 cps. modified NAB recording. **Net price $6.60.**

MODEL 115 — audio sweep frequency film, 35mm, positive print, variable density, 10 ft. lengths. **Net price $10.00.**

MODEL 116 — audio sweep frequency film, 35mm, positive print, variable area, in 10 ft. lengths. **Net price $10.00.**

MODEL 117 — audio sweep frequency film, 16mm, positive print, variable density, in 10 ft. lengths. **Net price $10.00.**

STEADY STATE FREQUENCY RECORDS

A series of new test records in which all the information for the engineer is annotated for both the cutting and reproduction. In recording these records harmonic distortion was kept to the lowest possible figure. Extreme care throughout the processing cycle was used. Careful reproduction, using the latest techniques insures exact duplication of the original recordings in each pressing.

MODEL 2000S — Steady State Frequency Record, 12″ Vinylite, 78.26 RPM 50 cps. to 10,000 cps. flat recording (1 side only). **Net price $3.90.**

MODELS 2001S & 2002S — Microgroove Steady State Frequency Record, 12″ Vinylite, 33-1/3 RPM, 50 cps. to 10,000 cps. one side NAB, other side flat recording. **Net price $3.90.**

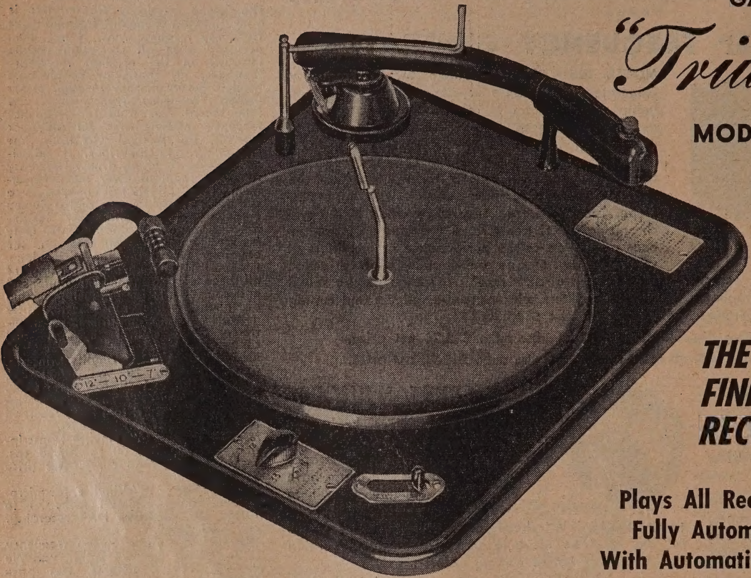
MODEL 101 — Intermodulation Test Record, 12″ Vinylite, 33-1/3 RPM, standard groove, 1/4 ratio, 7 KC and 100 cps. (1 side only). **Net price $3.90.**

(All prices subject to change without notice.)

CLARKSTAN CORP.

Los Angeles 64, California

GARRARD GARRARD GARRARD



GARRARD
"Triumph"
MODEL RC-80

THE WORLD'S FINEST 3 SPEED RECORD CHANGER

Plays All Records:
Fully Automatic
With Automatic Stop!

Introducing several ingenious innovations in 3 speed record changers, the RC-80, nevertheless, retains the watch-like custom construction which has made Garrard acclaimed by music lovers the world over.

The Garrard "Triumph" plays all types of records now in use, 33-1/3 - 45 - 78 rpm, regardless of diameter (7"-10"-12") or size of spindle hole. Once records are placed on the player and simple settings made, action is completely automatic, with unfailing switch-off at the end of the last record. Tone arm is automatically returned to rest position.

The new changer is surprisingly simple in operation. It has one turntable, one tone arm, one set of switches. But over-simplification has been avoided in the interests of quality and standards of performance. Certain features previously found in Garrard instruments have been retained because good basic engineering demands them. For example, record changing is accomplished by the same tried-and-true pusher-type platform mechanism proven best in previous Garrard models.

45 r.p.m. records are played exactly as intended by the manufacturer. A special spindle is provided with each changer to accommodate these records. No "spiders" or artificial inserts are necessary; the pusher platform is not even used.

Any modern type of quality pick-up can be used for standard and microgroove reproductions. Crystal, magnet[illegible] variable reluctance cartridges can be selected by the customer.

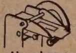
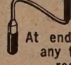
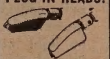
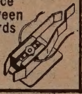
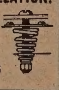
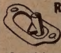
The "Triumph" is heavily built for long, rugged service. It cannot sag or warp. Repairs and adjustments can be made inexpensively on parts which, in most other machines, would require expensive replacement in their entirety.

Minimum cabinet dimensions are 15½" long x 13¼" wide x 5¾" clearance above and 3½" clearance below the top of motor board.

RC-80 — AC Model Dual voltage motor 100/130 and 200/250 volts, 60 cycles. 50 cycle pulley available. Less cartridge.

RC-80-C — Same as RC-80 but complete with Dual Stylus, Turnover and Crystal Cartridge.

A triumph of engineering, with every feature tested for finest performance.

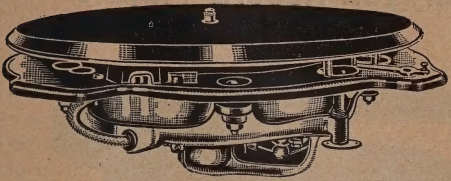
PUSHER TYPE PLATFORM:  It always works	**TWO INTERCHANGEABLE SPINDLES** Plays records as intended	**HEAVY DRIVE SHAFT:** No wows, no wavers
JEWEL MOUNTED TONE ARM: Disturbing resonance eliminated	**AUTOMATIC STOP:**  At end of any type record	**TRIPLE SPEED SWITCH:** Simple and easy settings
INTERCHANGEABLE PLUG-IN HEADS:  Your choice of cartridge	**HEAVY DUTY SILENT MOTOR:** Absolutely no rumble	**WEIGHTED TURNTABLE:** Gives flywheel action
MUTING SWITCH: Silence between records 	**SIMPLE INSTALLATION:** Fits former Garrard cut-outs 	**START-STOP-REJECT LEVER:**  Combined and conveniently located

GARRARD SALES CORPORATION • • • • • NEW YORK 13, N. Y.

GARRARD GARRARD

GARRARD MULTI-SPEED TRANSCRIPTION TURNTABLE . . Model 201-V

Governor-controlled motor!



The Garrard 201-V dual speed motor is offered exactly as produced for the U.S. Navy and the British Admiralty.

The governor-controlled motor is adjustable to any speed between 25 and 90 r.p.m. with settings at 33⅓ and 78. Absolutely constant with no waver or rumble. It is ideally suited for use where truly superior reproduction is required. It is constantly variable, governor-controlled.

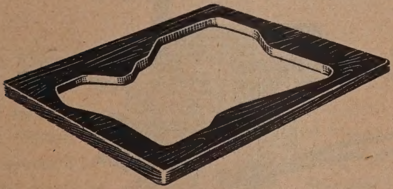
Because of its extra-heavy rotor, which is slow-running, the resulting torque makes this motor amazingly smooth and silent. In sheer performance, it is the finest we have to offer. It is a self-starting, induction type unit, and is fitted with the patented Garrard Governor to insure perfect regularity.

A unique feature is its "one shot lubrication." The only maintenance required is to sparingly lubricate the main bearings in the gears through the single oiling point, which is located in the top of the center spindle.

The 201-V is equipped with a Speed Regulator, by means of which a wide range of speeds is possible. It is set on an extension arm so that 16" transcription records can be properly speed controlled.

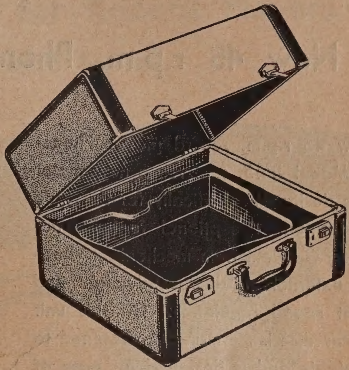
Model 201-V — Constantly variable; dual voltage; AC-110/130 and 200/250 volts, 40/60 cycles.

GARRARD MOUNTING BOARD



Strong, durable ⅝" Gumwood, smooth sanded and cut out for the RC-80. Dimensions: 18"x 16".

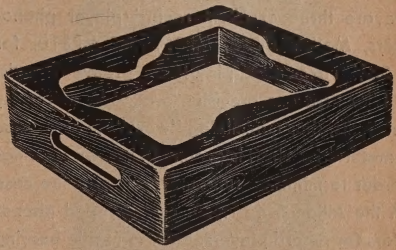
GARRARD CARRYING CASE



This De Luxe unit is fabricated of seasoned wood and covered with a fine parchment-type material. Sewn leather edges run completely around the case. The hardware used is the very finest durable brass and it has two locking snaps.

Easily carried, this unit is ideal for portable installations or for use in the home where one does not need the record playing equipment out unless it is in actual operation.

GARRARD WOOD BASE



A new unit! Wood base of finest hardwood, cut to fit the Garrard Changers. Smoothly joined, attractively finished in dark Mahogany.

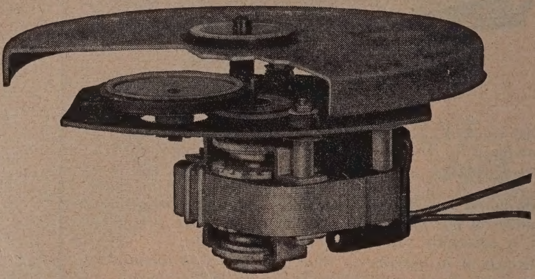
GARRARD SALES CORPORATION • • • • • NEW YORK 13, N. Y.

alliance PHONOMOTORS

New 45 r.p.m. Phonomotor for Record Players

The new 45 r.p.m. record player Phonomotor, Model JP45, features a new motor which is designed specifically for this type of application. Exceptional features are quietness, freedom from mechanical vibration, no external fan, decreased height, and excellent speed regulation. On this unit the center disc is permanently fastened to the turntable and is designed for ease of record placement and removal. The unit is furnished with a 6½″ O.D. turntable for RCA records with the 1½″ diameter center hole.

NOMINAL RATING—45 r.p.m. for 5 gram stylus force with 117 volts, 60 cycles, 0.2 amps., and 10 watts input.



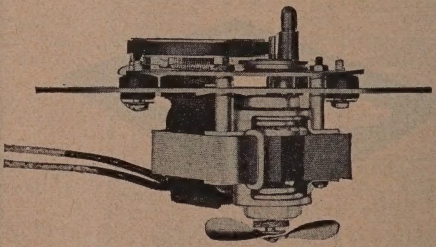
PHONOMOTOR MODEL JP45

New 45 r.p.m. record player PHONOMOTOR is designed for ease of record placement and removal.

New 33⅓ r.p.m. Phonomotor for Record Players

Here are three excellent record player phonomotors, Models MPS8, MPS9, and MPS10, for the 33⅓ r.p.m. long-play Micro-groove records. The idler tires are precision ground to extremely close limits, thus minimizing "wow." In each case the motor drive shaft is ground in its own bearings in order to minimize run-out. As is also the case with the Alliance 45 r.p.m. and 3-speed phonomotors for record players, each turntable bearing is rotary burnished to assure smoothness of operation. These units are furnished with 8″, 9″, or 10″ O.D. turntables for records with conventional center holes.

NOMINAL RATING—33⅓ r.p.m. for 5 gram stylus force with 117 volts, 60 cycles, 0.3 amps., and 14½ watts input.



PHONOMOTOR MODELS MPS8, MPS9, AND MPS10

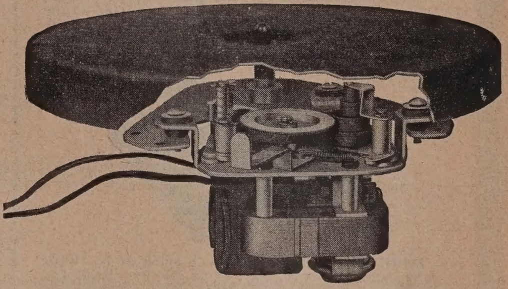
(with 8″, 9″, and 10″ O.D. turntables, respectively).

alliance
Powr-Pakt MOTORS

New 3-Speed Phonomotors for Record Players

Drive 33⅓, 45, and 78.26 r.p.m. Records

The new Alliance 3-speed record player Phonomotors, Models JPT8 and JPT9, are so advanced in design that mechanical operation is unexcelled! There are no rubber bands or belts to slip, snap, distort, or stretch . . . no needle shafts to indent tires under stall. A totally new motor assures minimum rumble, hum, and unequalled speed regulation! Motor has minimum height — no external fan — electronically dynamic balanced rotor — new vibration reduction mounting! Driving mechanism assures unimpaired performance at all speeds — has fewer moving parts! These units are furnished with 8″ or 9″ O.D. turntables designed for records with either the conventional or the RCA 1½″ diameter center holes. A removable center disc is provided to fit the 1½″ diameter center holes. This disc is reversible and will go on either way. Its height is designed for ease of record handling.

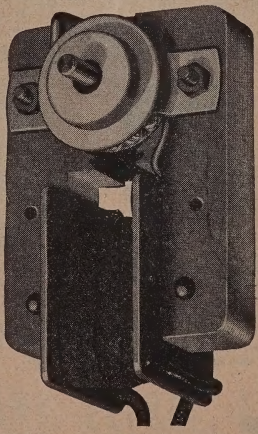


PHONOMOTOR MODELS JPT 8 AND JPT9
(with 8″ and 9″ O.D. turntables, respectively).

NOMINAL RATING—33⅓ or 45 r.p.m. for 5 gram stylus force and 78.26 r.p.m. for 10 gram stylus force with 117 volts, 60 cycles, 0.3 amps., and 14½ watts input.

Powr-Pakt
Model MS Motor

The Alliance Powr-Pakt Model MS motor is suitable for driving toys or other light loads. It is an adaptation of the quiet, smooth running motor which is used to power the Models MPS8, MPS9, and MPS10 Phonomotors. It measures 3⅛″ x 2″ x 1¾″ not including the 7/16″ long shaft extension which has an 11/64″ diameter. Rotation is clockwise facing the shaft extension. Its self aligning bearings are of the porous bronze oilless type.



MOTOR MODEL MS

NOMINAL RATING—2800 r.p.m. at full load with 117 volts, 60 cycles, 0.3 amps., and 16 watts input. More detailed specifications are available upon request.

WEBSTER-CHICAGO Diskchangers

Recognized by service men, dealers, and consumers as the ultimate in design, quality and performance.

THE 106 SERIES

This newest line of Diskchangers incorporates the famous push-off principal that proved itself in the 56 series. This three-speed, three-size, completely automatic diskchanger is the ultimate in mechanical perfection.

Model 106—Plays full one-inch stack of 7-, 10- or 12-inch records at 33⅓, 45 or 78 rpm. Tone arm comes to rest after last record and motor shuts off automatically. Automatic muting switch cuts out radio or amplifier during record change. Dimensions: 14″ x 14″ x 8¾″. Shipping weight: 16 lbs. 106-27 for G. E. Variable Reluctance Cartridge.

Model 107—Same as Model 106 but enclosed in metal base for semi-portable use. Plugs into radio, TV or amplifier.

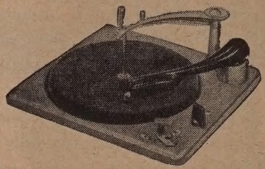
MODEL 100-641 AND MODEL 166

The Portable Model 100-641 uses the 100 series record changer which plays all three speeds, all three-size records.

Portable amplifier to use with record changer or wire recorder. 10-inch P.M. speaker. Has microphone input and additional amplifier stage. Suitable for use as a public address system.

THE MODEL 100 SERIES

The Model 100 is a new development in three-speed, three-size record changers. Plays full inch stack of 7-, 10- and 12-inch records at 33⅓, 45 and 78 rpm. Equipped with Velocity trip mechanism.



Model 100-1—For replacement and custom installations. Dimensions: 13″ x 13½″. 5⅛″ above mainplate, 3⅛″ below. Shipping weight 14 lbs. 100-27 for G. E. Variable Reluctance Cartridge.

Model 100-551—Same as Model 100-1 but enclosed in an attractive metal base. Can be used in sound systems or plugged into radio or TV sets.

Model 100-270—Same as Model 100 but equipped with G.E. Variable Reluctance triple-play cartridge. Shipping weight 18 lbs.

WEBSTER-CHICAGO Diskchangers Chicago 39, Illinois

Smooth Power

ELECTRIC PHONO MOTORS **RECORDING MOTORS**

TAPE-DISC RECORDING ASSEMBLIES

HOME-RECORDING AND PHONOGRAPH ASSEMBLIES

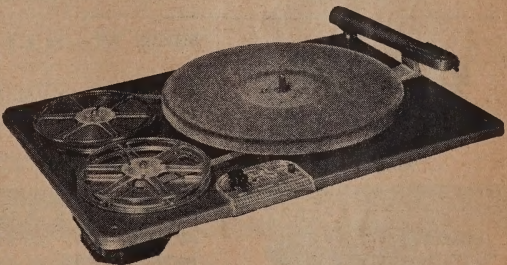
TAPE-DISC RECORDING ASSEMBLY

MODEL 250

115 volts a. c., 60 cycles **List Price, $79.50**

When connected with the proper amplifier, the Model 250 performs the following functions:

- RECORDS TAPE FROM RECORDS
- RECORDS DISCS FROM TAPE
- RECORDS MICROPHONE ON TAPE
- RECORDS RADIO ON DISC
- RECORDS MICROPHONE ON DISCS
- RECORDS RADIO ON TAPE
- PLAYS BACK BOTH TAPE AND DISCS
- PLAYS ANY 78 R.P.M. RECORDS



TAPE RECORDING FEATURES:

One hour recording time.

Dual track.

Fast forward and reverse.

Permanent magnet erase head.

Turntable acts as flywheel, giving constant tape speed.

Designed for use with 5" reels.

Tape speed 3¾" per second.

Designed for use with either plastic or paper base tape.

No tape threading — Merely place tape around turntable — Automatically drops into correct position.

Due to ingenious clutch and drive mechanism, impossible to throw tape.

Mechanical interlock eliminates any possibility of accidentally erasing tape.

Equipped with a switch for recording head electrical interlock.

Automatically shuts off at end of tape playback.

DISC RECORDER AND PLAYBACK FEATURES:

Cuts records up to 10" in diameter at 78 R.P.M.

Plays 78 R.P.M. recorded discs and all 78 R.P.M. commercial records. When pivot of arm is lifted it snaps into recording position, engages lead screw, and insures proper angle for cutting stylus.

Merely push arm down for playback.

Simple to interchange cutting stylus and playback needle.

Dimensions: Width 12½", Length 17½", Depth below mounting plate 4". Equipped with G.I. smooth power, dynamically balanced four-pole motor. Net weight 10½ lbs. Shipping weight 14 lbs.

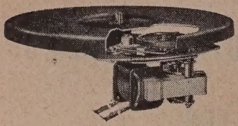
THE GENERAL INDUSTRIES COMPANY, ELYRIA, OHIO

GI GENERAL INDUSTRIES GI

Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

Suitable for every phonograph instrument where low cost, dependable performance, compactness, light weight and quietness of operation are important considerations. GI phonomotors are even in speed and have ample power to play 10″ and 12″ records. Fan cooling permits use in partially closed cabinets. Designed to comply with Underwriters' Laboratories' requirements.

CONSTANT SPEED ELECTRIC PHONOMOTORS

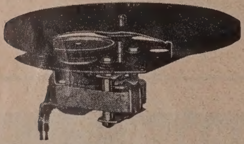


Model MX Model MX-3
Model MX-45

MODEL MX — 78 R. P. M. . . . . List Price, $8.60
MODEL MX3 — 33-1/3 R. P. M. . . . . List Price, 9.90
MODEL MX45 — 45 R. P. M. . . . . List Price, 9.90
115 volts a. c., 60 cycles

Rim drive, 2-pole motor with novel idler arrangement insuring quiet operation. Motor is also insulated from mounting plate to eliminate vibration. Turntable shaft revolves with turntable, and is grooved for turntable clip. Novel bearing construction insures rigid and permanent alignment of motor shaft. Oilless bearings. Furnished with 9″ turntable and complete with mounting plate ready for installation.

Dimensions: Length—3⅛″; Width—2¼″; Depth—2¼″ below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.



Model LX Model LX-3
Model LX-45

MODEL LX — 78 R. P. M. . . . . List Price, $7.40
MODEL LX3 — 33-1/3 R. P. M. . . . . List Price, 8.70
MODEL LX45 — 45 R. P. M. . . . . List Price, 8.70
115 volts a. c., 60 cycles

Rim drive, 2-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Turntable shaft revolves with turntable, and is grooved for turntable clip. Furnished with 9″ turntable and complete with mounting plate ready for installation.

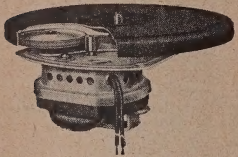
Dimensions: Length—3½″; Width—2″; Depth—2″ below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.

Model LC

MODEL LC — 78 R. P. M. . . . . List Price, $6.35
115 volts a.c., 60 cycles

A low-priced 78 R.P.M. 2-pole, rim drive motor suitable for installation where size and cost are prime factors. Furnished with 8″ turntable and mounting plate ready for installation.

Dimensions: Length—3½″; width—2″; depth—1⅞″ below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.



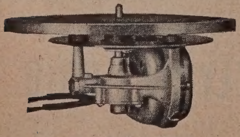
Model RX Model RX-3
Model RX-45

MODEL RX — 78 R. P. M. . . . . List Price, $11.05
MODEL RX3 — 33-1/3 R. P. M. . . . . List Price, 12.85
MODEL RX45 — 45 R. P. M. . . . . List Price, 12.85
115 volts a. c., 60 cycles

Rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Driving pulley, idler and turntable are positively aligned in one plane for efficient performance. Turntable shaft revolves with turntable and is grooved for turntable clip. Furnished with 9″ turntable and complete with mounting plate, ready for installation.

EXTRA FOR 10″ TURNTABLE (RX ONLY), 20 CENTS EACH

Dimensions: Length—4⅛″; Width—3⅜″; Depth—2⅛″ below mounting plate. Packed in individual cartons. Shipping weight—5 lbs.



Models CX & CX3

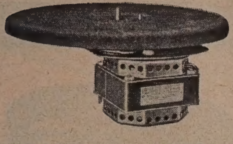
MODEL CX — 78 R. P. M. . . . . List Price, $15.50
MODEL CX3 — 33-1/3 R. P. M. . . . . List Price, 17.40
115 volts a. c., 60 cycles

Gear drive, 4-pole motor. Fully enclosed, with silent, helical-cut gears running in oil bath within the sealed housing. Patented combination rubber turntable drive sleeve and record centering tip insure mechanical and electrical insulation between turntable and motor. Furnished complete with mounting plate, ready for installation; available with 9″ turntable.

EXTRA FOR 10″ TURNTABLE, 30 CENTS EACH

Dimensions: Length—4¼″; Width—4⅛″; Depth—3⅛″ below mounting plate. Packed in individual cartons. Shipping weight—6 lbs.

GENERAL INDUSTRIES
Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS



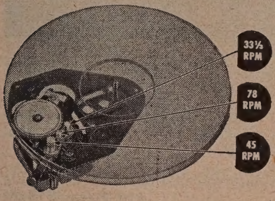
Model RM4 Model RM4-3
Model RM4-45

MODEL RM4 — 78 R. P. M. . . . . List Price, $17.35
MODEL RM4-3 — 33-1/3 R. P. M. . . . . List Price, 19.20
MODEL RM4-45 — 45 R. P. M. . . . . List Price, 19.20
115 volts a. c., 60 cycles

Heavy duty, rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for exceptionally quiet operation. Turntable shaft revolves with turntable and is grooved for holding clip. Retractable pin in turntable permits playing standard records without adjustment. Efficient performance is assured by positive alignment of driving pulleys, idler and turntable in one plane. Furnished with 10″ weighted turntable and complete with mounting plate ready for installation.

Dimensions: Length—3⅜″: Width—3⅜″: Depth—2$\frac{15}{16}$″ below mounting plate. Packed in individual cartons. Shipping weight—9 lbs.

THREE-SPEED PHONOGRAPH MOTORS



Model TS

MODEL TS — 45, 78, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**

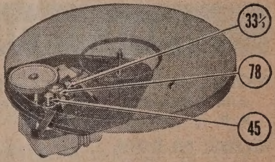
A novel 45-78-33⅓ R.P.M. rim drive, 2-pole motor. Very compact. Employs two identical Neoprene belts for 45 and 33⅓ R.P.M. speeds. 78 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of the new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 8″ or 9″ turntable, using same mounting plate. A 45 R.P.M. record adaptor and a speed indicator dial are furnished with each motor. **List Price, $11.50**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2$\frac{9}{16}$″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.

MODEL TR — 45, 78, 33⅓ R. P. M. . . . . **115 volts a.c., 60 cycles**

Deluxe three-speed rim drive, 2-pole motor. Turntable speeds of 33⅓, 45 and 78 R.P.M. are secured through three separate pulleys running on oil-impregnated bearings and mounted on a turret plate. By means of a simple lever, the desired pulley is brought into contact with the idler wheel. The two pulleys not in contact with the idler wheel remain stationary. Symmetrical electrical and mechanical design results in minimum stray field and maximum performance. Ingenious locking device holds turret plate firmly in driving position at any of the three speeds. Available with 8″ or 9″ turntable. A 45 R.P.M. record adapter and speed indicator dial are furnished with each motor. **List Price, $12.10**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2$\frac{9}{16}$″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.



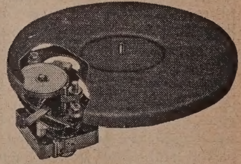
Model TR

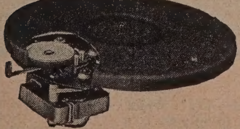
DUAL-SPEED PHONOGRAPH MOTORS

MODEL DS — 45, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**

A novel 45-33⅓ R.P.M. rim drive, 2-pole motor. Very compact. Employs a Neoprene belt for the 33⅓ R.P.M. speed. 45 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designd and manufactured to hold wow and rumble to a minimum for excellent reproduction of the new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 8″ or 9″ turntable, using same mounting plate. **List Price, $11.15**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2$\frac{9}{16}$″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.





MODEL DM — 33-1/3, 78 R. P. M. • **MODEL DE** — 45, 78 R.P.M.
115 volts a. c., 60 cycles

Novel and ingenious rim drive, 2-pole motors. Very compact. Employs a Neoprene belt for slow speeds. 78 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 9″ turntable. **List Price, $11.15**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2⅜″ below mounting plate. Furnished complete with 9″ turntable and mounting plate ready for installation. Shipping weight—4 lbs.

[DUAL SPEED PHONOGRAPH MOTORS . . . CONTINUED ON NEXT PAGE]

GI GENERAL INDUSTRIES GI

Smooth Power PHONOGRAPH MOTORS,

TAPE-DISC RECORDER AND DISC RECORDERS

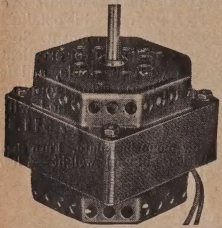
DUAL-SPEED PHONOGRAPH MOTORS . . . (continued)

MODEL DR — 78, 33-1/3 R. P. M. • MODEL DZ — 78, 45 R. P. M.
MODEL DV — 45, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**

Deluxe rim drive, 4-pole motors with a simple and positive mechanism for shifting from one speed to the other. Speed change is accomplished by means of an external push-pull lever. An ingenious mechanism raises and lowers the entire idler assembly, disengages the idler wheel from the two-diameter motor shaft and moves the idler wheel from one diameter to the other. At the slow speed the idler wheel engages the small diameter of the motor shaft; at the fast speed it engages the large diameter. **List Price, $19.80**

Dimensions: Length—6″; Width—5⅝″; Depth—2⅝″ below mounting plate. Furnished complete with 10″ turntable and mounting plate ready for installation. Shipping weight—6½ lbs.

TAPE, WIRE AND DISC RECORDING MOTORS



Heavy duty 4-pole, shaded pole induction motors. 1/10 H.P. Free speed: 1740 R.P.M. Maximum running torque: 12 ounce-inches.

Features include: A locating and locking arrangement for both top and bottom covers which assures high accuracy in alignment of rotor within the stator bore; new air intake; dual cooling fans and self-aligning, oil-impregnated sleeve bearings.

These high torque motors are used in practically all tape, wire and disc recorders now being manufactured. **List Price, $13.25**

Dimensions: Length—3⅜″; Width—3⅜″; Depth 3″ below mounting plate; Shaft diameter—5/16″

115 volts a. c., 60 cycles

HOME RECORDING AND PHONOGRAPH ASSEMBLIES

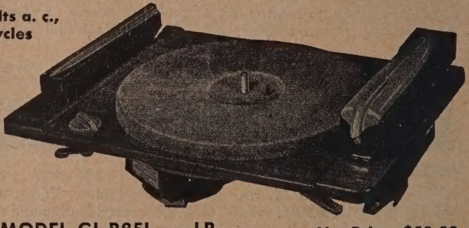
MODEL GI-R85L — LP, 78 and 33-1/3 R. P. M. with conversion spring for changing the 33-1/3 R. P. M. speed to 45 R. P. M.

MODEL GI-R90L — 78 & 33-1/3 R. P. M. — Standard

115 volts a. c., 60 cycles

Model GI-R90L is the standard model which has been in the GI line for several years. It cuts 120 lines per inch, and plays back records with the standard needle pressure.
The Model GI-R85L incorporates a dual purpose pickup cartridge and an excellent and simple adjustment for playing the LP records and standard records. It cuts 160 lines per inch. In a separate envelope is furnished a conversion spring for changing the 33⅓ R.P.M. speed to 45 R.P.M. with mounting instructions printed thereon.

Both models cut records up to 10″ diameter . . . play records up to 12″ diameter. To shift motor from one speed to the other, merely turn the speed change dial. Beautiful walnut wood grain on steel base plate. Streamline plastic trim on pickup and cutter arm attractively engraved with legends "Reproducer" and "Recorder". Turntable recessed into well in base plate. Merely lower cutting arm over record disc to start recording. Convenient, depth-of-cut adjustment. Dynamically-balanced, rim drive, 4-pole motor. Compensating switch operated by speed change dial.



MODEL GI-R85L — LP . . . . . List Price, $53.50
MODEL GI-R90L — STANDARD . List Price, 49.50

Assembly includes dual speed motor; 10″ weighted turntable; crystal cutter; crystal pickup; compensation switch; pickup and cutter arm rests; drawn steel base plate with formed down edges.

Above prices include crystal cutter.
For (M41-10) magnetic cutter add $2.00 each.

Dimensions: Base plate—15″ wide; 11½″ front to back; height above lower edge of base plate—2¾″; depth below lower edge of base plate—3⅞″. Packed in individual cartons. Shipping weight—17 lbs.

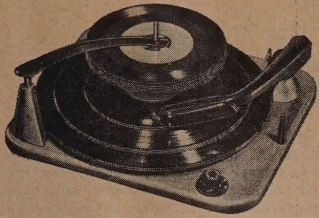
MASTER JR. SPRING MOTOR

Plays two 10″ selections from one winding. Exceptionally quiet and uniform in speed. Turntable is held in place by turntable-holding clip. Furnished with 9″ turntable, winding crank and escutcheon; turntable brake; dial and pointer speed regulator; mounting screws and washers. **Dimensions:** Length—5⅜″; Width—4¾″; Depth—2 5/16″ from top surface of casting to bottom.

MODEL: MASTER JR. — 78 R. P. M. List, $11.10

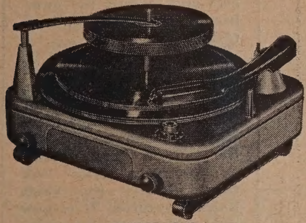
Single Spring Type. Price includes 9″ turntable and parts.

V-M tri-o-matic RECORD CHANGERS

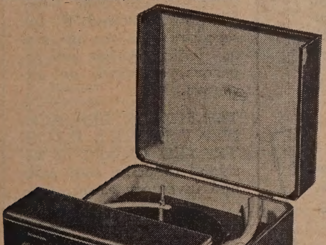


MODEL 950
Tri-o-matic replacement unit for modernizing to 3 speeds. Wood pre-cut mounting board available.

MODEL 955
Model 950 equipped with steel base — rubber feet — phono cord and A.C. cord. Plug into radio or TV.



MODEL 970
Complete self contained phonograph, incorporating Model 950 changer, 2 tube (plus rectifier) amplifier, 4" x 6" speaker.



MODEL 975 OR 980
Portable phonograph using 950 record changer. 2 tube (plus rectifier) amplifier, 4" x 6" speaker.

TRI-O-MATIC* RECORD CHANGERS

The new V-M Model 950 tri-o-matic AUTOMATICALLY plays all records, all sizes, all speeds (33 1/3, 45 and 78 rpm). While "Automatic Operation for all records" is the outstanding sales feature, from a practical standpoint the many record protecting features are equally important. Due to the unique, patented tri-o-matic spindle, records are LOWERED—NOT DROPPED—on the Spindle Shelf. There is no wobbling down the spindle—no slap or scrape—no possibility of the tiny microscopic grooves of the new type records being damaged in any way. Controls are simple and located at the front, easily accessible in any installation. All moving parts in the tri-o-matic Changers are factory-adjusted—riveted or pinned in adjustment—insuring years of trouble-free performance. Actually, only two adjustments are ever needed—needle height and setdown—and both are accessible from above the base plate.

OTHER FEATURES: Plays any ten 12" or 10" records of the same speed INTERMIXED—Plays twelve 7" records—AUTOMATICALLY SHUTS OFF after last record—Velvet action Velocity Trip—Dual Needle, Reversible Cartridge—Quick, Quiet Change Cycle—Minimum Mounting Space (13 13/16" wide, 12¼" long, 7¼" overall height).

The V-M tri-o-matic 955 is the Model 950 mounted on a metal base, as a wired changer, for playing through any standard radio or TV set. A compact unit, beautifully styled to blend with furniture of any period. Complete with 6-foot A.C. cord and 4-foot sound cord and plugs.

TRI-O-MATIC PHONOGRAPHS

The new tri-o-matic Model 980 Portable is handsomely cased in mahogany wood-grain leatherette, and is equipped with a superb amplifying system that offers console-type sound reproduction (two-tube, plus Rectifier, Amplifier, and 4" x 6" Speaker). Has all tri-o-matic features (see above) and plugs into any A.C. outlet. Overall size 14½" x 9" x 17", shipping weight 21 lbs.

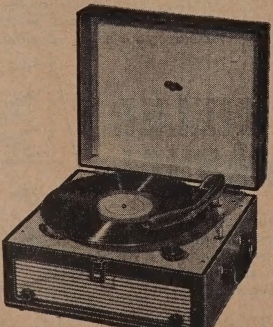
The tri-o-matic Model 970 is the ideal phonograph for use in any room in the home. Has smooth, functional styling that looks well in any setting. Has all tri-o-matic features (see above). Overall size, 13" x 8½" x 11½", shipping weight 16½ lbs.

NOTE: Models 950 and 955 may be purchased with the G.E. Variable Reluctance Cartridge at slight additional cost.

TRI-O-SPEED PHONOGRAPHS

The V-M tri-o-speed Model 150 plays all records, all sizes, all speeds (33 1/3, 45 and 78 rpm) manually. Has a beautiful wood-grain mahogany leatherette case and an outstanding amplifying system that reproduces faithfully the complete tonal range of any record (two tubes plus Rectifier, and 4" x 6" Speaker). Has free-floating Tone Arm, Dual-Needle Reversible Cartridge, and separate Tone and Volume Controls. Overal size 14½" x 13" x 8", shipping weight 15 lbs.

*Registered, spindle patented



MODEL 150
Manual 3 speed phonograph. 2 tubes plus rectifier, 4" x 6" speaker.

LISTED UNDER REEXAMINATION SERVICE OF UNDERWRITERS' LABORATORIES, INC.
UL

V-M
CORPORATION
Benton Harbor, Mich.

Miller Replacement Phonograph Needles

Miller
REPLACEMENT NEEDLE
for
ASTATIC Q
TIP SAPPHIRE (SYN)
SPEED 78 R.P.M
PRICE $2.50
CAT NO A23M
M. A. MILLER MFG. CO.
1169 E. 43rd STREET CHICAGO 15, ILLINOIS
MADE & PRINTED IN U.S.A.

MILLER NEEDLES are Individually Carded

The M. A. Miller Mfg. Co. is a prime manufacturer supplying needles to the most prominent radio and cartridge manufacturers . . . also in position to supply replacement needles . . . to meet your most exacting needs.

Each needle is attractively packaged in color code for quick identification; blue card for 78 RPM; red for Microgroove; green for all-groove or dual needles.

Miller
REPLACEMENT
NEEDLES

Dealer Counter Dispenser

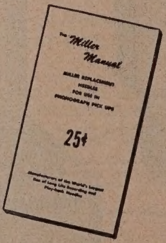
Holds 48 to 60 individual carded needles for easy reference. Sturdy plywood construction, bright red enamel finish with yellow trim. Has transparent acetate cover to protect your needles.

Miller REPLACEMENT NEEDLES

MASTER COUNTER DISPENSER

Saves time . . . makes sales . . . makes profits . . . simplifies inventory, takes advantage of limited counter space. Colorful, durable wood construction to hold six file drawers, each holding 48 to 60 individual carded needles. Acts as "your silent salesman".

MILLER MANUAL



Handy, 48 page illustrated booklet plus cover, gives complete summary of Miller Replacement Needles with installation diagrams. Also includes presentation of cartridges to which Miller Needles are adapted; reference material; data, etc. Available upon request.

How to Utilize the MILLER Replacement Needle Chart

To determine the specific needle used in any player, it is necessary to first inspect the cartridge in the record player tone arm. Note the cartridge brand name and serial number or letter. This is easily accomplished by lifting the tone arm and reading the numbers stamped on the cartridge.

Now locate the group of needles, i.e., Astatic, Shure, Electro-Voice or other brand. The cartridge identification shown opposite the caption "manufacturer's cartridge series" will then identify the exact needle required. It is now only necessary to determine whether you desire a sapphire or metal tip as indicated by the code letter "M" for metal and "S" for sapphire and the tip size as indicated for microgroove, standard, or all-groove.

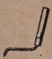
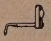
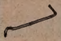
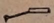
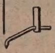
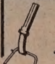
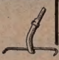
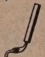
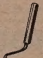
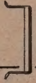
The MILLER REPLACEMENT NEEDLE ILLUSTRATED CHART is designed to make your sales and inventory easier.

NOTE: All Miller replacement needles listed with the jewelled (Syn.) tip are available with Diamond Stylii upon request.

The Miller Manual is a "must" for every serviceman.

M. A. Miller MANUFACTURING CO. 1169 East 43rd Street, Chicago 15, Illinois

M. A. Miller Phonograph Replacement Needles

	I ASTATIC (AST)					II WEBSTER CHICAGO (WC)		III WEBSTER ELECTRIC FEATHERIDE (WE)				
Mfr's Code	T	Q	G	U	A	NE 214-316		Q1	Q2 Q3	A	F16	F14
MILLER Replacements												
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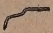
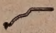
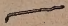
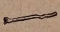
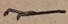
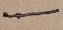
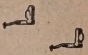
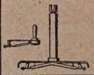
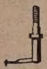
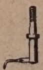
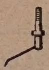
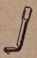
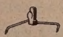
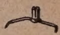
Micro-groove (M)	A11(M)	A21(M)	A31(M)	A41(M)	A61(M)	Cat. No.			WE21(M)	WE31(M)	WE41(M)	
Standard 3 Mil (M)	A13(M)	A23(M)	A33(M)	A43(M)	A63(M)			WE13(M)	WE23(M)	WE33(M)	WE43(M)	
Micro-groove (S)		A21(S)	A31(S)	A41(S)	A61(S)					WE31(S)		
Standard 3 Mil (S)		A23(S)	A33(S)	A43(S)	A63(S)					WE33(S)		
All-groove (M)	A113(M)	A213(M)	A313(M)		A613(M)				WE213(M)	WE313(M)		
All-groove (S)										WE313(S)		
Dual Tip (M)						WC213	WC313					WE513(M)
Mfr's Cartridge Series	L-T	QT LQ CQ	GC	UJ UM M-D (Substitute For C Needle)	AC AC-D	2 Speed 21-291 21-297	3 Speed 21-298	Q1	Standard Q2 All-groove Q3, A9 1 Mil-F13	A1, A8 Micro-groove A (1 to 7)	F15 F16	F14 (1 to 4)

	IV SHURE (SH)		V ELECTRO-VOICE (EV)				VI COLUMBIA (COL)	VII G-E
Mfr's Code	A63MG* A62A A66U‡	A65MG* A61A A67U‡	O	S	OO-D	SS-D	M102	RPJ-005* RPJ-001 RPJ-006± RPJ-010
MILLER Replacements								
Point Description:	**MILLER** Catalog Number		**MILLER** Catalog Number				**MILLER** Catalog Number	
Micro-groove (M)*	P31(M)		E11(M)					
Standard 3 Mil (M)	P33(M)		E13(M)					
Micro-groove (S)*		P41(S)		E21(S)			Col 11(S) Col 21(S)	GE 21 (S)
Standard 3 Mil (S)		P43(S)		E23(S)				GE 23 (S)
All-groove (M) ‡	P313(M)		E 113(M)					
All-groove (S) ‡		P413(S)						GE 213 (S)
Dual Tip (M)					E313(M)			
Dual Tip (S)						E413(S)		GE 113 (S)
Mfr's Cartridge Series	Standard—P30, P57, P70, P74, P76, P77, P79, P85, P86, P88, P89, P94, PN30, W22, W23, W40, W41, W42, W60, W61, W65 Micro-groove—P73, P74AD, P76, P77 P79, W21, W22. All-groove—P37, P71, P81, W26.		Standard M12, H12, L12 Micro 14, 22, L14, 34 All-groove 130	Standard M12S, H12S, L12S Micro 14S, 22S, 34	16TT 22TT	16TT 26TT	45-1609 CQJ	DUAL RPX-050 Micro & A.G. RPX-041 Std & A.G. RPX-040

	VIII RCA			IX PHILCO (PH)			X MAGNAVOX (MA)	
Mfr's Code	74068* 72345	75045* 75046	75496* 75497	DYN	COL	DUAL	560101	560138
MILLER Replacements								
Point Description:	**MILLER** Catalog Number			**MILLER** Catalog Number			**MILLER** Catalog Number	
Micro-groove (M)*		RC21(M)	RC31(M)		PH21(M)			
Standard 3 Mil (M)		RC23(M)	RC33(M)				M13(M)	
Micro-groove (S)	RC11(S)				PH21(S)			
Standard 3 Mil (S)	RC13(S)			PH13(S)				
Dual Tip (M)						PH313(M)		M213(M)
Dual Tip (S)						PH313(S)		
Mfr's Cartridge Series	Standard—70338, 70339, 70332, 72551, 9890, 39919, 39550, 38598, 39851. Micro-groove—74067		135-1	Dynamic Reproducer	45-1609	76-4649	560101	560133

CODE SYMBOLS:
* Micro-groove 1 mil tip
‡ All-grove tip
(M) indicates precious Metal tip
(S) indicates Sapphire tip
Note: Needle Tip, Size
Identified by Color

1 Mil Micro-groove	Red
2 Mil All-groove	Green
Truncated	Blue

(D) Indicates diamond tip which will be furnished on request for any jewel tipped needle.

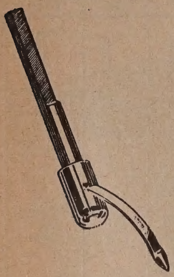
LIST PRICES OF MILLER REPLACEMENT NEEDLES

	Osmium	*Osmium Dual*	*Sapphire (Syn.)*	*Sapphire Syn. Dual*	*Diamond*	*Diamond Dual*
Astatic	$1.00	—	$1.50	—	$20.00	—
Columbia	—	—	1.50	—	20.00	—
Electro-Voice	1.50	$2.50	2.50	$3.50	20.00	$40.00
General Electric	—	—	3.50	5.95	27.50	49.95
Magnavox	1.50	2.50	—	3.50	—	40.00
Philco	1.50	2.50	2.25	3.50	—	40.00
RCA	1.50	—	1.60 (.001) 3.45 (.003)	—	20.00	—
Shure	1.50	—	2.50	—	20.00	—
Webster-Electric	1.50	2.50	2.50	—	—	—
Webster-Chicago	—	4.00	—	—	—	—

M. A. MILLER MFG. CO. 1169 EAST 43rd STREET, CHICAGO 15, ILLINOIS
Manufacturers of World's Largest Line of Long Life Playback and Recording Needles

Carillon Dynamic PHONOGRAPH NEEDLES

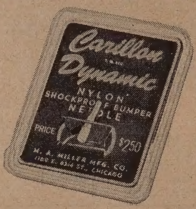
SHOCK-PROOF NYLON NEEDLES



Individually boxed in transparent plastic container with sliding tight-fitting lid. Needle is mounted on colorful "butterfly" holder.

Cat. #1600-N
list per needle $2.50

ONE FREE
with each dozen.


Carillon
Dynamic
NYLON
SHOCKPROOF BUMPER
NEEDLE
PRICE
$2.50
M. A. MILLER MFG. CO.
1165 E. 43rd ST., CHICAGO

Eye - appealing, multi-colored display card with one "bonus" needle mounted to produce volume at "point of sale". Almost indestructible needle of nylon and spring wire; bumper absorbs shock.

SHOCK PROOF
NYLON BUMPER
PHONOGRAPH
NEEDLES
M.A. MILLER MFG. CO.

Carillon Dynamic NEEDLES are mounted in pilfer-proof, locked-in metal containers.

Carillon Dynamic

Cat. #581-S—SAPPHIRE JEWEL (Syn.)

The finest quality jewel-tipped needle with the long-life your customers demand. Designed for lighter tone arms. .... List $2.00

***Cat. #581-S (MG)** .... List 2.00
***Cat. #581-S (AG)** .... List 2.00
***Cat. #581-R, with Ruby tip** .... List 2.50

Carillon Dynamic

Cat. #580—SOFTONE NEEDLE

High fidelity, minimum record talk. Has duraluminum offset shank for softer tone. .... List $1.50

***Cat. #580 (MG)** .... List 1.50
***Cat. #580 (AG)** .... List 1.50

Carillon Dynamic

Cat. #560—HYTONE STYLUS

Extremely long-life needle with highest attainable fidelity. Offset shank provides brilliant tone with minimum record surface noises. ....List $1.00

***Cat. #560 (AG)** .... List 1.00

MILLER NEEDLES are displayed to SELL!

This typical display card illustrates how each easeled display card has individual pilfer-proof locked-in metal containers.

Carillon Dynamic
PRECIOUS METAL ALLOY
100
PLAYS UP TO 5000 RECORDS
BELL-LIKE CLARITY
PHONOGRAPH NEEDLES
FOR PERFECTION IN REPRODUCTION
M.A. MILLER MFG. CO.

Carillon Dynamic

Cat. #550 FITONE NEEDLE

A fine quality needle at a price to please. .... List $0.50

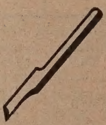
COMBINATION DISPLAY CARD

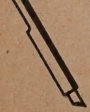
Attractive, colorful card with 14 needles from **50c** to **$2.50** list price, for the price of 12 needles.

Here is a "bonus" offer. .... List $17.00

CUTTING NEEDLES

Cat. #543
Finest alloy tool steel; microscopically ground, will cut approximately twenty-five six inch records.
List 3 for $1.00





Cat. #542
Stellite . . . fine recording stylus; provides excellent results; hand-finished tip; cuts about five hundred six inch records. ......**List $1.50**

★ ALL CARILLON DYNAMIC NEEDLES are of finest quality . . . available in proper tip radius for standard 78RPM or micro-groove (MG) or for all-groove (AG) records.
When ordering, be sure to specify the tip radius if you desire MG or AG.

Manufacturers of the World's Largest Line of Long-Life Recording and Playback Records

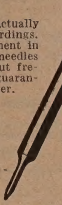
M. A. *Miller* Manufacturing Co.
1165-69 East 43rd Street • Chicago 15, Illinois

DUOTONE NEEDLES

FILTER POINT No. 6

The Filter Point needle is a newly developed needle which actually filters surface noise, yet retains the brilliance of your recordings. The highly polished and rounded point assures smooth movement in the record groove, reducing record wear to a minimum. The needles are hand picked and will play from 12 to 15 records without frequency loss or distortion. The specially designed point is guaranteed not to break when used with any type of record changer.

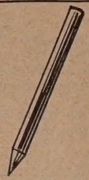
	List
Package of 10 needles	$ 0.10
Cat. No. 610-B—Carton of 100 pkgs.	10.00
Cat. No. 610-C—Display card of 50 pkgs.	5.00
Package of 25 needles	$ 0.25
Cat. No. 625-B—Carton of 50 pkgs.	12.50
Cat. No. 625-C—Display card of 50 pkgs.	12.50



DUOTONE CACTUS NEEDLE No. 18

Made from specially selected cactus thorns chemically treated to prolong life of point and assure quiet reproduction. Each needle may be re-sharpened many times. Can be used on record changers as well as ordinary phonographs. Especially recommended for use on records with high surface noise.

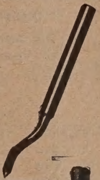
	List Price
Package of 12 needles	$ 0.35
Cat. No. 18-B—Carton of 50 packages	17.50
Cat. No. 18-C—Display card of 25 pkgs.	8.75



MIRO-POINT No. 21

The Miro-Point Needle is the "low surface" specialist of the Duotone Line. Despite this fact it still brings out the highs in a manner never before attained by a needle of this type. Designed to play up to 1000 records the Miro-Point is the outstanding needle in the field today.

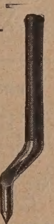
	List Price
Needle list price, each	$0.50
Cat. No. 21-B—Carton of 18 needles	9.00
Cat. No. 21-C—Display card of 18 needles	9.00



DUOTONE No. 20 "LIFETONE" OSMIUM TIPPED

The Duotone Lifetone Needle was especially designed for use with record changers. Its brilliant performance coupled with low surface noise makes it ideal for this purpose. When properly used, it will give up to 5000 perfect playings, maintaining throughout its life the same bright reproductive qualities. Packed in beautiful plastic container.

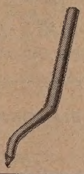
	List Price
Each needle	$ 1.50
Cat. No. 20-B—Carton of 12 needles	18.00
Cat. No. 20-C—Display card of 12 needles	18.00
Cat. No. 20-C—(M) Micro-Groove	18.00
Cat. No. 20-AC—All Groove	18.00



NEW REGENT SAPPHIRE *(Double Bend)* No. 13

A permanent needle with a flat on the shank allowing removal from, and insertion into pickup as required. Will play approximately 6000 home recordings, or 5000 commercial recordings. Finest quality jewel assures natural tone reproduction and very low record wear. Especially recommended for use in lightweight pickups. Packed on individual card.

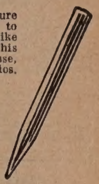
	List Price
Each Needle	$ 2.00
Cat. No. 13-B—Carton of 12 needles	24.00
Cat. No. 13-C—Display card of 12 needles	24.00



TRANSCRIPTION No. 7

Transcription needles are individually shadowgraphed to insure each needle being perfect. They are especially designed to reduce record wear on home recordings and will give life-like reproductions when used on commercial or home records. This needle, because of its perfect point and fine frequency response, is extensively used by broadcasting stations, and recording studios. Ideal for hand wound phonographs.

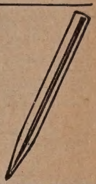
	List Price
Package of 10 needles	$ 0.10
Cat. No. 710-B—Carton of 100 packages	10.00
Cat. No. 710-C—Display card of 50 packages	5.00
Package of 25 needles	$ 0.25
Cat. No. 725-B—Carton of 50 packages	12.50
Cat. No. 725-C—Display card of 50 packages	12.50
Package of 75 needles	$ 0.50
Cat. No. 750-B—Carton of 20 packages	10.00



CHROMIUM No. 17

The Duotone Chromium needle is Duo Chrome plated to insure long life and minimum record wear. Ideally suited for use on record changers. Each needle has a highly polished surface, and is shadow-graphed. Being of a semi-permanent type, the Chromium needle avoids the necessity of constantly changing needles. Each needle is guaranteed to play at least 50 records, assuring a full evening of music without requiring a change of needle.

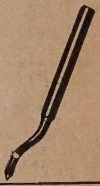
	List Price
Package of 5 needles	$ 0.25
Cat. No. 17-B—Carton of 50 pkgs.	12.50
Cat. No. 17-C—Display card of 25 pkgs.	6.25



DURPOINT No. 15

Permanent needle for home use. Will play up to 4000 records without changing. Takes additional polish from the groove of the record thus minimizing record wear, and reducing surface noise. Because of this feature the Durpoint should not be removed from pick up until replacement is necessary. Packed on individual cards.

	List Price
Each Needle	$ 1.00
Cat. No. 15-C—Display card of 12 needles	12.00
Cat. No. 15-B—Carton of 12 needles	12.00
Cat. No. 15-C—(M) Micro-Groove	12.00
Cat. No. 15-AC—All Groove	12.00

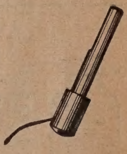


SHOCKPROOF NYLON NEEDLE NO. 25

Unique in design, this needle has an osmium tip on spring steel set into a Nylon bumper. This eliminates damage to either needle or record should the pickup arm be accidentally dropped. This needle also eliminates surface noise. Individually packed in attractive lucite container. This needle will play up to 5,000 recordings. Ideal for children.

	List Price
Each Needle	$ 2.50
Cat. No. 25-C—Display card of 12 needles	30.00
Cat. No. 25—(M) Micro-Groove*	
Cat. No. 25—(A) All Groove*	

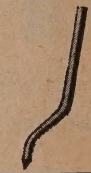
*Same prices as above



RUBY NEEDLE No. 35

The Ruby tops everything else in its price class. Second only to the famous Duotone "Star," the Ruby is known for its life-like reproduction with minimum of surface noise. Packed in beautiful plastic container.

	List Price
Each Needle	$ 1.50
Cat. No. 35-B—Carton of 12 needles	18.00



No. 19 "STAR"

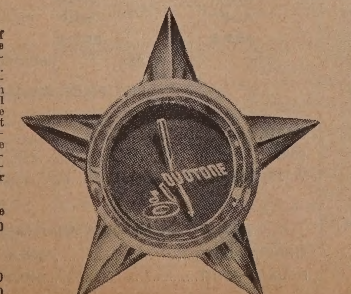
Reproduces any type of record without surface noise yet maintains brilliant high frequencies. Finest quality gem, brightly polished for smooth riding in groove. Special design filters out all noise and needle talk. Has flat on shank for easy insertion in pickup. May be removed if desired. Individually packed in beautiful lucite box. Ideal for dubbing.

All Groove	**List Price**
Each Needle	$2.50

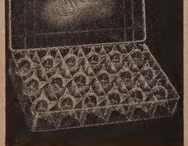
Cat. No. 19-B

Carton of 12 needles $30.00

18 to Lucite Case $45.00



UNITONE 3 SPEED NEEDLE



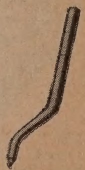
The needle everyone has been waiting for — the high quality hand-crafted Sapphire Needle that plays all types of records with full brilliance and tone. Packaged in individual cases and counter displays of beautiful, clear lucite as above. Sell UNITONE Needles for replacement in 3 speed machines.

Cat. No. 36

Each needle in lucite box
List Price $2.50

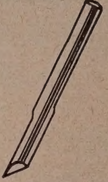
Cat. No. 36-C

18 to giant lucite case
List Price $45.00



DUOTONE NEEDLES

STEEL CUTTING STYLUS No. 8

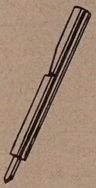


The ideal needle for use in homes by amateur record makers. With ordinary care will make a quiet record of good quality, which can be played back many times. Will make approximately 15 to 25 10" records. Packed 4 to handy point-protecting felt-lined package. **Price $1.00**

	List
Cat. No. 8-B—Carton of 25 pkgs.	$25.00
Cat. No. 8-C—Display card of 25 pkgs.	25.00

STELLITE CUTTING STYLUS No. 9

Available in Long and Short Shank



The Stellite cutting stylus with proper care, will make a record that compares favorably with a professional cutting. Its hand-lapped edge cuts a groove which assures a noiseless recording. Stellite styli are recommended after some cutting experience has been acquired. The reduction in surface noise and the improved quality of the recording will be instantly noticeable, and will be well worth the difference in cost. Will cut approximately 500 6" records. Individually packed on cards. **Price $2.00.**

	List
Cat. No. 9-B—Carton of 12 needles	$24.00
Cat. No. 9-C—Display card of 12 needles	24.00

Can Be Re-sharpened.

LAPPED *STEEL* CUTTING STYLUS No. 10

This new hand-made lap on the cutting edge of the needle makes a much smoother cut, thereby reducing surface noise and adding to the life of the needle. Especially recommended for making vocal recordings.

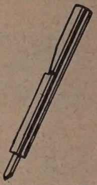
List Price, 5 Needles on card	$ 1.50
Cat. No. 10-B—Carton of 10 cards	15.00
Cat. No. 10-C—Display card of 10 cards	15.00

DUOTONE RECORD PRESERVER AND STATIC REDUCER

A newly developed fluid that helps make phonograph records (Victor, Columbia, Decca, etc.) static free. Duotone Record Preserver not only cleans the record, but actualy puts a thin protective coating on it. This coating protects the record against excessive wear and in addition enables the needle to glide smoothly, reduces surface noise and static.

	List
Each Bottle	$0.50
Cat. No. 105-B—Attractive display carton of twelve 2-oz. bottles	6.00

SAPPHIRE CUTTING NEEDLES DURAL SHANK No. 11



This needle is similar to No. 12, and in addition is held to more exacting specifications, as established by leading engineers. Mounted in Dural shank. Packed in plastic container. **Each $7.25**

(Resharpening—Each $1.75)

MICRO-GROOVE CUTTING NEEDLES

11-M Special Sapphire Cutting Stylus, for use with Micro-Groove Equipment. **$7.25 Each, List**

Available in Long and Short Shank

STYLUS No. 12

The sapphire Professional cutting stylus is the finest available. The cutting jewel is very highly polished and has a patented hand-lapped edge, which cuts and polishes the groove, making a record with the lowest surface noise. With proper handling will give 10-15 hours of cutting and can be resharpened many times. **Available long or short shank. $5.50 Each, List**

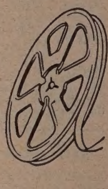
Re-sharpening . . . . Each $1.75

DUOTONE RECORDING BLANKS

All Duotone recording discs have a "professional nitrate" coating

	Red Label (Aluminum Base)		Purple Label (Aluminum Base)		Orange Label (Compo Base)	
	Carton	Each	Carton	Each	Carton	Each
6½ inch	100	$.40	100	$.30	100	$.20
8 inch	50	.50	100	.40	100	.30
10 inch	50	.80	100	.60	100	.45
12 inch	25	1.00	—	—	—	—

DUOTONE MAGNETIC RECORDING TAPE

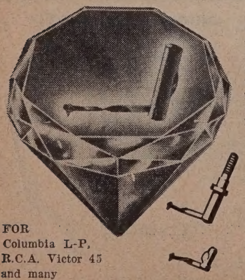


High Constant Output With Minimum Background Noise High Frequency Response—Long Life (No rub off oxide coating)—Interchangeable with other good quality tape

*All Tape Comes On Six Spoke Polystyrene Reels.

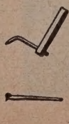
	List
RPI (in) 1250 — RPI (in) 625	
Red Oxide Plastic Base, 1250 ft., 7" reel	$5.50
Red Oxide Plastic Base, 625 ft., 5" reel	3.50
RPO (out) 1250 — RPO (out) 625	
Red Oxide Plastic Base, 1250 ft., 7" reel	5.50
Red Oxide Plastic Base, 625 ft., 5" reel	3.50
2500 ft. on Hub	10.00
2500 ft. on Reel	12.85
RPI (in) 5000 ft. NAB Aluminum Hub	20.00

GENUINE "*diamond*" REPLACEMENT NEEDLES



Offering wear-resisting qualities that protect records from the ravages of "flats" and other wear-distorted needle shapes. The Duotone Diamond is the nearest thing to a really permanent needle ever produced—outplays, outwears and costs less per playing than any other type made.

FOR Columbia L-P, R.C.A. Victor 45 and many others.



AVAILABLE for standard, all-groove and micro-groove replacement as shown on the following page.

DIAMOND NEEDLES AVAILABLE AS STOCK ITEMS . . .

AS-3
AS-4LP
AO-8
AO8LP
ES23
ES24LP
CS6LP
PHS14
RS-7
RS8LP
MSS
MSSLP
WES28
WES29LP

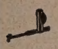
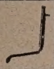
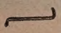
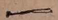
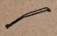
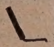
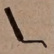
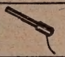
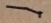
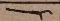
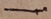
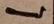
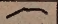
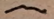
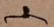
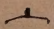
LIST PRICE $20.00

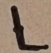
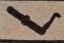
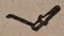
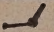
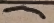
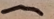
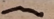
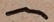
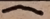
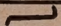
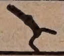
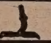
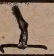
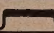
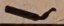
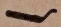
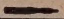
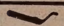
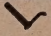
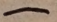
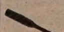
MA016	$25.00 LIST
ES22	$40.00 LIST
W013, W012, W011, MAS17	$50.00 EACH

ALL OTHER NEEDLES AVAILABLE ON ORDER

SINGLE POINT	$20.00 to $25.00 List Price
DOUBLE POINT	$40.00 to $50.00 List Price

DUOTONE REPLACEMENT NEEDLES

Cartridge Mfg. and Their Needle No.		Duotone Needle No.	Cartridge Number	Point Material	Point Size	Price
Astatic Q(M)		AO1	QT-M, QT2-M, QT3-M, LQD, LQD-1	Osm.	Stand.	$1.00
Astatic Q(J)		*AS3	QT-J, QT2-J, Q23-J, LQD, LQD-1	Jew.	Stand.	1.50
Astatic Q-33(M)		AO1-LP	QT33-M, CQ-M, LQD, and LQD-1 Series	Osm.	Micro Groove	1.00
Astatic Q-33(J)		*AS4-LP	CAC-J (New Model) QT33-J, CQ-J, LQD, LQD-1	Jew.	Micro Groove	1.50
Astatic Q-(A-G) (J)		AS4-A	CQ, AG-M, CQ, AG-J	Jew.	All Groove	1.50
Astatic D(M)		AO2	LT2, LTD Series, MD, LT3-D, LT4-D, LT4-D1	Osm.	Stand.	1.00
Astatic D-33(M)		AO2-LP	LTD3-D, LT4, LT4-D, LT4-D1	Osm.	Micro Groove	1.00
Astatic D-(A-G) (M)		AO2-A	LT4-AG	Osm.	All Groove	1.00
Astatic G-78(M)		AO5	GC7-J, GC8-M, MG78-J, MG78-M	Osm.	Stand.	1.00
Astatic G(M)		AO5-LP	GC-J, GC-M, GC1-J, GC-1M, MG-J, MG-M	Osm.	Micro Groove	1.00
Astatic G-AGM		AO5-A	GC-AG-M, MG-AG-M	Osm.	All Groove	1.00
Astatic G-AG(J)		AS5-A	GC-AG-J, MG-AG-J	Jew.	All Groove	1.50
Astatic U-78(M)		AO7	U78M	Osm.	Stand.	1.00
Astatic U-78(J)		AS7	U78-J	Jew.	Stand.	1.50
Astatic U(M)		AO7-LP	U-M	Osm.	Micro Groove	1.00
Astatic U(J)		AS7-LP	U-J	Jew.	Micro Groove	1.50
Astatic C-3(M)		AO8	MD-3	Osm.	Stand.	1.00
Astatic C-3(J)		AS8	MD-3	Jew.	Stand.	1.50
Astatic C-1(M)		AO8-LP	MD-1	Osm.	Micro Groove	1.00
Astatic C-1(J)		AS8-LP	MD-1	Jew.	Micro Groove	1.50
Astatic 1J Nylon		ANS10	1-J	Jew.	Stand.	2.50
Astatic T(M)		AO11	LT1-M, LT2-M, LT3-M	Osm.	Stand.	1.00
Astatic T33(M)		AO11-LP	LT33	Osm.	Micro Groove	1.00
Am.-Micro-S-1		AMO	S1, S1-A, S2, S2-A	Osm.	Stand.	1.50
Am.-Micro-CO-3		AMO1	C3	Osm.	Stand.	1.50
Am.-Micro-CO-2		AMO2-A	C1, C2	Osm.	All Groove	1.50
Am.-Micro-CO-1		AMO1-LP	C1, C2	Osm.	Micro Groove	1.50
Crosley 145720		CRO	145749	Osm.	Stand.	2.50
Elec.-Voice O-3		EO19	M12, H12, L12	Osm.	Stand.	1.50
Elec.-Voice O-1		EO19-LP	14, 22, L14, 34	Osm.	Micro Groove	1.50
Elec.-Voice O-2		ESOA25	130-33	Osm.	All Groove	1.50
Elec.-Voice O-2		ES25-A	130-33S	Jew.	All Groove	2.50
Elec.-Voice S-3		*ES23	M12S, H12S,-L12S	Jew.	Stand.	2.50
Elec.-Voice S-1		*ES24-LP	14S, 22S, 34S	Jew.	Micro Groove	2.50
Elec.-Voice O-13		EO21	16TT, 22TT	Osm.	Twin Point	2.50
Elec.-Voice S-13		ES22	16TT, 22TT	Jew.	Twin Point	3.50
Magnavox 560102		MAO16	Magnavox 560101	Osm.	Stand.	1.50
Magnavox 560138		MAS17	Magnavox 560133	Osm.	Stand & Micro Groove	2.50
Philco-Col. 45-1613		CO5-LP	45-1609, 45-1612	Osm.	Micro Groove	1.50
Philco-Col. 45-1613		*CS6-LP	45-1609, 45-1612	Jew.	Micro Groove	2.00
Philco 45-1596		*PHS14	Philco-Dynamic Repro. 76-1622	Jew.	Stand.	2.25
Philco 45-1597		PHO16	35-2671	Osm.	Stand.	1.50
Philco 45-1651		PHS16	35-2671	Jew.	Stand.	2.50
Philco-3 Sp. 35-2693		PHO15	76-4649	Osm.	Twin Pt. Stand. & Micro Gr.	2.50
Philco-3 Sp. 35-2693		PHS15	Philco-Dynamic Repro. 76-4649	Jew.	Twin Pt. Stand. & Micro Gr.	3.50

Cartridge Mfg. and Their Needle No.		Duotone Needle No.	Cartridge Number	Point Material	Point Size	Price
RCA-Part # 39863,72345		*RS7	70338, 70339, 72551, 39919, 212X1, 9890	Jew.	Stand.	$3.50
38449,75046		RO7	(Magic Tone Cell) 39550 38598, 70332, 39851	Osm.	Stand.	2.00
RCA-Part # 74068		*RS8-LP	74067, Improved Type, 74625	Jew.	Micro Groove	2.50
RCA-Part # 75045		RO9-LP	74067, 74625	Osm.	Micro	1.50
RCA-Part # 135-1, 75497		RO10	75475	Osm.	Stand.	2.00
RCA-Part # 75496		RO10-LP	75475	Osm.	Micro	2.00
RCA-Part # 75497		RS11	75475	Jew.	Stand.	3.50
RCA-Part # 75496		RS11-LP	75475	Jew.	Micro Groove	2.50
Shure A-62A		MSO	P30, P70, P74-AD, P76, P76-AF, P57-S,	Osm.	Stand.	1.50
Shure A-61A		*MSS	P76-AFV, P77, W22, W22-AB, W23-A, W23-AB, W60-A, W60-B, W60-HS, W60-PN, W61-B, W65-B, P70-A,	Jew.	Stand.	2.50
Shure A-63 Mg.		MSO-LP	P37-A, P75-A, P73, P72-V, P76-AV, P76-AFV,-P77-AV,	Osm.	Micro	1.50
Shure A-63 Mg.		*MSS-LP	Also Turn Over, Admiral 409-A11	Jew.	Micro	2.50
Shure A-66U		MSO-A	Admiral 409-A13 P71, P71-B, P71-C, P81, P81-AD, P81-C,	Osm.	All Purpose Truncated Tip	1.50
Shure A-66U		MSS-A	P37, P37-C, P37-A, P81-A, W26-A, W66-A, W26-B, W66-B	Jew.	All Purpose Truncated Tip	2.50
Sonotone		SO-A	W-7590	Osm.	All Gr.	1.50
Sonotone		SS-A	W-7590	Jew.	All Gr.	2.50
Webster-Chi. 3-Sp. Ch. NE-215		WO13	21P247, 21P402, 21P403	Osm.	Twin Point	4.00
Webster-Chi. 3-Sp. Ch. NE-215		WO12 (Nylon)	21P247, 21P402, 21P403 (Nylon)	Osm.	Twin Point	4.50
Webster-Chi. 3-Sp. Ch. NE-316		WO11	21P404	Osm.	Twin Point	4.00
Webster-El. M		WEO17	M1	Osm.	Stand.	1.50
Webster-El. F-14		WEO18	F14, F14-1, F14-2, F14-3	Osm.	Twin Point	2.50
Webster-El. A3S		*WES28	A8, A1	Jew.	Stand.	2.50
Webster-El. A1S		*WES29 LP	A1, A8, A6, A3, A5, A4	Jew.	Micro Groove	2.50
Webster-El. A30		WEO20	A1-M, A1-M1, A5-M, A6-M	Osm.	Stand.	1.50
Webster-El. A10		WEO20 LP	A1-M, A1-M1, A2-M, A6-M	Osm.	Micro Groove	1.50
Webster-El. A9		WEO31-A	A9-M	Osm.	All Groove	1.50
Webster-El. Q1		WEO22	Q1	Osm.	Stand.	1.50
Webster-El. Q2		WEO26	Q2	Osm.	Stand.	1.50
Webster-El. F7		WEO LP27	Q2, F7-1, F13, F7-2	Osm.	Micro Groove	1.50
Webster-El. C9		WEO21-A	C9	Osm.	All Groove	1.50
Webster-El. A2		WEO-A30	Q3, A9, F13	Osm.	All Groove	1.50
Webster-El. F16-3		WEO32	F16, F16-1, F16-2	Osm.	Stand.	1.50
Webster-El. F16-1		WEO32 LP	F16, F16-1, F16-2	Osm.	Micro Groove	1.50
Webster-El. F15-3		WEO33	F15, F15-1	Osm.	Stand.	1.50
Webster-El. F15-1		WEO33 LP	F15, F15-1	Osm.	Micro Groove	1.50
Webster-El. F10		WEO	F10, F11, F11-1	Osm.	Stand.	1.50
Webster-El. F10-1		WES-LP	F10, F11, F11-1	Jew.	Micro Groove	2.50
Webster-El. G3		WEO34	G3-M	Osm.	Stand.	1.50
Webster-El. G1		WEO34 LP	G1-M	Osm.	Micro Groove	1.50
Webster-El. G2		WEO34-A	G2-M	Osm.	All Groove	1.50
Webster-El. WS		WEO35	WS	Osm.	Stand.	1.50
Webster-El. AJ		WEO35 LP	AJ4	Osm.	Micro Groove	1.50
Duotone		36	For any set screw pick-up made for All Purpose records	Jewel		2.50
Duotone		36-D	For any light weight cartridge. Made for All Purpose use—using set screw for removal	Diamond		20.00

audiotape
TRADE MARK
it speaks for itself

A complete line of professional quality magnetic recording tape—on plastic or paper base, with red or black oxide coating, permitting matched performance in any tape recorder.

Audiotape is precision manufactured to the same exacting standards of quality and uniformity which have characterized Audiodiscs for the past decade—your assurance of maximum fidelity, uniformity, frequency response, and freedom from background noise and distortion.

The following types of Audiotape are now available:

	Length	Reel	Coating	TYPE No.		List Price
				Oxide Out	Oxide In	
PLASTIC BASE	600 ft.	5″ Plastic	Black Oxide Red Oxide	640 650	641 651	$ 3.50
	1250 ft.	7″ Aluminum (or plastic)	Black Oxide Red Oxide	1240 1250	1241 1251	5.50
	2500 ft.	Std. NAB Hub 10½″ Alum. Reel	Red Oxide Red Oxide	2550H 2550R	2551H 2551R	10.00 12.85
	5000 ft.	Std. NAB Hub 10½″ Alum. Reel	Red Oxide Red Oxide	5050H 5050R	5051H 5051R	20.00 26.00
	1000 meters (3300 ft.)	Std.. NAB Hub	Red Oxide	3350H	3351H	13.00
PAPER BASE	600 ft.	5″ Plastic	Black Oxide Red Oxide	600 620	601 621	2.25
	1250 ft.	7″ Aluminum (or Plastic)	Black Oxide Red Oxide	1200 1220	1201 1221	3.50
	2500 ft.	Std. NAB Hub 10½″ Alum. Reel	Red Oxide Red Oxide	2520H 2520R	2521H 2521R	6.50 9.35
	5000 ft.	St. NAB Hub 10½″ Alum. Reel	Red Oxide Red Oxide	5020H 5020R	5021H 5021R	13.00 19.00

Audiotape can also be supplied in any desired width, for special recording applications.

AUDIOTAPE is cut by a superior straight-line slitting process which makes it track and wind absolutely flat.

AUDIOTAPE has no curl—lies flat on the magnetic head without increased tension, giving better frequency response and more uniform motion.

AUDIOTAPE has exceptionally low surface friction—reduces wear on heads.

AUDIOTAPE has definitely superior dispersion of oxide particles — no lumps, no bumps. This can be checked with any good microscope.

AUDIOTAPE is completely free from any tendency to stick, layer to layer. Unwinds uniformly, no tendency to create wows.

AUDIOTAPE coating is specially formulated to give strong adherence of the oxide to the base.

AUDIOTAPE is designed to give maximum signal to noise ratio.

AUDIOTAPE has excellent high frequency response.

AUDIOTAPE has low distortion.

AUDIOTAPE has no low-frequency modulation noise.

AUDIOTAPE has unequalled uniformity—within the reel, and from reel to reel. No magnetic weak spots that can cause fluctuations in output.

audiodiscs *and* **audiopoints** ***are listed on the following page.***

"HOW TO MAKE GOOD RECORDINGS"

A complete, authoritative and non-technical handbook on all phases of disc recording—materials, equipment and techniques. Contains 140 pages, profusely illustrated with photographs, charts and diagrams. Includes a glossary of recording terms. Now in its 9th printing.

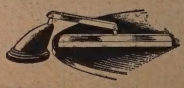
List price $2.00

HOW TO MAKE GOOD RECORDINGS

AUDIODISC CHIP-CHASER

A simple but perfect solution to the thread removal problem in recording. The felt-lined wiper blade is set on the disc before starting the recording. The Chip-Chaser automatically and infallibly brushes the thread toward the center, winding it up on the overhead post or drive pins, as the case may be.

List Price for 16″ turntables, **$6.25**
for 12″ turntables, **$5.00**



audiodiscs®

For truly fine recording and reproduction

For more than a decade, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

Type		Diameter	List Price per Disc	Box Contains
RED LABEL Audiodiscs for professional use. Exceed the most exacting demands for highest quality professional recordings. The finest discs obtainable. Aluminum base. Double sided. Embossed labels.		8″ 10″ 12″ 16″	$0.90 1.25 2.05 3.75	25
SINGLE FACE RED LABEL Audiodiscs. Same quality as double sided Red Label Audiodiscs, listed above.		12″ 16″	$1.65 2.95	25
YELLOW LABEL Audiodiscs for general use. High uniform quality. The popular choice for all general purpose recording. Aluminum base. Double sided. Yellow paper labels.		8″ 10″ 12″ 16″	$0.75 1.00 1.65 2.95	25
REFERENCE LABEL Audiodiscs. Provide maximum economy for test cuts, filing, reference recordings, auditions and equipment adjustments. Aluminum base. Double sided. White paper labels.		10″ 12″ 16″	$0.85 1.25 2.25	25
BLUE LABEL Audiodiscs for amateur use. Same high quality lacquer as professional discs, but on thinner aluminum base. Ideal for schools, homes, and general amateur use. Double sided. Blue paper labels.		6½″ 8″ 10″	$0.40 .55 .80	50
MASTER Audiodiscs. The outstanding choice of professional recordists for use where pressings are to be made. Give fine results with either silvering or gold sputterings. Aluminum base. Double sided or single face.	Double Sided	12″ 13¼″ 17¼″	$2.60 3.35 5.60	25
	Single Face	12″ 13¼″ 17¼″	$2.05 2.35 4.10	25

Prices slightly higher in Pacific Coast and Southwestern Areas.

audiopoints®

microscopically matched recording and playback styli

The complete line of Audiopoints covers the full range of recording and playback needs—for professional as well as general use. Audiopoints are made by skilled craftsmen, and conveniently packaged in cards, boxes or envelopes.

RECORDING AUDIOPOINTS

audiopoints
RECORDING

SAPPHIRE No. 14—long recognized as the finest recording stylus made. Short or long dural shank, and 87° or 70° included angle.
List Price—$7.25
(Resharpening cost, 87°—$3.25)
(Resharpening cost, 70°— 3.75)

SAPPHIRE No. 202—a high-quality professional stylus. Short or long brass shank.
List Price—$5.25
(Resharpening cost—$2.60)

SAPPHIRE No. 20—especially designed for professional microgroove recording. Short or long dural shank.
List Price—$7.25
(Resharpening cost—$3.25)

STELLITE No. 34—a favorite with many professional and non-professional users. Short or long shank. 87° included angle.
List Price—$1.75
(Resharpening cost—$0.85)

DIAMOND LAPPED STEEL No. 50—most practical and economical stylus for non-professional use.
List Price—3 for $1.00

PLAYBACK AUDIOPOINTS

audiopoints
PLAYBACK

SAPPHIRE No. 113—meets the requirements of the most critical professional recordists. Straight dural shank.
List Price—$6.50
(Resharpening cost—$2.25)

SAPPHIRE No. 123—for professional use with microgroove recordings.
List Price—$2.00
(Resharpening cost—$1.00)

"RED CIRCLE" SAPPHIRE No. 103—for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.
List Price—$2.00
(Resharpening cost—$1.50

"RED CIRCLE" SAPPHIRE No. 303—same as No. 103, except with bent dural shank. Ideal for phonograph records.
List Price—$2.00
(Resharpening cost—$1.00)

STEEL TRANSCRIPTION NEEDLE No. 151—finest steel needles made. 100% shadowgraphed to assure perfection of every needle.
List Price—100 for $1.25
20 for $0.25

RESHARPENING SERVICE

Established years ago, our Resharpening Service materially reduces the over-all cost of using sapphire and stellite Audiopoints. Each resharpened point is disc-tested. Special cards and envelopes are available for returning Audiopoints for resharpening.

INSTANTANEOUS RECORDING BLANKS

THE RECORDISC CORP.

395 BROADWAY, NEW YORK 13, N. Y. • CABLE ADDRESS: RECORDISC, NEW YORK, N. Y.
EXPORT DEPT.: ROYAL NATIONAL COMPANY, INC., 89 BROAD STREET, NEW YORK

WORLD-FAMOUS HOME RECORDING BLANKS

ORANGE LABEL

Popular composition base disc . . . a party favorite! Heavy and firm, it will take punishment, yet it is coated carefully with our standard RECORDISC surface compound. The acme of amateur transcription blanks.

"GM" LABEL

Available in the three larger sizes only, these discs are made on heavy .021 aluminum base, coated with critically selected compound. Precision-made, and minutely inspected, they are guaranteed for perfect performance and long use.

PURPLE LABEL

Lightweight aluminum base disc with heavyweight selling power! The lowest-priced high-quality disc with an inexpensive .012 aluminum base, designed for amateurs desiring semi-professional reproduction.

MAGNETIC RECORDING TAPE

Precision-manufactured on a specially designed machine, RECORDISC recording tape features high tensile strength for longer life, even coating for high frequency response and controlled slitting for trouble-free winding.

RED LABEL

High-fidelity, volume selling disc with .021 aluminum base. Coated with flawless RECORDISC compound. Professional quality in smaller sizes for those who want the finest. Professional nitrate coating.

Super-Tone RECORDING WIRE

RECORDISC's stainless steel recording wire is the product of extensive research — delivers ultra-high fidelity, easy erasing qualities and outstanding durability. Wound on RMA-standard spools.

LIST PRICES†

RECORDING WIRE

LENGTH	PRICE
¼ Hour	$2.00
½ Hour	3.00
1 Hour	5.00

Empty spool, 75c

CODE:
P—Plastic Base
K—Kraft Base
IW—Inside Winding of Oxide
OW—Outside Winding of Oxide
625—625 ft. length
1250—1,250 ft. length

RECORDING TAPE

STYLE NO.	DESCRIPTION	SIZE REELS	LIST PRICE
PIW-625	625 Ft. Plastic Base, Oxide In	5"	$3.50
PIW-1250	1250 Ft. Plastic Base, Oxide In	7"	5.50
POW-625	625 Ft. Plastic Base, Oxide Out	5"	3.50
POW-1250	1250 Ft. Plastic Base, Oxide Out	7"	5.50
KIW-625	625 Ft. Kraft Base, Oxide In	5"	2.25
KIW-1250	1250 Ft. Kraft Base, Oxide In	7"	3.50
KOW-625	625 Ft. Kraft Base, Oxide Out	5"	2.25
KOW-1250	1250 Ft. Kraft Base, Oxide Out	7"	3.50

ALL TAPES SUPPLIED ON 6-SPOKE POLYSTERENE REEL

RECORDING DISCS

LABEL	BASE	6½"	8"	10"	12"
ORANGE	Bond	25c	35c	50c	
PURPLE	Aluminum	30c	40c	60c	
RED	Aluminum	40c	50c	80c	$1.00
"GM"	Aluminum		80c	$1.00	$1.25

Precision-Perfect Professional Recording Discs

Designed for broadcasting stations and recording studios. Years of costly research and the valuable experience gained as the world's largest producer of home recording blanks have been combined to produce the perfect professional recording disc . . . possessing a fidelity heretofore thought impossible. Each blank guaranteed for five full years.

LIST PRICES†	10"	12"	16"
2 ★ ★ STAR precision-processed, double-face	$1.15	$2.00	$3.15
3 ★ ★ ★ STAR perfectly flawless, double-face	$1.40	$2.40	$3.95

STEEL STYLI
(CHROME PLATED)

STEEL STYLI
Chrome Plated Shank
Designed for Perfect Home Recording
3 for $1
RECORDISC

A fine economy stylus that gives excellent service during its recording life of approximately one hour. Shiny chrome-plate on hardened steel. Packed in protective cards. LIST 3 for $1

SPECIAL QX-5

RECORDISC
Special QX-5
75c
RECORDING STYLUS

A precision-made stylus made of processed and tempered steel . . . with an expensive filter cutting point and recessed shank. Smooth easy cutting for those who seek a fine but non-fragile recording tip. LIST PRICE 75¢

RECORDISC RECORDING STYLI

Best Suited for Best Recordings

STELLITE STYLUS

Super
STELLITE STYLUS
$2
RECORDISC

Carefully machined of special, hardened metal alloy . . . less fragile than costly sapphire styli. Recommended for less experienced recording operators. Packed one to a protective card. LIST PRICE‡ 2.00

SAPPHIRE STYLUS

SAPPHIRE STYLUS
RECORDISC
6.50

A specially lapped sapphire point on each stylus cuts clean shiny grooves with less surface noise than any similar stylus. As much as 10 hours of recording time . . can be sharpened as many as 15 times. Packed in individual jewel box. LIST PRICE‡ 6.50

‡50 †40

Walco PLAY BACK Needles

Walco "400" Floating Jewel Sapphire*

	List price
WS-400	$2.50
WS-400-2, All-groove . .	2.50
400MGS, Microgroove .	2.50

Walco "400" RUBY* JEWEL

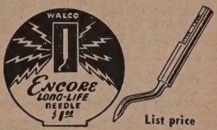
	List price
WR-400	$2.00

The Walco "400" needles are beautifully packaged and are available 12 to a counter display card or in cartons of 12. All Walco needles are available with microgroove (1 mil) points for LP records.

Walco "400" PRECIOUS METAL

	List price
WA-400	$1.50
WA-400-2, All-groove . .	1.50
400MGA, Microgroove .	1.50

Walco ENCORE



	List price
WA-100	$1.00
WA-100-2 All-groove . .	1.00

Exceptionally fine, precious metal tipped needle, priced for volume sales.

Carded 12 to display card

Walco GROOVE MASTER

	List price
WA-150	$ .50

High-fidelity needle tipped with precious metal alloy. Hand-polished point with filter type shank.

Carded 2 doz. to display card

Walco SAPPHIRE* MUTED STYLUS for Shure 30 cartridges

	List price
WA-30S	$1.50
WA-30MGS, Microgroove .	1.50

Deluxe metal foil and cellophane window package.

Carded 12 to display card

Walco ALLOY MUTED STYLUS for Shure 30 cartridges

	List price
WP-30	$1.00
WP-30MGA, Microgroove .	1.00

Deluxe metal foil and cellophane window package.

Carded 12 to display card

Walco TRU-TRAC SAPPHIRE*

	List price
WN-50, Bent shank .	$1.00
WN-55, Straight shank	1.00

For older type phonos with heavier pick-ups. Hand polished sapphire with notched dural shanks.*

Walco COIN MACHINE NEEDLES

SA-2
Precious metal

An all-purpose, long life coin machine needle of superior quality.

WS-900
SAPPHIRE*

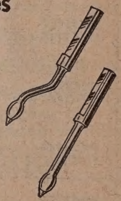
For light weight tone arms in new coin phonographs. Rated at an extremely high number of plays.

Prices of above on request

Walco DIAMOND Needles

	List price
WD-90, Bent shank . .	$12.50
WD-95, Straight shank .	12.50

In plastic, transparent case, handsomely boxed, with written guarantee. Packaged like the exquisite product that it is. The finest, longest lasting needle made. Costs less per play than any other Walco needle.



Walco CUTTING Needles

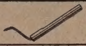
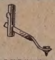
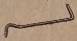
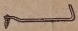
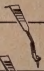
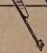
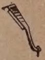
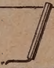
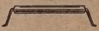
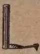
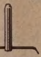
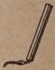
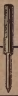
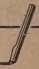
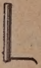
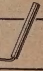
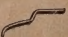
	List price
WC-25 SAPPHIRE* . . .	$6.00
Hand lapped, precision ground.	
WC-20 STELLITE	2.00
Long life, hand-polished stylus.	
WC-30 STEEL, card of 5 .	1.00
For finer home recording.	

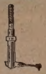
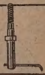
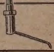
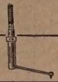
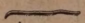
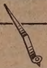
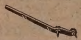
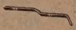
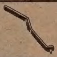
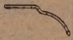
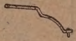
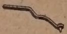
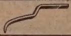
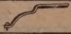
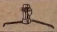
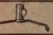
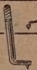
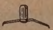
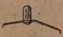
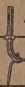
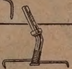
*synthetic

Copyright 1951
Electrovox Company, Inc.,
East Orange, New Jersey.

Walco Needles are used as Original Equipment by Leading Manufacturers

Walco REPLACEMENT NEEDLES

CARTRIDGE MFG'S. NEEDLE NO.	ILLUSTRATION	WALCO NEEDLE NO.	LIST PRICE
ASTATIC T-(M) ASTATIC T-33 (M)		W-1A W-1MGA	$1.00 1.00
ASTATIC Q-(M) ASTATIC Q-33 (M) ASTATIC Q-AG (M)		W-2A W-2MGA W-2AGA	1.00 1.00 1.00
ASTATIC Q-(J) ASTATIC Q-33 (J) ASTATIC Q-AG (J)		W-2S W-2MGS W-2AGS	1.50 1.50 1.50
ASTATIC G-78 (M) ASTATIC G-(M) ASTATIC G-AG-(M)		W-3A W-3MGA W-3AGA	1.00 1.00 1.00
ASTATIC G-78 (J) ASTATIC G-(J) ASTATIC G-AG (J)		W-3S W-3MGS W-3AGS	1.50 1.50 1.50
ASTATIC U-78 (M) ASTATIC U-(M)		W-4A W-4MGA	1.00 1.00
ASTATIC U-(J) ASTATIC U-78 (J)		W-4MGS W-4S	1.50 1.50
ASTATIC C-3 (M) ASTATIC C-1 (M)		W-19A W-19MGA	1.00 1.00
ASTATIC C-3 (J) ASTATIC C-1 (J)		W-19S W-19MGS	1.50 1.50
ASTATIC D-(M) ASTATIC D-33 (M) ASTATIC D-AG (M)		W-6A W-6MGA W-6AGA	1.00 1.00 1.00
ASTATIC A-1 (M) ASTATIC A-3 (M) ASTATIC A-AG (M)		W-5MGA W-5A W-5AGA	1.00 1.00 1.00
ASTATIC A-1 (J) ASTATIC A-3 (J) ASTATIC A-AG (J)		W-5MGS W-5S W-5AGS	1.50 1.50 1.50
WEBSTER-ELECTRIC M		W-8A	1.50
WEBSTER-ELECTRIC F-14		W-9TPA	2.50
WEBSTER-ELECTRIC A-3S A-1S		W-10S W-10MGS	2.50 2.50
WEBSTER-ELECTRIC A-30 A-10		W-11A W-11MGA	1.50 1.50
WEBSTER-ELECTRIC Q-1		W-12A	1.50
WEBSTER-ELECTRIC A-2		W-13AGA	1.50
WEBSTER-ELECTRIC C-9		W-14AGA	1.50
WEBSTER-ELECTRIC Q-2		W-15A	1.50
WEBSTER-ELECTRIC F-16-3 F-16-1		W-16A W-16MGA	1.50 1.50
WEBSTER-ELECTRIC F-15-3 F-15-1		W-17A W-17MGA	1.50 1.50
WEBSTER-ELECTRIC F-7		W-18MGA	1.50
WEBSTER-ELECTRIC F-10 F-10-1		W-30A W-30MGA	1.00 1.00

CARTRIDGE MFG'S. NEEDLE NO.	ILLUSTRATION	WALCO NEEDLE NO.	LIST PRICE
R.C.A. 72345 and 39863		W-42S	$3.00
R.C.A. 74068		W-42MGS	2.00
R.C.A. 39449 and 75046 R.C.A. 38448 and 75045		W-43A W-43MGA	1.50 1.50
R.C.A. 75497 R.C.A. 75496		W-44A W-44MGA	1.50 1.50
R.C.A. 75497 R.C.A. 75496		W-44S W-44MGS	2.00 3.00
ELECTRO-VOICE O-3 ELECTRO-VOICE O-1 ELECTRO-VOICE O-2		W-20A W-20MGA W-20AGA	1.50 1.50 1.50
ELECTRO-VOICE S-3 ELECTRO-VOICE S-1		W-21S W-21MGS	2.50 2.50
ELECTRO-VOICE O-13 ELECTRO-VOICE S-13		W-22TPA W-22TPS	2.50 3.50
SHURE BROS. TURNOVER CARTS. TURNOVER CARTS.		W-29A W-29MGA	1.00 1.00
SHURE BROS. TURNOVER CARTS. TURNOVER CARTS.		W-29S W-29MGS	1.50 1.50
SHURE BROS. A-62A A-63MG A-66U		W-30A W-30MGA W-30AGA	1.00 1.00 1.00
SHURE BROS. A-61A A-65MG A-67U		W-30S W-30MGS W-30AGS	1.50 1.50 1.50
SHURE BROS. P-81 D		W-37AGS	1.50
PHILCO 45-1597		W-30A	1.00
PHILCO 45-1651		W-30S	1.50
PHILCO 45-1613		W-45MGA	1.00
PHILCO 45-1613 PHILCO-COLUMBIA		W-45MGS	1.50
PHILCO 35-2693		W-46TPA	2.00
PHILCO 45-9589		W-46TPS	3.50
PHILCO 45-1596		W-48S	2.25
MAGNAVOX 560102		W-50A	1.00
MAGNAVOX 560138		W-51TPA	2.50
MAGNAVOX 560153-2		W-52TPA	2.50
WEBSTER-CHICAGO NE-215		W-60TPA	3.00
WEBSTER-CHICAGO NE-316		W-63TPA	3.00

IMPORTANT NOTICE!

Walco model numbers also indicate specifications as follows: **A—Alloy S—Sapphire MG—MicroGroove AG—All-Groove (3-speed) TP—Twin Point**

Thus the suffix AGS means All-Groove Sapphire, MGA means MicroGroove Alloy (metal), etc.

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Complete REPLACEMENT NEEDLE *Control*

Phonograph needle replacements made easy to

SELECT • SELL • STOCK

Walco REPLACEMENT NEEDLES MASTER CONTROL INDEX
PHONOGRAPH MANUFACTURERS INDEX
CARTRIDGE MAKERS INDEX
WALCO REPLACEMENT NEEDLES INDEX
MASTER CONTROL INDEX
Walco REPLACEMENT NEEDLE MANUAL
REPLACEMENT NEEDLE MANUAL
INVENTORY CONTROL FILE CASE
Walco REPLACEMENT NEEDLE
Walco REPLACEMENT NEEDLES INVENTORY CONTROL

The C-I (Controlled Inventory) Plan solves the ordinarily complex problem of stocking and selling the hundred odd varieties of replacement needles now in use.

These "Silent salesmen" help you offer prompt, efficient service to your customers, allow you to *sell* the right needle for every phonograph.

Make your store headquarters for replacement needles with:

Walco's permanent **Master Control Index** *lists all phonographs by year, model number, cartridge, and needle. Makes it easy to determine the* **correct** *replacement needle* **immediately.**

Walco's comprehensive, pocket-sized **Replacement Needle Manual** *contains same information as Master Control Index. Makes it easy for the serviceman to install the* **right** *needle on his* **first** *call.*

Walco's space saving **Inventory Control File Case** *simplifies stock control. Keep your entire needle inventory in this compact, cross-referenced cabinet.*

MASTER CONTROL INDEX or REPLACEMENT NEEDLE MANUAL

complete with 13 Basic Replacement Needles

W-1A
W-2-S
W-2MGS
W-9TPA
WP-30S
WP-30MGS
WP-30AGS
W-42S
W-42MGS
W-45MGS
W-46TPS
WT-63TPA
WA-400-2

(fill over 90% of replacement demand)

List price	Dealer Cost
$25.50	**$15.00**
(for needles alone)	(complete)

NOTE: Master Control Index or Replacement Needle Manual, complete with 13 basic needles, supplied FREE OF CHARGE with your order for $30.00 (your cost) worth of Walco conventional (78RPM) needles.

None of these wonderful aids costs you a cent. Leave it to the nation's leading supplier to phonograph manufacturers to provide you with not only every variety of needle in use, but with the only sensible, fool-proof system to help you sell them, and sell them at a profit.

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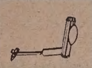
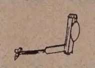
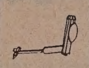
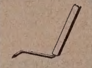
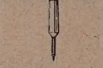
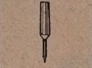
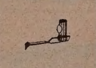
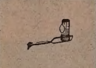
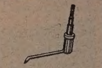
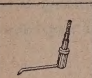
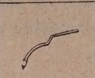
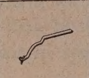
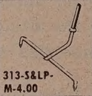
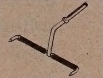
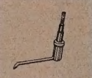
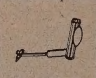
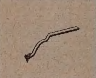
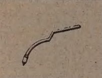
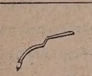
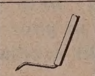
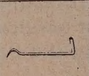
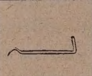
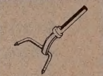
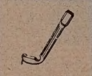
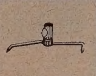
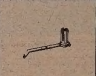
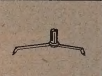
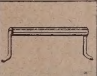
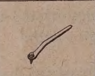
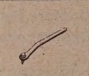
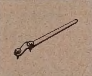
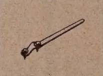
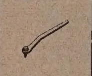
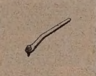
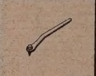
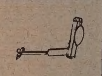
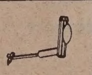
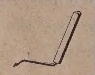
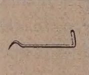
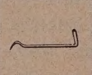
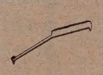
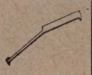
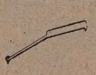
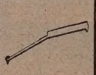
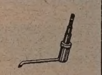
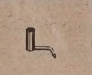
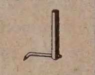
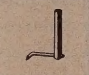
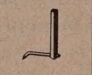
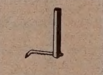
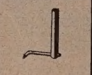
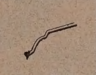
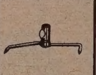
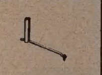
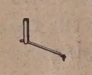
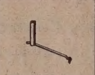
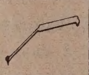
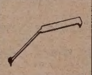
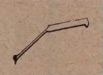
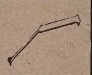
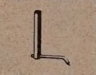
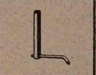
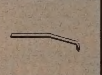
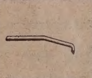
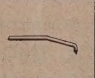
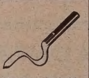
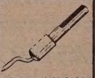
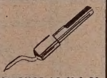
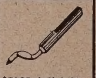
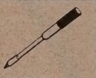
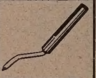
RECOTON* Replacement Needles

Always faithful

 301-S-M-1.00	 302-S-J-1.50	 303-LP-J-1.50	 304-S-M-1.00	 305-S-M-2.50	 306-S-J-3.00	 307-LP-M-1.50	 308-LP-J-2.50	 309-S-J-3.50
 310-LP-J-3.50	 311-S-M-1.50	 312-S-J-2.50	 313-S&LP-M-4.00	 314-S&LP-M-5.50	 315-LP-M-1.50	 316-LP-M-1.00	 317-LP-J-2.50	 318-LP-M-1.50
 319-A-M-1.50	 320-LP-M-1.00	 321-S-M-1.00	 322-LP-M-1.00	 323-LP&S-M-4.00	 324-S-J-2.25	 325-LP&S-M-2.50	 326-S-M-1.50	 327-LP&S-M-2.50
 328-LP&S-M-2.50	 329-S-M-1.50	 330-LP-M-1.50	 331-LP&S-M-2.50	 332-LP&S-J-3.50	 333-S-J-2.50	 334-LP-J-2.50	 335-A-M-1.50	 336-A-M-1.00
 337-A-J-1.50	 338-A-M-1.00	 339-A-M-1.00	 340-A-J-1.50	 341-LP-M-1.00	 342-S-M-1.00	 343-LP-J-1.50	 344-S-J-1.50	 345-S-M-1.50
 346-S-M-1.50	 347-LP-M-1.50	 348-S-M-1.50	 349-LP-J-2.50	 350-S-J-2.50	 351-A-M-1.50	 352-A-J-2.50	 353-LP&S-J-3.50	 354-S-M-1.00
 355-LP-M-1.00	 356-A-M-1.00	 357-S-M-1.00	 358-LP-M-1.00	 359-S-J-1.50	 360-LP-J-1.50	 361-S-M-1.50	 362-LP-M-1.50	 363-S-M-1.50
 364-LP-M-1.50	 365-A-M-1.50	 2412R-S-M-1.00	 2512R-S-M-1.50	 2512MGR-LP-M-1.50	 2712R-A-M-1.00	 2812R-A-J-1.50	 2912R-A-J-2.50	**REMEMBER! Recoton does not duplicate the same needle under another number!**

CODE

First part of number is RECOTON's catalog number.

Second part of number denotes point size.
S—Standard 78 RPM
LP—Microgroove 33⅓ RPM and 45 RPM
A—All Speeds

Third part of number denotes point material.
M—Precious metal
J—Jewel

Thus 301-S-M = Recoton's replacement needle catalog #301 which is used for 78 RPM and has a precious metal tip.

NEED A REPLACEMENT NEEDLE?
33⅓-45-78 RPM
RECOTON
Recoton

* Reg. U.S. Pat. Off.

RECOTON No. 31512
FOR RCA 45 RPM PLAYER

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

RECOTON No. 30312
FOR COLUMBIA AND DECCA LP PLAYERS

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

RECOTON No. 31912
MUTED STYLUS
FOR ALL 3 SPEEDS

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

REPLACEMENT NEEDLE KIT No. 250

Recoton Replacement Needles are precision made of the finest materials by Recoton's skilled craftsmen. Expertly designed to fit all popular cartridges — Recoton's famous phoneedles incorporate the most advanced developments in the acoustical field — guarantee full tonal range and longer life.

NEED A REPLACEMENT NEEDLE?
RECOTON
RECOTON
REPLACEMENT NEEDLES

	List Price
No. 250—Replacement Cabinet containing 1 needle each of Cat. No. 301 through No. 314	$ 35.00
No. 450—Replacement Cabinet containing 2 needles each of Cat. No. 301 through 365 and including 2 each of 2412R, 2512R, 2512 MGR, 2712R, 2812R, 2912R	$261.50

ASK FOR OUR SIMPLIFIED REFERENCE GUIDE

RECOTON* *Phoneedles*

Always faithful

Recoton
SUPEROSMIUM
$1.00

SUPEROSMIUM No. 2412

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Good for up to 5,000 performances free of surface noise and hiss. Exceptionally gentle to records.

List Price

No. 2412—1 needle to a plastic box ....**$ 1.00**
12 to a display card **12.00**

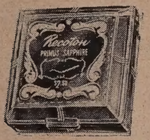
Recoton
SHOCK PROOF
Nylon
$1.50

NYLON PHONEEDLE* No. 2512

Recoton's precision-made nylon phoneedle provides up to 6,000 enjoyable plays. Unconditionally guaranteed . . . with shock absorbing action. Contains surface noise filter . . . eliminates needle scratches. Has handy jewel box and record cleaning pad . . . a fine velour brush for keeping records clean.

List Price

No. 2512—1 needle to a plastic box ....**$ 1.50**
12 to a display card **18.00**
No. 2512—MG for 33-1/3 and 45 RPM Recordings



PRIMUS SAPPHIRE NEEDLE No. 2612

Versatile . . . popular priced . . . ideal for every kind of electrical player including automatic changers. Features special wire-type grip to allow greater flexibility permitting needle to follow modulation track of record faithfully. Fine sapphire point eliminates surface noise, minimizes record wear. Reproduces entire tonal range; good for up to 10,000 fine plays.

List Price

No. 2612—Each needle ....**$ 2.50**
12 to carton 30.00
No. 2612—MG for 33-1/3 and 45 RPM Recordings

CUTTING STYLI

No. 5

No. 7

SAPPHIRE CUTTING NEEDLES

Factory Tested and Sealed

Superbly crafted; equipped with finest sapphire point. For professional use.

List Price

No. 5*—Brass shank, packed in wooden container **$5.50**

No. 7*—Dural shank, packed in wooden container **$7.25**

* Available in "Long Shank"; specify with order LS after catalog number.

No. 7 also available for Microgroove cutting. Specify No. 7MG when ordering.

SUPERIOR RECOTON No. 1S

Recoton's famous popular-priced steel needle, precision turned in Switzerland, made of Swedish surgical steel. Fine reproduction and elimination of surface noise. Good for 12 to 15 plays.

List Price

No. 1S—Package of 25 needles (25c each) to an envelope.
50 envelopes to carton....**$12.50**

RECOTON
RECOTON

OSMIUM TIPPED FEATHER-LITE NEEDLE No. 2124

Recoton's new osmium tipped bent shank phoneedle.* Permanent type construction . . . plays up to 2500 perfect performances. Fine value for needle of this quality!

List Price

No. 2124—1 needle to package....$ .50
24 packages to a display card **12.00**

RECOTON
Feather-Lite
50¢

ALL GROOVE NEEDLES

No. 2712 SUPEROSMIUM UNIVERSAL 3-SPEED OSMIUM TIPPED

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Good for up to 5,000 performances, lowest surface noise and hiss. Exceptionally gentle to records.

List Price

No. 2712—1 needle to a card......$ 1.00
12 to a display card.... **12.00**

No. 2812 ULTRA UNIVERSAL 3-SPEED SAPPHIRE

Popular-priced sapphire-tipped needle featuring high-level performance at low-level cost. Quality crafted . . . micro-tested, factory-sealed for fine results. Up to 6,000 faithful plays with minimum surface noise and record wear. Remarkable value!

List Price

No. 2812—1 needle to a card....$ 1.50
12 to a display card **18.00**

RECOTON
RECOTON
Ultra

STEEL CUTTING NEEDLES

Crafted of the highest-grade steel alloy to cut smooth grooves with low surface noise level. Shaped with careful precision, polished to mirror-like finish for accurate recordings. HAND-LAPPED for extra efficiency.

List Price

5 needles to a card.............................**$ 1.50**
No. 1060—12 cards to a display card........... **18.00**

STELLITE CUTTING NEEDLES

Designed for professional use, these high-grade cutting needles have a special patented finish that cuts and polishes groove of disc at same time. Equipped with Dural shank, can be depended upon for noiseless, high-fidelity performances. Will improve any recorder; recommended for slow-speed recordings.

List Price

Cat No. 11—Stellite Cutting Needle, packed in individual cards................**$ 2.00**
Cat No. 1112—12 cards to a display card....... **24.00**

PRECISION-TURNED CUTTING STYLI

Made in Switzerland

These steel cutting styli are precision turned of finest Swedish steel alloys. They are diamond-dust hand-lapped for cutting smooth grooves with extremely low surface noise and minimum background.

List Price

Each stylus packed in individual container.....**$ .50**
No. 2330 —30 containers to a master carton... **15.00**
No. 2330M—30 containers on a display card.... **15.00**

Recoton
Recoton

MAGNETIC RECORDING TAPE for all Tape Recorders.
RECOTON Magnetic Recording Tape comes on sturdy six spoke plastic reels which turns true and resists warping.
RECOTON Magnetic Recording Tape is constant output controlled, 65 DB Dynamic Range with minimum background, eliminating rumble and even microscopic irregularities! Wide Bias latitude results in high uniform output and low distortion without critical bias adjustment.
RECOTON Magnetic Recording Tape is easy to erase and is guaranteed for thousands of recordings and playbacks.

Cat No.	Oxide-Base	Winding Oxide Faces	Length In Feet	Size of Plastic Reel	List Price
1112A	Red Plastic	In	1250	7″	$5.50
1112B	Red Plastic	Out	1250	7″	5.50
116A	Red Plastic	In	625	5″	3.50
116B	Red Plastic	Out	625	5″	3.50

HOME RECORDING DISCS

Perfected for home, commercial and educational use, these popular recording discs are preferred for their excellent reproductive quality, long life, absence of surface noise. Each disc is smooth cutting, uniformly coated and free from warpage. Carefully inspected at every point of manufacture.

RED LABEL — ALUMINUM BASE	(per carton) List Price
6½″ packed 100 to a carton (35c each)	$35.00
8″ packed 50 to a carton (45c each)	22.50
10″ packed 50 to a carton (70c each)	35.00
12″ packed 25 to a carton (90c each)	22.50

GREEN LABEL — THIN ALUMINUM BASE		(per carton) List Price
6½″ (100 blanks packed to a carton)	(.25 ea.)	$25.00
8″ (100 blanks packed to a carton)	(.35 ea.)	35.00
10″ (100 blanks packed to a carton)	(.55 ea.)	55.00

RECOTON CORPORATION

NEW YORK 10, N. Y.

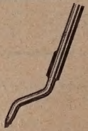
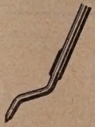
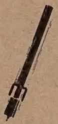
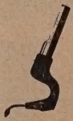
* Reg. U.S. Pat. Off.

PERMO long life

CONVENTIONAL PHONOGRAPH NEEDLES

For more than 12,000,000 record players now in use

SPECIALIZED NEEDLE CHARACTERISTICS FOR PEOPLE WHO WANT THE BEST

<table>
<tr><th>STOCK No.</th><th>ILLUSTRATION</th><th>RADIUS OF TIP AND TIP MATERIAL</th><th>FOR R.P.M. RECORD SPEED</th><th>LIST PRICE</th></tr>
<tr><td rowspan="2">A-311</td><td></td><td>.001"
One Mill
Shielded Jewel tip</td><td>33⅓ & 45</td><td>$1.50</td></tr>
<tr><td colspan="4">THE MICRO-POINT—The combination of Shielded Jewel Tip, bent shank design and careful matching of needle to record characteristics insures finest reproduction with longest record and needle life. The Micro-Point is specifically designed for use with 33⅓ and 45 R.P.M. Vinylite Records of the .001" (1 mill) Micro-Groove Variety.</td></tr>
<tr><td rowspan="2">B-310</td><td></td><td>.0021"
Compromise Point
PERMOMETAL TIP</td><td>33⅓ & 45
and 78</td><td>$1.00</td></tr>
<tr><td colspan="4">THE COMPROMISE—This needle was designed for use in record players that use one needle for all three speeds: 33⅓, 45 and 78 R.P.M.
It should only be used where the compromise point is specified by the equipment manufacturer in relation to the design of the phono cartridge, tone arm and player.</td></tr>
<tr><td rowspan="2">C-323</td><td></td><td>.003"
Three Mill
PERMOMETAL TIP</td><td>78</td><td>$ .75</td></tr>
<tr><td colspan="4">THE VINYL—DeLuxe version of standard output needle with special vinyl dampener and permometal tip, provide many features of the highest price needles. Standard frequency characteristics output and life.
The best money value in the industry.</td></tr>
<tr><td rowspan="2">C-325</td><td></td><td>.003"
Three Mill
PERMOMETAL TIP</td><td>78</td><td>$1.25</td></tr>
<tr><td colspan="4">THE NYLON—The combination of the offset design with nylon damped spring action provides unusual lateral and vertical compliance with excellent tracking at low needle pressures. This gives low output with extended range frequency characteristics and long life for both needle and records.
The Finest Nylon Needle money can buy.</td></tr>
</table>

PERMO

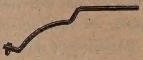
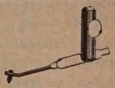
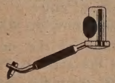
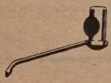
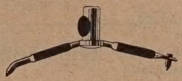
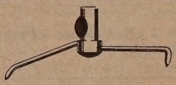
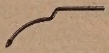
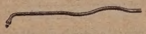
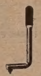
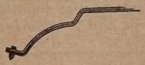
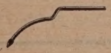
PERMO, INC. 6401-33 RAVENSWOOD AVENUE, CHICAGO 26, ILLINOIS

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF LONG LIFE PHONOGRAPH NEEDLES

PERMO
long life

SPECIAL TYPE PHONOGRAPH NEEDLES

See Permo long-life Phonograph & Needle Facts for
sets, changers and cartridges using these needles.

STOCK No.	ILLUSTRATIONS	TIP MATERIAL AND RADIUS	FOR RECORDS R.P.M.	LIST PRICE
A-300		.001″ One Mill Shielded Jewel tip	33⅓ & 45	**$1.50**
A-305		.001″ One Mill Shielded Jewel tip	33⅓ & 45	**$1.50**
A-314		.001″ One Mill Shielded Jewel tip	33⅓ & 45	**$1.50**
A-316		.001″ One Mill PERMOMETAL TIP	33⅓ & 45	**$1.00**
AC-313		.001″ One Mill .003″ Three Mill	33⅓, 45 and 78	**$2.50**
AC-315		.001″ One Mill .003″ Three Mill	33⅓, 45 and 78	**$2.00**
B-306		.0023″ Compromise Point PERMOMETAL TIP	33⅓, 45 and 78	**$1.00**
B-307		.0023″ Compromise Point PERMOMETAL TIP	33⅓, 45 and 78	**$1.00**
C-317		.003″ Three Mill Shielded Jewel tip	78	**$2.25**
C-318		.003″ Three Mill Shielded Jewel tip	78	**$1.50**
C-320		.003″ Three Mill PERMOMETAL TIP	78	**$1.00**

PERMO, INC. 6401-33 RAVENSWOOD AVENUE, CHICAGO 26, ILLINOIS
WORLD'S OLDEST AND LARGEST MANUFACTURERS OF LONG LIFE PHONOGRAPH NEEDLES

PERMO

PERMO-MAGNETIC .0036" *LUBRI-LO* RECORDING WIRE

THE QUIETEST MAGNETIC RECORDING WIRE EVER PRODUCED

It is a Low DC noise wire. The specifications for the wire include under Noise Requirements, the following:

"The modulation noise level shall be at least 40 Db below the saturated output at the frequency of maximum response."

This improvement of 10 Db over competitive recording wires provides:

1. Modulation noise (noise behind the signal) is reduced.
2. Second harmonic distortion is lessened.
3. High background noise is decreased.
4. DC erase and bias for special applications can be employed.
5. Permanent magnet for erasing over-modulated signals can be utilized.

LUBRI-LO RECORDING WIRE

The wire is lubricated during processing at the wire mill. Lubrication of this Low DC noise wire provides the following additional improvements:

1. Reduction of pull and wear on the recording head.
2. Elimination of sticking and stalling.
3. Lower background noise because of smoother passage of the wire through the head.
4. Elimination of mechanical noise, and vibration and chatter in the head.
5. Reduction of microphonic noise from the wire and audio system in playback.
6. Improvement in level winding.
7. Reduction of noise of the wire passing on and off the supply and/or take-up spools.

The combination of the new low DC noise wire and lubrication of the same is PERMO-MAGNETIC — Lubri-Lo — the quietest magnetic recording wire ever produced.

PART NUMBER	DESCRIPTION		LIST PRICE
160-36N	1 HOUR SPOOL (Metal)	Over 7200 feet of wire wound with 2 plastic leaders attached. (2 loose nylon leaders also included.)	**$4.50 ea.**
160N-36	1 HOUR SPOOL (Metal)	Over 7200 feet of wire wound with 2 nylon leaders attached. (2 loose plastic leaders also included.)	**4.50 ea.**
260-36N	½ HOUR SPOOL (Metal)	Over 3600 feet of wire wound with 2 plastic leaders attached. (2 loose nylon leaders also included.)	**2.75 ea.**
260N-36	½ HOUR SPOOL (Metal)	Over 3600 feet of wire wound with 2 nylon leaders attached. (2 loose plastic leaders also included.)	**2.75 ea.**
360-36N	¼ HOUR SPOOL (Metal)	Over 1800 feet of wire wound with 2 plastic leaders attached. (2 loose nylon leaders also included.)	**1.85 ea.**
360N-36	¼ HOUR SPOOL (Metal)	Over 1800 feet of wire wound with 2 nylon leaders attached. (2 loose plastic leaders also included.)	**1.85 ea.**
PM-121N7	EMPTY METAL SPOOL	Usable for 1, ½ and ¼ hour windings of wire furnished in Permo-Magnetic Box with 2 plastic and 2 nylon leaders.	**.75 ea.**

NOTE: Permo-Magnetic Recording Wire is packed in multiples of 15 spools per carton and should be ordered accordingly. Multiples of 30, 50, 60 and 100 spools are also convenient for shipping. Assorted sizes are permissible.

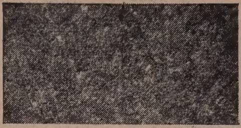
PERMO

PERMO, INC. 6401-33 RAVENSWOOD AVENUE, CHICAGO 26, ILLINOIS

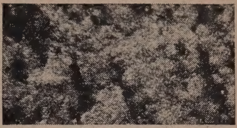
WORLD'S OLDEST AND LARGEST MANUFACTURERS OF LONG LIFE PHONOGRAPH NEEDLES

PERMO-MAGNETIC RECORDING TAPE

Permo-Magnetic Recording Tape incorporates the best in engineering, manufacturing and coating practices attained over a long period of experience. The coating of red or black oxide powders on plastic or paper base is uniform, which is essential to excellence in recording and playback performance. There are no clusters of powders or magnetic "holes" in Permo-Magnetic Recording Tape.



Photomicrograph of Permo-Magnetic Tape (above) enlarged 50 X shows uniform dispersion and smooth surface essential for low tape noise and uniform performance.



Particular attention is invited to the absence of "clusters" of particles. Above is a photomicrograph of competitive tape enlarged 50 X.

PAPER BASE *BLACK OR RED OXIDE COATING*

PART NUMBER BLACK OXIDE	PART NUMBER RED OXIDE	DESCRIPTION	LIST PRICE
T-55-1	**T-86R-1**	5" (Plastic Reel) Tape, 600 feet, in Permo-Magnetic Box, Magnetic Coating INSIDE.	**$2.25 ea.**
T-55-0	**T-86R-0**	5" (Plastic Reel) Tape, 600 feet, in Permo-Magnetic Box, Magnetic Coating OUTSIDE.	**2.25 ea.**
T-57-1	**T-88R-1**	7" (Plastic Reel) Tape, 1200 feet, in Permo-Magnetic Box, Magnetic Coating INSIDE.	**3.50 ea.**
T-57-0	**T-88R-0**	7" (Plastic Reel) Tape, 1200 feet, in Permo-Magnetic Box, Magnetic Coating OUTSIDE.	**3.50 ea.**

PLASTIC BASE

PART NUMBER	DESCRIPTION	LIST PRICE
T-66-1	5" (Plastic Reel) Tape, 600 feet, in Permo-Magnetic Box, Magnetic Coating INSIDE.	**3.50 ea.**
T-66-0	5" (Plastic Reel) Tape, 600 feet, in Permo-Magnetic Box, Magnetic Coating OUTSIDE.	**3.50 ea.**
T-68-1	7" (Plastic Reel) Tape, 1200 feet, in Permo-Magnetic Box, Magnetic Coating INSIDE.	**5.50 ea.**
T-68-0	7" (Plastic Reel) Tape, 1200 feet, in Permo-Magnetic Box, Magnetic Coating OUTSIDE.	**5.50 ea.**

NOTE: Permo-Magnetic Recording Tape is available on metal reels if desired. To order on metal reels, add the letter "M" to regular part number. *Example:* TM-55-1, instead of T-55-1. Permo-Magnetic Recording Tape is packed in multiples of 12 reels per carton and should be ordered accordingly.

ACCESSORIES — *METAL AND PLASTIC REELS — SPLICING TAPE*

TM-35-PM	EMPTY 5" METAL REEL usable for 600 feet of Recording Tape, furnished in Permo-Magnetic Box.	**.90 ea.**
TM-37-PM	EMPTY 7" METAL REEL usable for 1200 feet of Recording Tape, furnished in Permo-Magnetic Box.	**1.00 ea.**
T-5-PM	EMPTY 5" PLASTIC REEL usable for 600 feet of Recording Tape, furnished in Permo-Magnetic Box.	**.50 ea.**
T-7-PM	EMPTY 7" PLASTIC REEL usable for 1200 feet of Recording Tape, furnished in Permo-Magnetic Box.	**.60 ea.**
T-20-PM	SPLICING TAPE 100" roll, ½" wide, specifically designed for splicing recording tape.	**.35 ea.**

PERMO, INC. 6401-33 RAVENSWOOD AVENUE, CHICAGO 26, ILLINOIS

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF LONG LIFE PHONOGRAPH NEEDLES

REEVES

Soundcraft

"MAKING THE RECORDINGS MILLIONS LISTEN TO"

SAPPHIRES—CUTTING & PLAYING

Code Word	Description	List Price	Net to Radio Station, Studio, etc. Less 50%
	SAPPHIRE CUTTING STYLUS		
Sacut	Broadcast quality, dural shank, maximum length jewel Standard 87 deg. angle, 1.5 mil radius, or Microgroove stylus, .5 mil radius. (Specify if microgroove & long or short.)	$7.50	$3.75
	STELLITE CUTTING STYLUS		
Stell	For semi-professional recording. (Specify long or short shank as above.)	$2.00	$1.00
	SAPPHIRE TRANSCRIPTION PLAYBACK NEEDLE		
Sapla	Straight dural shank, 2.5 mil radius Microgroove playback, 1 mil radius. (Specify if microgroove.)	$6.50	$3.25
	RESHARPENING SERVICE		
	Sapphire Cutting Stylus, any type.	$3.25	$1.63
	Stellite Cutting Stylus	1.00	.50
	Sapphire Transcription Playback	2.50	1.25

Mail styli for resharpening in original packaging to your distributor.

TECHNICAL SPECIFICATIONS OF SOUNDCRAFT DISCS

PHYSICAL PROPERTIES OF BLANK DISCS

Aluminum Bases: Alcoa #2 Reflector Sheet Stretcher-leveled for flatness ¾ hard.

Base Thicknesses: 17¼″ & 13¼″ — .050
16″ — .040; 12″ — .032
10″, 8″, 6½″ — .025

Center Hole: .2845″ + or — .001″

Drive Pin Holes: .284″ + or — .010

Coating: Recording lacquer applied by flow method.

Coating Thickness: .007 to .008
Coating thickness increases slightly toward outer edge so that weight of pile of discs is carried on outer edges in recording margin.

Thread Behavior: Thread throws inward ½″ to ¼″. Can be picked up easily.

CHEMICAL PROPERTIES OF COATINGS

Free from foreign matter down to size of 1 micron (thoroughly filtered).
Free from hard or soft spots (thoroughly mixed).
No deterioration with age (inert plasticizers).
Free from solvents (thoroughly dried).

Free from excess lubricant (successfully processed regularly by RCA-VICTOR, COLUMBIA, MERCURY, CAPITOL, etc.)

Free from lacquer impurities to cause grey cutting.

SOUND PROPERTIES OF COATINGS

Frequency Response: Indefinable (due to factors of temperature, diameter, stylus tip dimensions, pickup characteristics, playback needle dimensions, etc.), but will playback at least 10,000 cycles per second under commercial conditions.

Surface Noise: — 55 to 60 db below maximum signal level commonly recordable.

Wearlife: At least 100 playings of unmodulated groove without noticeable noise increase, using any good pickup, if kept dust-free.

REEVES

Soundcraft

RECORDING DISCS
Soundcraft

FAMOUS NAME SOUND RECORDING DISCS

"THE BROADCASTING STATION STANDARD"

10 SOUNDCRAFT FEATURES

- Greater dynamic range of Soundcraft discs exceeds highest broadcasting requirements.
- Inaudible surface noise. Soundcraft microscopically filters all impurities out of coating materials and dries wet coatings with conditioned, dust-free air.
- High-frequency response to 15,000 cps. Soundcraft coating formulation combines proper physical texture with wax-like low cutting-friction.
- Dependability from batch to batch regardless of season. The Soundcraft disc plant makes its own weather, eliminates mysterious humidity troubles.
- Uniform cutting for both conventional and micro-groove recording. Soundcraft discs, to minimize minute variations in groove depth, are manufactured with the flattest, smoothest, aluminum bases obtainable.
- Long stylus-life assured. Soundcraft coating purity and low-friction reduce stylus wear and eliminate recording failures from stylus damage.
- 1,000 or more playings. Soundcraft's sealed-in lubricant for low needle-friction reduces wear to the point where dust in grooves and needle quality are chief controlling factors.
- Long storage-life, recorded or new. Under normal conditions Soundcraft discs cut and play after years of storage.
- Improved diameter effects. Soundcraft's superior coating formula minimizes high frequency loss and actually lowers surface noise as diameter decreases.
- Easy-to-pick-up thread. The Soundcraft coating is compounded with an exclusive ingredient to make thread throw toward center, and to minimize static charge.

DEALER PRICE LIST

The "PLAYBACK"

The standard broadcast-quality disc for all professional applications in radio stations, recording and motion picture studios. Physical and sound properities assure the finest quality of recorded sound.

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
6½"	20	.65	.39	.43
8"	20	.90	.54	.60
10"	20	1.25	.75	.83
12"	20	2.05	1.23	1.37
16"	20	3.75	2.25	2.50

The "PLAYBACK" — Single Face

The same quality as the "Playback" but intended for economy applications requiring the use for only one side. Both sides of the disc are coated, and the useable side is identified by the Soundcraft embossing.

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
10"	20	1.00	.60	.67
12"	20	1.65	.99	1.10
16"	20	2.95	1.77	1.97

The "AUDITION"

A double face disc, selected from the regular runs, suitable for less important station and studio applications, for schools, amateur, and better home recording. Paper labelled for greater convenience.

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
6½"	20	.55	.33	.37
8"	20	.75	.45	.50
10"	20	1.00	.60	.67
12"	20	1.65	.99	1.10
16"	20	2.90	1.74	1.94

The "BROADCASTER"

A MASTER selection in instantaneous sizes for vitally important and critical recordings. A premium product guaranteeing absolute perfection. Available only in double face type.

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
10"	20	1.40	.84	.93
12"	20	2.20	1.32	1.47
16"	20	3.95	2.37	2.63

The "MAESTRO"

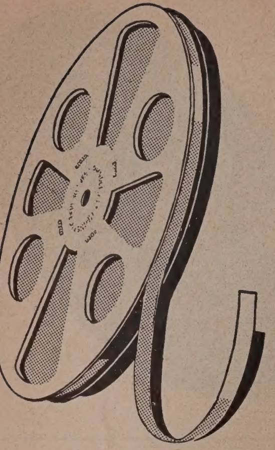
Oversize MASTER discs for originals in making phonograph records and transcriptions. Best available for either regular microgroove recording. Available either with standard one drive hole or with center hole only for 45 rpm masters. Processed regularly by all of the foremost phonograph record and transcription manufacturers.

THE "MAESTRO" — DOUBLE FACE

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
12"	20	2.55	1.53	1.70
13¼"	20	3.40	2.04	2.26
17¼"	20	5.60	3.36	3.73

THE "MAESTRO" — SINGLE FACE

Size	Standard Package	List Price Each	Net 40% off Standard Packages Only	Net 33⅓% off Broken Lots
12"	20	2.00	1.20	1.34
13¼"	20	2.40	1.44	1.60
17¼"	20	4.10	2.46	2.73



REEVES

Soundcraft

CONSTANT OUTPUT

MAGNETIC SOUND-RECORDING TAPE

FOR ALL MAKES OF TAPE RECORDERS

- **CONSTANT OUTPUT** assured by new electronic monitoring method. The playback level of a continuously recorded tone during coating controls compensating adjustments to the coating machinery.
- **GREATER DYNAMIC RANGE,** high output with minimum background rumble results from combining the highly uniform oxide dispersion with tape surfaces specially polished in production to eliminate even microscopic irregularities.
- **HIGH FREQUENCY RESPONSE** of Soundcraft tape conforms to the standards set by the industry and, due to elaborate control methods, remains constant from one production lot to the next.
- **POLISHED SURFACE** of Soundcraft tape by a specially-developed buffing process insures maximum head life and eliminates the mechanical "squeal" caused occasionally by excessive tension of the tape on the heads.
- **HIGH OUTPUT** assured by Soundcraft's highly-engineered, uniform oxide dispersion giving maximum sensitivity.
- **LONG LIFE** for thousands of recordings and replayings at high output is assured by complete erasability without special equipment and by Soundcraft's absolute adherence oxide coating.
- **LONG HEAD LIFE.** Low-friction oxide-coating vehicle covers each of the uniform-sized particles of oxide with a tough microscopic film that prevents any abrasive material from touching magnetic heads. This vehicle or binder, moreover, contains nothing that can rub off and gum head surfaces.
- **LONG STORAGE LIFE** is guaranteed by safety film type plastic and high tensile paper base materials. Under average indoor temperatures and humidities, Soundcraft tapes will not become brittle, stretch, or shrink.
- **HIGH ADHERENCE** of the coating to the base is effected by preprocessing the base material before coating. This method assures that Soundcraft oxide coating will neither flake nor rub off.
- **MECHANICAL UNIFORMITY** is assured by precision, rotary shearing of the wide stock into individual tapes and by the special coating formulation that prevents curling. Soundcraft tape tracks straight and winds flat.

DEALER PRICE LIST

RED OXIDE
PLASTIC BASE

Type	Length	Reel	Oxide Wound	List	Net Each*			Standard Package Quantity
					1-4 reels	5-9 reels	10 reels or more	
RPN-1	150′	3″ Plastic	in	$1.00	.67	.67	.60	10
RPN-6 RPO-6	625′	5″ Plastic	in out	3.50	2.33	2.33	2.10	10
RPN-12 RPO-12	1250′	7″ Plastic	in out	5.50	3.67	3.67	3.30	10
RPN-25	2500′	Aluminum NAB Hub	in	10.00	6.67	6.00	6.00	5
		Complete 10½″ Aluminum Reel		12.85	8.57	7.71	7.71	
RPN-50	5000′	Aluminum NAB Hub	in	20.00	13.33	12.00	12.00	5

RED OXIDE
KRAFT PAPER BASE

Type	Length	Reel	Oxide Wound	List	1-4 reels	5-9 reels	10 reels or more	Standard Package Quantity
RKN-6 RKO-6	625′	5″ Plastic	in out	$2.25	1.50	1.50	1.35	10
RKN-12 RKO-12	1250′	7″ Plastic	in out	3.50	2.33	2.33	2.10	10

*Net Cost—List less 40% in standard package quantities, less 33 1/3% in less than standard package quantities. Reels of same size but with different type numbers can be combined to obtain maximum discount.

REG. U. S. PAT. OFF.

irish Tape

BRAND

FOR HIGH QUALITY SOUND RECORDING

THERE IS A GRADE OF IRISH SOUND RECORDING TAPE FOR EVERY NEED AND PURPOSE.
USE THE BEST GRADE SUITED FOR YOUR REQUIREMENTS!

STOCK NUMBER	DESCRIPTION	600 ft. REEL	1200 ft. REEL	2400 ft. NAB 10½"
		List Price	List Price	List Price
211RPA	**GREEN-BAND (plastic base) Sensitive LONG LIFE. "SOFTERIZED"**	$3.50	$5.50	$11.00
211BPA	**GREEN-BAND (plastic base) BLACK OXIDE**	3.50	5.50	11.00
205RPA	**YELLOW-BAND (plastic base) UTILITY-STANDARD for general purpose, professional use**	2.75	4.50	9.00
205RKA	**YELLOW-BAND (Kraft base) same as 205RPA**	2.25	3.50	7.00
200BKA	**ORANGE-BAND (Kraft base) BLACK OXIDE**	2.25	3.50	7.00
195RPA	**BROWN-BAND Domestic (plastic base) RED OXIDE**	2.25	3.50	7.00
195RKA	**BROWN-BAND Domestic (Kraft base) RED OXIDE**	1.75	2.50	5.00
195BPA	**BLACK-BAND Domestic (plastic base) BLACK OXIDE**	2.25	3.50	7.00
195BKA	**BLACK-BAND Domestic (Kraft base) BLACK OXIDE**	1.75	2.50	5.00

NOTE: 4,800 ft. lengths of ALL types may be supplied upon request.

EXPLANATION OF NOMENCLATURE — STOCK ITEMS

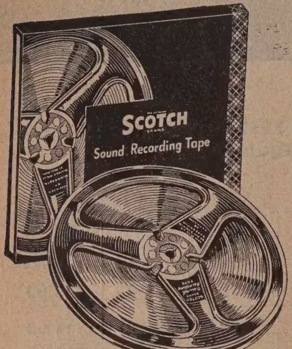
RPA: Red oxide, plastic base, coating wound inside
BPA: Black oxide, plastic base, coating wound inside
BKA: Black oxide, Kraft base, coating wound inside
RKA: Red oxide, Kraft base, coating wound inside

When it is required that active side of tape be wound outside, specify "B" in place of "A" as suffix, example: BKB would indicate Black Oxide, Kraft base, wound with active material outside.

MADE IN U. S. A. BY ORRADIO INDUSTRIES, INC., OPELIKA, ALABAMA

● PRICES SUBJECT TO CHANGE WITHOUT NOTICE ●

for professional-like recordings use the tape the professionals use . . .



REG. U. S. PAT. OFF.

SCOTCH

BRAND

Sound Recording Tape

In radio stations and recording companies all over the country—where QUALITY sound recording is a must—you'll find "SCOTCH" Brand Sound Recording Tape being used exclusively. Test reels of "SCOTCH" Sound Recording Tape have lasted through more than 10,000 recording cycles—are still going strong.

Rigid manufacturing standards, continuous research and testing . . . analyzing . . . testing . . . analyzing . . . over and over again always adds up to the same answer. "SCOTCH" Brand Sound Recording Tape is the No. 1 sound recording tape on the market. Ask for it . . . look for it in the distinctive plaid decorated box. It costs no more and the brand name "SCOTCH" is your assurance of sound quality. Insist on "SCOTCH" Brand Sound Recording Tape.

"SCOTCH" Sound Recording Tape is available in the following sizes.

No. 101 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Paper Base—Red Oxide Coating).

SIZE	LIST PRICE
¼" x 150 ft. plastic reel	$0.75
¼" x 600 ft. plastic reel	2.25
¼" x 1200 ft. plastic reel	3.50

No. 111 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Plastic Base—Red Oxide Coating) (This is a tape designed for the professional and more critical user.)

SIZE	LIST PRICE
¼" x 150 ft. plastic reel	$ 1.00
¼" x 600 ft. plastic reel	3.50
¼" x 1200 ft. plastic reel	5.50
¼" x 2400 ft. NAB hub	11.00
¼" x 2400 ft. NAB reel	13.85
¼" x 4800 ft. NAB hub	22.00

*A Magnetic Coating wound facing in.
**B Magnetic Coating wound facing out.
All reels of tape are individually boxed.

"SCOTCH" Sound Recording Tape has the lowest coefficient of friction of any sound recording tape. This means increased tape life, longer use of recorder heads and guide mechanisms. Tape glides smoothly past heads with no distortion, no oxide rub-off, absolutely no gumming of heads.

"SCOTCH" Sound Recording Tape can be stored for an indefinite time with no danger of physical distortion. No stickiness or layer to layer adhesion. Freedom from cupping and curling under extremes of temperature and humidity assures the user a tape with maximum fidelity—no loss in high frequency response due to poor head contact.

"SCOTCH" Sound Recording Tape No. 111 has the greatest tensile strength of any sound recording tape on the market. This added toughness and strongness means longer tape life.

"SCOTCH" Sound Recording Tape has extremely low modulation noise due to new processing and manufacturing techniques. Tape has an increased dynamic range or signal to noise ratio, i.e. the difference between the loudest and softest notes it is possible to record.

"SCOTCH" Sound Recording Tape is manufactured under rigid quality control and manufacturing standards. This insures tape that is always uniform within each reel and from reel to reel.

"SCOTCH" Sound Recording Tape will track perfectly and wind flat due to accurately controlled slitting standards and methods.

"SCOTCH" Sound Recording Tape has the greatest frequency response of any sound recording tape. Laboratory tests show this is especially apparent at slower recording speeds.

"SCOTCH" Sound Recording Tape has also proven to be matchless on these two points—***greatest output and lowest distortion.***

"SCOTCH" Sound Recording Tape is attractively packaged in a rugged, handsome, hinged-type box with recording suggestions printed on the inside covers—ample space for labeling and indexing.

"SCOTCH" Brand Splicing Tape No. 41

This is a special pressure-sensitive tape designed for splicing sound recording tape. It has a special white adhesive which will not ooze and cause sticky splices when spliced to sound recording tape. ½" x 100" length on metal utility dispenser. . . . . .list price 29c

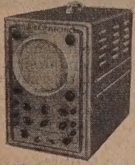
"SCOTCH" Brand Leader and Timing Tape No. 43

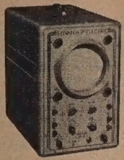
This is a tough ¼" plastic treated paper tape that can be spliced to sound recording tape for protection, for cueing and exact timing. ¼" x 150 ft. length. . . . . .list price 50c
Empty reels and boxes may also be purchased.

Made in U.S.A. by **MINNESOTA MINING & MANUFACTURING COMPANY** St. Paul 6, Minn.

Look to SYLVANIA for the latest in ELECTRONIC TEST EQUIPMENT

Television Oscilloscope. An Exceptionally High-Gain, Wide-Band Oscilloscope Designed for Television. Accurately displays any TV pulse or wave-shape on a large, eye-saving 7″ screen. Sensitivity: 0.01 v./in. Vert. response useful to 4.0 mc. Hard-tube sweeps to 50 kc.; phasing control; pos. or neg. sync. control; many other outstanding features. Recommended for servicemen; laboratories; advanced schools and industry. Price: $249.50.


Type 400


Type 132Z

General Purpose Oscilloscope. A Versatile 7″ 'Scope with Many Features Found in Type 400 above, priced as low as oscilloscopes with smaller screens. Sensitivity: 0.10 v./in.; freq. response: exceeds 7 cps. to 70 kc. Widely used by servicemen, schools and industry for AM-FM-TV testing. Price: $149.50.

TV High-Voltage Probes. New, Quality Probes that Permit Measuring High TV Anode Voltages by increasing the dc range of Polymeters to 30,000 or 10,000 volts. Special conversion cartridge permits using 30 kv probes with ANY 1,000 volt scale 20,000 ohm/volt meter. Select correct probe from list below:

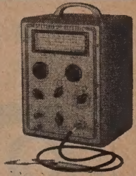
Type	Range	Use with	Price
225	30 kv	Polymeter, Type 221 and 221Z.............	$12.50
224	30 kv	Earlier Polymeters, Types 134 and 134Z......	12.50
226	30 kv	Conversion cartridge for use with above Type 225 or 224 to convert ANY 20,000 ohm/volt meter with a 1000-volt scale to a kilovoltmeter......	2.00
223	10 kv	Polymeter, Type 221 and 221Z	9.95
222	10 kv	Earlier Polymeters, Types 134 and 134Z......	9.95

Tube Tester Type 220. Made By A Tube Manufacturer For Tube Users, these instruments test for ALL usual faults—not just one particular characteristic. New and exclusive ohmmeter-type shorts/leakage test indicates "GOOD" or "REPLACE" directly on the illuminated meter. Gas and a special heater-cathode leakage tests made in single operations. Single composite dynamic test for emission, transconductance and relative tube life. Panel-mounted roller-chart; convenient switches; provisions for future tubes. Portable Type 220 has durable metal case and handle; removable cover. Size: 6″ x 11¼″ x 17″. Price $114.50.

Tube Tester Type 219. The counter Type 219 is electrically equivalent to the portable type. Attractively housed in a streamlined wood and metal cabinet. Adaptable to any surroundings. Occupies small counter space. Size: 5¾″ x 13″ x 18¾″ Price: $114.50.

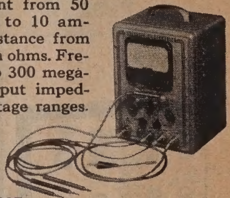
Modulation Meter. Directly indicates per cent of AM modulation. Compact; requires no direct connection to circuit. Used by amateurs, transmitter builders and others. Indicates carrier shift. Price: $29.50.

Type X-7018

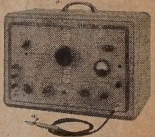

Type 500

TV Signal Generator. An ALL ELECTRONIC Sweep Generator for TV and FM. Fundamental center frequencies: 2-25, 20-64, 60-120, and 140-230 mc. Two adjustable sweep widths: 0-600 kc./15 mc.; excellent sweep linearity; output 0.1 v. Edge-lighted dial; simplified controls; small size: 11½″ x 8½″ x 7″. May be used with any 'scope and marker including those shown at left and below. Price: $139.50.

Polymeter—TV Vacuum-Tube Voltmeter. A Sensitive DC, AC and RF Vacuum-Tube Voltmeter, Ohmmeter and DC Current Meter. Illuminated meter; microphone-type lead connectors. Ranges: rf to 300 volts (only 3 μμf shunt capacity); ac and dc to 1000 volts (10 or 30 kv dc using h.v. probes described at left); dc current from 50 microamperes to 10 amperes; and resistance from 0.5 to one billion ohms. Frequency range to 300 megacycles. High input impedance on all voltage ranges. Size identical to TV generator above. Price: $99.50.


Type 221Z

FM-AM Signal Generator. *Useful as a TV Marker.* A versatile AM-FM generator, doubly useful for peaking alignment of TV and as a TV marker. Calibrated to 0.05%. Fundamentals 80 kc to 120 mc; harmonics to 240 mc. Modulation: 0-100% AM; 0-30/150/700 kc FM. 1.0 volt max. output. Low leakage. Built-in crystal circuit. Size: 11⅜″ x 17 1/16″ x 10⅝″. Price: $139.50.


Type 216

Cathode Ray Tube Testing Adapter. Use with *any* Sylvania Tube Tester to check 85% of your picture tube troubles, without removing tube from receiver. Checks electro-magnetic types for emission, shorts, leakage, and open filaments. Price: $9.50. Type 228.

Type 228

Only brief data are presented in this highly condensed catalog. More detailed literature is available from your Sylvania Distributor or Sylvania Electric Products Inc., Emporium, Pa.

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

3" OSCILLOSCOPE (WO-57B)

High Gain—Wide Band—DC and AC Inputs

The WO-57B is an outstanding innovation in portable oscilloscope design. Especially suited for television, this new scope is excellent for laboratory, factory or shop use . . . for viewing and measuring square waves, pulses, TV sync signals and sine waves.

Incorporating the features of far more expensive instruments . . . and with a sensitivity and response equal to that of many laboratory units . . . the WO-57B is the first inexpensive oscilloscope wholly equipped to handle every TV and Radio Service Job. Direct-coupled amplifiers are used to provide low-frequency response flat down to dc. Excellent low-frequency square-wave reproduction, essential for correct sweep alignment, is thus assured. High-frequency square-wave response up to 100 kc enables the WO-57B to reproduce blanking and sync pulse wave shapes with fidelity heretofore unobtainable in moderately priced service-type oscilloscopes. Sugg'd User Price: **$145.00*** includes Probes and Cables.

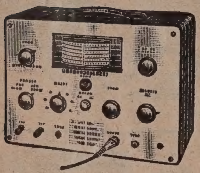
Check these important features!

- √ Sensitivity—30 millivolts per inch deflection
- √ Frequency Response of vertical amplifier—flat within 1.3 db from zero to 500 kc; down only 50% at 1 Mc; useful beyond 2 Mc
- √ Transient Response—tilt and overshoot less than 2%
- √ Utility—provided with frequency-compensated and calibrated step attenuator. Also has vernier control and calibrating voltage source
- √ 60-Cycle Sweep—with phasing control
- √ Input Capacitance—less than 15 $\mu\mu$f with WG-214 accessory probe

PLUS these outstanding extras . . .

- + Trace Expansion—two times screen diameter for sweep-alignment applications
- + Direct Coupled Vertical Amplifier—separate jacks for DC and AC signal measurements
- + Linear Sweep—range 15 to 30,000 cps, with preset fixed positions for viewing vertical and horizontal TV sync pulses and oscillator waveforms
- + Exclusive—sweep direction reversing switch—positive or negative syncing
- + Push-Pull Amplifiers—produces sharper trace and reduces astigmatism

TELEVISION CALIBRATOR (WR-39C)



Now—in one compact, portable unit—the new RCA WR-39C provides crystal-controlled markers for all TV frequencies—included in this one instrument is a crystal-calibrated variable frequency oscillator, two crystal-controlled oscillator stages with three crystals supplied, a wide-band modulator stage for internally modulating the output at audio and rf frequencies, and an audio amplifier with speaker.

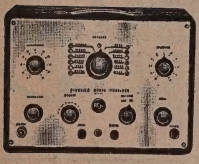
In addition to its function as a marker generator, the WR-39C can be used as a heterodyne frequency meter to identify unknown frequencies. The vfo, when tuned to any TV channel and modulated with the 0.25-Mc crystal oscillator, will put vertical bars on the raster; or when modulated with an external audio oscillator will put horizontal bars on the raster. Thus the instrument can be used for making linearity adjustments in the absence of a test pattern.

The WR-39C may also be modulated by the video signal from a television set, which makes it in effect a 12-channel miniature TV transmitter. Sugg'd User Price: **$242.50***

Check these important features!

- √ Crystal-controlled markers, 4.5 Mc removed from main marker for television if alignment
- √ Crystal-controlled markers, 250 kc removed from main marker for sound-discriminator alignment
- √ Provision for injection of external marker
- √ Internal audio and rf modulation of variable frequency oscillator
- √ Crystal-calibrated heterodyne frequency meter
- √ Crystal-controlled 4.5-megacycle output for alignment of TV receivers employing inter-carrier sound
- √ Marker oscillator operates on fundamental on all bands
- √ Sound and picture carriers marked on dial

TV SWEEP GENERATOR (WR-59B)



The WR-59B is a high-quality sweep generator which is used extensively for the design, manufacture and servicing of TV sets. It generates fundamental oscillator sweep-frequencies, preset on switch positions for TV channels 2 to 13. IF and video frequency coverage is produced by a separate calibrated control with continuous tuning from 300 kc to 50 Mc.

Sweep width is continuously variable, and output level is exceptionally flat in all positions. The rf output cable termination can be adjusted to match balanced or unbalanced loads; the rf output level is variable over wide limits by means of a coaxial-type piston attenuator. The unit develops a sweep signal for a scope; a phasing control is provided. An additional feature is return-trace blanking which produces a zero-reference line on the cathode-ray tube for measurement of instantaneous voltages. The unit is complete with rf and if output cables. Shipping weight, 35 lbs. Sugg'd User Price: **$274.50***

CHARACTERISTICS

Frequency Ranges:
RF (TV Channels 2-13): 54-60, 60-66, 66-72, 76-82, 82-88, 174-180, 180-186, 186-192, 192-198, 198-204, 204-210, 210-216 Mc. Sweep width: 10 Mc max.
IF: 0.3 to 50 mc, continuous tuning. Covers video band, FM if, prewar if's, all present sound and picture if's. Sweep width continuously variable 0-10 mc.

Output Impedance (at cable terminals):
RF Ranges: 300 ohms balanced
IF Range: 160 ohms

Maximum Attenuator Ratio:
RF Ranges: 20000/1
IF Range: 4000/1

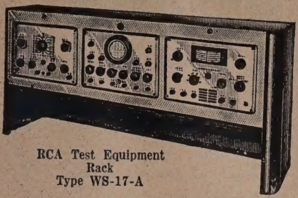
Maximum Amplitude Variation of Sweep Envelope: All ranges, less than ±1.5 db

Horizontal Sweep: Phase Range, 0-160°; Power-line Frequency; Amplitude, 5.6 peak-to-peak (2 RMS) volts

*All Prices Subject to Change Without Notice

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS



RCA Test Equipment
Rack
Type WS-17-A

TEST-EQUIPMENT RACK WS-17A

Cash in on the lucrative television service market! Modernize your work bench for efficient TV service with this new RCA 3-Place Test Rack. . . . Instruments are at your fingertips for quick, accurate service. Accommodates any three matched RCA Test Instruments to meet your individual TV, FM, or AM service needs. Dimensions: 48 x 21½ x 12. Sugg'd User Price: **$59.50**

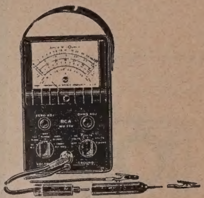
JUNIOR VOLTOHMYST** (WV-77A)

Here again, the famous RCA Junior VoltOhmyst** at an amazing low price, embodying all the features that made its predecessor famous plus many new extras. Measures dc from 50 millivolts to 1200 volts—even in presence of ac. Less than 2 $\mu\mu f$ input capacitance. Excellent for making measurements in AVC, bias, oscillator, and other high-impedance circuits. Measures ac voltages from 100 millivolts to 1200 volts (rms). High-impedance vacuum tube diode used as rectifier . . . all electronic operation. Measures resistance from .2 ohm to 1 billion ohms. Only **$47.50*** (Suggested User Price) complete with tubes, battery, probes and cables.

**Reg. U. S. Pat. Off.

FEATURES YOU WANT . . .

- High input resistance all ranges....11 megohms dc; .2 to 2 megohms ac
- Flat frequency response (30 cps to 3 Mc) 50 kc to 250 Mc with WG-264 Probe
- Meter electronically protected against burnout all functions
- Durable 4½" plastic meter case....full view design
- Carbon-film 1% multiplier resistors....lasting accuracy and dependability
- Sturdy 200 microampere movement....standard for all VoltOhmyst** Meters
- Completely shielded metal case....stable in rf fields
- Negative-feedback bridge circuit....freedom from line voltage changes
- DC polarity reversing switch.....eliminate test lead switching
- Zero-centering facilities....for discriminator alignment
- Ohms probe always positive........quickly check "electrolytics"

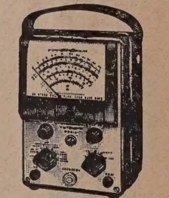


SENIOR VOLTOHMYST** (WV-97A)

The WV-97A, especially designed as a television signal tracer, features a high-impedance, full wave rectifier for direct readings of peak-to-peak voltages on all scales up to 4200 volts. Frequency response is flat to 3 Mc. The Senior VoltOhmyst** also reads dc voltages, resistance values, and rms voltages of sine waves. Instrument measures ac in presence of dc and vice-versa. Shipping weight: 5½ lbs. Suggested User Price: **$67.50***

**Reg. U. S. Pat. Off.

DC (seven continuous ranges)..............0 to 1.5, 5, 15, 50, 150, 500, 1500
Input resistance........11 megohms constant
AC (fourteen continuous ranges):
Peak-to-peak ranges...........0 to 4, 14, 42, 140, 420, 1400, 4200 volts
RMS ranges (for sine waves)...........0 to 1.5, 5, 15, 50, 150, 500, 1500
OHMMETER (seven continuous ranges)....0 to 1000 megohms
METER MOVEMENT (DC current for full scale deflection)........................200 ua
DIMENSIONS...........7⅞"H, 5¾"W, 4½"D
FINISH...........blue-gray hameroid case—satin-aluminum panels



7" OSCILLOSCOPE (WO-56A)

Designed with the user in mind, the WO-56A combines the advantages of high-sensitivity, wide-frequency range, and a large 7" cathode-ray tube into a compact, service-size cabinet. Dual controls for coarse and vernier adjustments save valuable servicing time. This instrument features identical vertical and horizontal push-pull amplifiers with frequency compensated and voltage - calibrated attenuator networks. Peak-to-peak calibrating voltage source on panel. "Plus" and "minus" sync for easy lock-in of "upright" and "inverted" pulse waveforms. Complete with matched probes and cables — **$217.50*** (Suggested User Price).

Frequency Response (Vertical Amplifier):
Flat from 0 to 500 kc..........within —2 db
Flat from 0 to 1 kc............within —6 db

Sweep Frequencies:
Variable...................3 cps to 30,000 cps.
Preset...................30 cps & 7875 cps for "TV/V" and "TV/H"

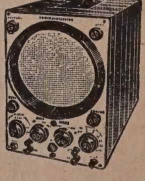
Deflection Sensitivity:
Vertical Amplifier..........10.6 rms millivolt per inch
Horizontal Amplifier........21.2 rms millivolt per inch

Power Supply..........105/125 volts, 50/60 cps

Dimensions................13⅜"H, 9"W, 16⅝"D

Weight........................31 lbs. (approx.)

Finish.................blue-gray hameroid case anodized satin-aluminum panels



*All Prices Subject to Change Without Notice

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

RCA RIDER CHANALYST 162-C

RCA Chanalyst 162-C speeds up those tough service jobs. Monitors intermittent receivers continuously, while service man is working on other jobs. Turns loss items into profits. 52-page instruction book shows test set-ups, circuit diagrams, discusses multitudes of obscure troubles, and explains applications of Chanalyst Analyzer. Height, 9"; width, 16"; depth, 10¾". Shipping weight, 32 lbs. Price **$162.50** *

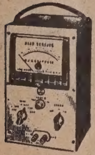
RF-IF Channel:	
Frequency Range	96-1700 kc
Sensitivity: Better than 80 μv to close indicator eye without probe lead	
Scale Accuracy	± 2%
Oscillator Channel:	
Frequency Range	600-15000 kc
Scale Accuracy	± 2%
Audio Channel:	
Frequency Range	15-50000 cps
Sensitivity (approx.): 0.1 RMS volt to close indicator eye	
Electronic Voltmeter Channel:	
Ranges	0 to 5-25-125-500 dc volts (Center-scale zero reference)
With Crystal Probe: 0 to 5, 0 to 20 RMS volts, (for sine waves)	
Frequency Response	± 10% from 1 kc to 100 Mc
Wattmeter Channel:	
Range	50-250 watts
Dimensions	9" x 16" x 10¾"

PORTABLE OSCILLOSCOPE (WO-79B)

For detailed observation and accurate measurement of voltages produced by TV synch. and deflection circuits, ignition systems, pulse generators, etc. Wide horiz. deflection—up to twice screen diam. Calibrated meter for voltage measurements. Built-in delay line. Triggered sweep. Sugg'd User Price: **$550.00.** *

Frequency Range:	
Vertical Amplifier	**10 cycles to 5 Mc**
Horizontal Amplifier	**10 cycles to 500 kc**
Deflection Sensitivity:	
Vert. Amplifier	**0.18 RMS volt/in**
Horizontal Amplifier	**0.46 RMS volt/in**
Sawtooth Time Base	**20 cycles to 250 kc/sec**
Triggered Time Base	**Repetition to 50 kc/sec**
Blanking	**Return trace blanked on triggered definition**
Power Supply	**105/125 volts, 50/60 cycles**
Dimensions	**8¼" w; 14½" h; 16¼" deep**

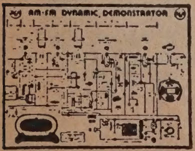
ULTRA-SENSITIVE DC MICROAMMETER (WV-84A)



Reads from 0.001 to 1000 microamperes in six separate ranges. Useful for measuring high values of resistance; may be used as high resistance volmeter. Approaches galvanometer sensitivity. Electronic protected non-burn-out meter. Accuracy, 0.01 range, ± 5% of full scale reading; other ranges ± 4%. Ideal for weak-current measurements in phototubes, multiplier phototubes, etc. Sugg'd User Price (less batteries): **$100.00.** *

Readings	**0.001 μa to 1 ma full scale**
Six Ranges	**0.01; 0.1; 1.0; 10; 100; 1000 μa**
Voltage Drop at Full Scale (all ranges)	**0.5 volts**
Power Supply (Batteries)	**2—1½ volts A (RCA VS106) 2—22½ volts B (RCA VS102)**
Dimensions	**6¼" w; 9½" h; 5¼" deep**
Weight (including batteries)	**9½ lbs.**

AM-FM DYNAMIC DEMONSTRATOR WE-82A



A working schematic diagram of a typical 5-tube superheterodyne broadcast receiver. Has discriminator circuit for FM-if demonstration. Five color panels and numerous pin jacks facilitate demonstrations described in instruction booklet. Height, 33"; width, 45"; depth, 6". Shipping weight, 42 lbs. Price **$99.50.** *

Frequency Range	**550-1600 kc**
AM Intermediate Frequency	**455 kc**
RF (AM) Sensitivity	**200 μv**
FM Intermediate Frequency	**10.7 Mc**
Discriminator	**Foster-Seeley**

***Reg. Trade Mark, U. S. Pat. Off.**

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RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

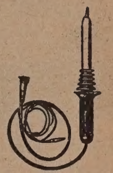
HIGH VOLTAGE PROBES WG-289, WG-290

Add Important Extra Servicing Value to Your Volt-ohm-meter. Measure DC Voltages Up to 50 Kilovolts in High-Resistance Circuits.

- Measure DC Voltages in Television Sets, X-Ray Machines, and other High-Voltage Electronic Devices.
- Increase Input Resistance of VoltOhmyst Meter to at least 1,000 Megohms.
- Multiply VTVM Scale by a factor of 100 times.
- Multiplier Resistors available for all popular Volt-ohm-meters.

The WG-289 and WG-290 Probes are identical except for their connectors. The WG-289 is provided with a microphone-type connector; the WG-290 is equipped with phone-tip connectors. Each Probe comes complete with cable, alligator-clip ground lead, and a complete instruction booklet. Five multiplier resistors are available (WG-206-207-208-209-210) and the proper type should be specified, using the type number recommended for your instrument in the instruction book.

Sugg'd User Price: $9.95 complete*



RCA TV ISOTAP (WP-25A)

Electrical (all voltages within ±5%)
Primary Winding:
  Line-Voltage Range ....105-130 volts
  Switch Positions......Off, 130, 125, 120, 115, 110, 105 volts
  Frequency ....50-60 cycles
Secondary Winding:
  With selector set to power line voltage and no load on secondary.109, 120, 135 volts
  With selector set to 130 volts, and with a secondary load of 275 volt-amperes..105, 115, 130 volts
Continuous Operation (at ambient temperature of 40° C)
  Primary (autotransformer)...500 Max. Va.
  Secondary (isolation)..........275 Max. Va.

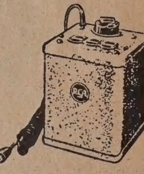
Here's a really useful tool for better, faster, and safer TV servicing. The RCA TV ISOTAP is an essential piece of test equipment for every television technician.

Consisting of a 500 volt-ampere autotransformer winding and a 275 volt-ampere isolated secondary winding, the TV ISOTAP has all the advantages of an isolation transformer—plus the extra value of a heavy-duty transformer. **Sugg'd User Price:$17.95***

ISOTAP ISOLATION TRANSFORMER (WP-24A)

Primary:
  Line Voltage Range.............105-130 volts
  Switch Positions.........105, 110, 115, 120, 125, 130 volts
  Frequency..........................50-60 cycles
Secondary:
  Output Voltages (approx.).....105-117-130
Power Output at unity power factor (Max.):
  Cont. Oper. (30°C Amb.).........100 watts
  Intermit. Oper. (30°C Amb.).....150 watts
Regulation (at 100 volt-amperes)........10%

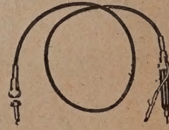
Eliminates shock hazard between ac-dc chassis and ground, speeds detection of receiver faults with high-low line tests, and facilitates testing of receivers at the design-center value of 117 volts. A six-position switch and three secondary receptacles afford maximum flexibility and operating convenience. Sugg'd User Price: **$8.95** *



CRYSTAL PROBE (WG-263)

Input Voltage..........................22 rms volts (max)
Frequency Range...........1000 cycles to 175 Mc
Frequency Response.....................± 10% from 1 kc to 100 mc
Overall Accuracy..................± 7.5% at full scale
Input Capacity..3.5 $\mu\mu f$

Makes any VoltOhmyst a VHF Voltmeter. Reads flat to 100 Mc. Adapts VoltOhmyst for HF, FM or TV test needs, within sensitivity range of the instrument. Withstands DC loads of 250 volts. Sugg'd User Price: **$8.95.** *



RACK-ADAPTER PANEL (WS-18A)

WS-18A Rack Adapter Panel for mounting any of the matched RCA Test Instruments in standard 19-inch relay racks . . . adds convenience and standardization to industrial test setups.

Dimensions: 10½ inches high, 19 inches wide, ⅛ inch thick.

Finish: Umber Gray.

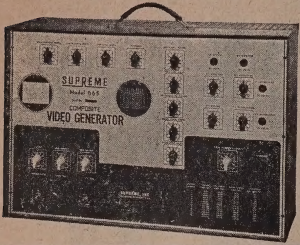
Price: $9.50 *

***All Prices Subject to Change Without Notice**

SUPREME *Instruments*

SUPREME BY COMPARISON

COMPOSITE VIDEO GENERATOR

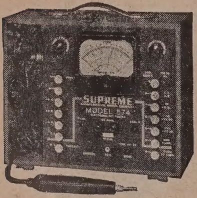


The SUPREME synchronizing and test pattern generator for testing and servicing television sets when the station pattern is off the air. Delivers the COMPOSITE video signal with all the sync, blanking, and equalizing pulses in the proper sequence to lock the raster into a frame of two interlaced fields. (This instrument should not be confused with the "cross-hatch" or "linearity pattern" type units). In addition to its synchronizing function, it has a built in VIDEO (picture signal) generator which produces a pattern of precision spaced dots. Pattern can be turned on or off without affecting the synchronization. For additional information, request data sheet RM-665.

MULTI-METERS

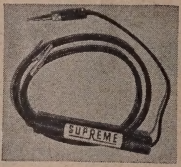
SUPREME makes Volt-Ohm - Milliammeters to fit most every need and budget. Large and small meter types with 1000 or 20,000 ohms/volt sensitivity. Request literature RM-4344.

V.T.V.M. SET TESTER



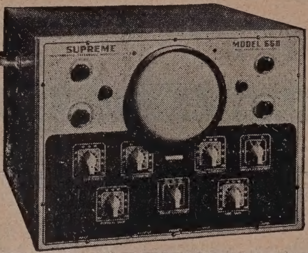
SUPREME Electronic Set Tester is the preferred vacuum tube volt - ohmmeter among technicians and engineers. Full details on Model 574 (illustrated) available by requesting Spec-RM-574.

KILOVOLT RANGE EXTENSION UNIT



For checking high (DC) voltage in television sets. Extends range of Supreme 20,000 ohms/volt and higher sensitivity multimeters to read 25,000 Volts. Units also available for Supreme Vacuum Tube Voltmeters.

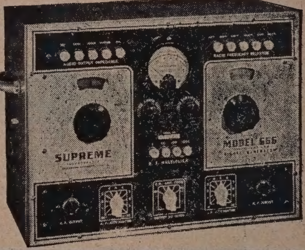
GENERAL PURPOSE & WIDE RANGE OSCILLOSCOPES



SUPREME oscilloscopes are years ahead in operation and design. Model 660 (illustrated) has virtually flat frequency response from 5 cycles to 5 megacycles making it the ideal instrument for checking video and high fidelity audio circuits. Shipped complete with professional type probe, filter screen, and frequency compensated attenuator. For additional data on all Supreme oscilloscopes request Spec. RM-3660.

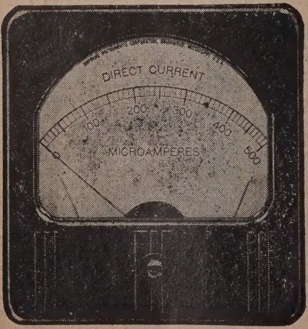
AF, RF, & TV SIGNAL GENERATORS

SUPREME has a most complete group of signal sources for testing and aligning radio and television sets including high fidelity sound amplifiers. AF and RF generators available as separate units or in combination. Supreme Television generators can be externally modulated with composite video signal. For additional data request Spec. RM-661.



INDICATING INSTRUMENTS

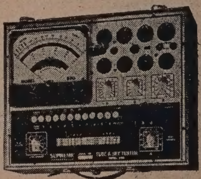
(Panel Meters)



SUPREME quality meters feature efficient Alnico Bar Magnet, Double Bridge construction, Selected Pivots and Jewels. Wide selection of stock models. Special dials available in quantity shipments.

TUBE & SET TESTERS

Dependable, field tested, time proven tube test circuit with design flexibility features to minimize obsolescence. SUPREME Tube and Battery testers are available as separate units or in combination with selected multi-meter functions. All models equipped with roll chart. Deluxe models with 7″ meters, standard models with smaller meters. Tube setting data on new tube types supplied free for first year to registered owners. Revised charts, listing new tube types, made available at small cost to owners after first year. Request Spec. RM-616 for additional information.



TEST EQUIPMENT and PANEL METERS designed and manufactured for special applications and distribution — write Commercial Engineering Dept. RM-16.

Factory and General Offices
SUPREME, INC.
GREENWOOD, MISSISSIPPI

ADDITIONAL SPECIFICATION DATA and quantity prices for resale purposes supplied on request. Address all inquiries to the factory.

MEASUREMENTS CORPORATION

Laboratory Standards

QUALITY ELECTRONIC
MEASURING INSTRUMENTS
FOR ACCURATE, DEPENDABLE SERVICE

SINCE 1939, MEASUREMENTS CORPORATION has developed and manufactured a precision line of Laboratory Standards designed for radio, television and other fields of the electronic industry. While our production departments are building instruments currently required by laboratories, manufacturers and the Armed Services, MEASUREMENTS' engineering division is engaged in extensive research on new equipment for the art.

Critical engineering control of all phases of manufacturing, from the selection of component parts, through the production departments, to the final mechanical and electrical inspection, assures every customer of quality instruments that are guaranteed to give accurate, dependable service.

STANDARDS ARE ONLY AS RELIABLE AS THE REPUTATION OF THEIR MAKER

STANDARD SIGNAL GENERATORS

MODEL	FREQUENCY RANGE	OUTPUT RANGE	MODULATION
65-B	75 Kc.-30 Mc.	0.1 microvolt to 2.2 volts	AM. 0 to 100% 400 cycles or 1000 cycles External mod., 50-10,000 cycles
78	15-25 Mc.; 195-225 Mc. 15-25 Mc.; 90-125 Mc. other ranges on order	1 to 100,000 microvolts	AM. 8200-400 cycles 625-400 cycles Fixed at approximately 30%
78-FM	86 Mc.-108 Mc.	1 to 100,000 microvolts	Deviation 0-300 kc, 2 ranges FM. 400-8200 cycles External modulation to 15 Kc.
80	2 Mc.-400 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30% 400 cycles or 1000 cycles External mod., 50-10,000 cycles.
82	20 cycles to 200 Kc. 80 Kc. to 50 Mc.	0-50 volts 0.1 microvolt to 1 volt	Continuously variable 0-50% from 20 cycles to 20 Kc.
84	300 Mc.-1000 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30%, 400, 1000, or 2500 cycles. Internal pulse modulator. External mod., 50-30,000 cycles.
90	20 Mc.-250 Mc.	0.3 microvolt to 0.1 volt	Continuously variable, 0 to 100% Sinusoidal modulation 30 cycles-5 Mc. Composite TV modulation.

U.H.F. OSCILLATOR

MODEL	FREQUENCY RANGE	OUTPUT RANGE	OUTPUT IMPEDANCE
112	300 Mc. — 1000 Mc.	Maximum varies between 0.3 volt and 2 volts. Adjustable over 40 db range	50 ohms

PULSE GENERATOR

MODEL	FREQUENCY RANGE	PULSE WIDTH	OUTPUT
79-B	60 to 100,000 cycles	Continuously variable from 0.5 to 40 microseconds	Approximately 150 volts positive with respect to ground. "Sync Output" 75 volts positive with respect to ground.

SQUARE WAVE GENERATOR

MODEL	FREQUENCY RANGE	WAVE SHAPE	OUTPUT
71	Continuously variable 6 to 100,000 cycles	Rise time less than 0.2 microseconds with negligible overshoot	Step attenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

U.H.F. RADIO NOISE and FIELD STRENGTH METER

MODEL	FREQUENCY RANGE	INPUT VOLTAGE RANGE
58	15 Mc. to 150 Mc.	1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

VACUUM TUBE VOLTMETERS

MODEL	VOLTAGE RANGE	FREQUENCY RANGE	INPUT IMPEDANCE
62	0-1, 0-3, 0-30 and 0-100 volts AC or DC	30 cycles to over 150 Mc.	Approximately 7 mmfd.
62-U.H.F.	0-1, 0-3, 0-30 and 0-100 volts AC or DC	100 Kc. to 500 Mc.	Approximately 2 mmfd.
67	.0005 to 300 volts peak-to-peak	5 to 100,000 sine-wave cycles per second	1 megohm shunted by 30 mmfd.

MEGACYCLE METER

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	MODULATION
59	2.2 Mc. — 400 Mc.	Within ±2%	CW or 120 cycles fixed at approximately 30%. Provision for external modulation

CRYSTAL CALIBRATOR

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	HARMONIC RANGE
111	250 Kc. — 1000 Mc.	0.001%	.25 Mc. Oscillator: .25-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.

BRIDGES

MODEL	INDUCTANCE (L)	CAPACITANCE (C)	AC RESISTANCE (R)
102	0.5 microhenry to 110 henries	1 mmf. to 110 mfd. Power factor 0-30%	1 ohm to 11 megohms

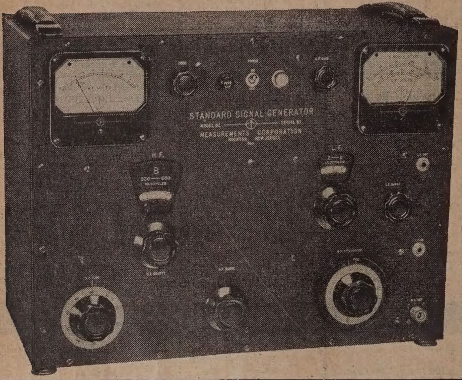
MEASUREMENTS CORPORATION • BOONTON, N. J.

MEASUREMENTS CORPORATION

Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 82

20 CYCLES - 50 Mc.



FREQUENCY RANGE: 20 cycles to 200 kilocycles in four ranges. 80 kilocycles to 50 megacycles in seven ranges. Position available for special range.

FREQUENCY ACCURACY: Each range is individually calibrated. 20 cycles to 200 kilocycles, accurate to ±5%. 80 kilocycles to 50 megacycles, accurate to ±1%.

OUTPUT VOLTAGE AND IMPEDANCE: 0-50 volts across 7500 ohms from 20 cycles to 200 kilocycles. (The output voltage and impedance in this range can be reduced by an external attenuator). 0.1 microvolt to 1 volt across 50 ohms over most of the range from 80 kilocycles to 50 megacycles.

MODULATION: Continuously variable 0-50% from 20 cycles to 20 kilocycles from low frequency variable oscillator or external source.

HARMONIC OUTPUT: Less than 1% from 20 cycles to 20 kilocycles; 3% or less from 20 kilocycles to 50 megacycles.

LEAKAGE AND STRAY FIELD: Less than 1 microvolt from 80 kilocycles to 50 megacycles.

POWER SUPPLY: 117 volts, 50-60 cycles, 75 watts.

DIMENSIONS: 15" high x 19" wide x 12" deep overall.

WEIGHT: 50 pounds.

STANDARD SIGNAL GENERATOR - Model 80

2 Mc. - 400 Mc.

FREQUENCY RANGE: 2 to 400 megacycles in 6 bands, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

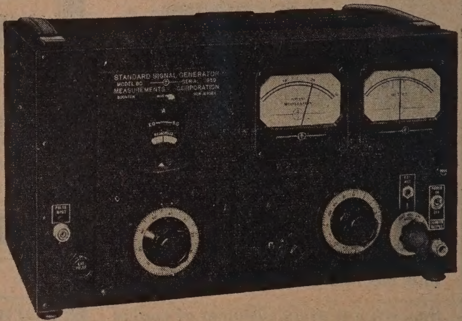
OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

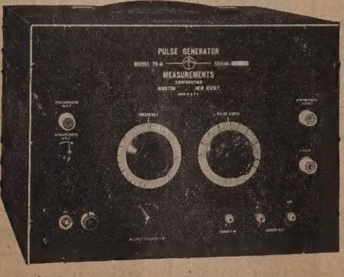
OUTPUT IMPEDANCE: 50 ohms.

MODULATION: Amplitude modulation is continuously variable from 0 to 30%. Modulation depth is indicated by a meter on the panel. Internal modulation, 400 and 1000 cycles. Modulation may also be applied from an external source. Pulse modulation may be applied to the oscillator from an external source through a special connector.

LEAKAGE AND STRAY FIELD: Attenuator leakage less than 0.1 microvolt. Power line leakage less than 0.5 microvolt. Stray fields less than two microvolts.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 70 watts.





PULSE GENERATOR MODEL 79-B

This instrument is specially adapted for plate pulsing of the Model 80 Standard Signal Generator.

REPETITION RATE: 60 to 100,000 pulses per second.

PULSE WIDTH: Continuously variable from 0.5 to 40 microseconds.

OUTPUT VOLTAGE: Approximately 150 volts positive with respect to ground.

"SYNC" OUTPUT: 75 volts positive with respect to ground. Displaced by ½ period from pulse output.

"SYNC" INPUT: May be synchronized with as little as 2 volts peak from an external source.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 10" high x 13⅝" wide x 10½" deep, overall.

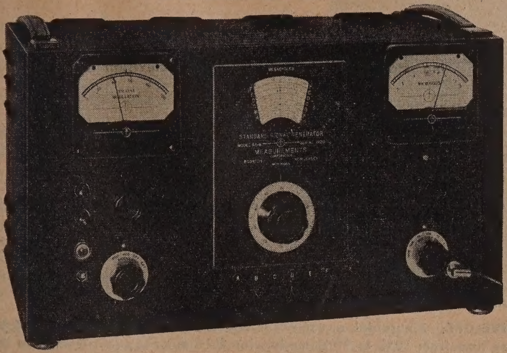
WEIGHT: Approximately 31 pounds.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 65-B

75 Kc. - 30 Mc.



FREQUENCY RANGE: 75 kilocycles to 30 megacycles in 6 push button ranges.

FREQUENCY CALIBRATION: The frequency dial is direct reading and individually hand calibrated for each range. It is accurate to ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 microvolt to 2.2 volts.

OUTPUT IMPEDANCE: 5 ohms to 0.2 volt, rising to 15 ohms at 2.2 volts.

MODULATION: Continuously variable from 0 to 100%. Modulation depth is indicated directly by a meter on the panel. Modulation may be obtained either from an internal source of 400 or 1000 cycles or from an external source.

ENVELOPE DISTORTION: Less than 4% at 100% modulation at 1 megacycle.

LEAKAGE: Less than 0.1 microvolt leakage with attenuator set for 0 output.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 11" high x 20" long x 10¼" deep, overall.

WEIGHT: Approximately 55 pounds.

FM STANDARD SIGNAL GENERATOR - Model 78-FM

86 Mc. - 108 Mc.

FREQUENCY RANGE: 86 to 108 megacycles, individually calibrated dials. Accurate to ± 0.5%.

OUTPUT VOLTAGE: 1 to 100,000 microvolts.

LEAKAGE: Less than 1 microvolt.

MODULATION: Deviation continuously variable from 0 to 300 kc. Indicated on directly calibrated dial. 400 cycle internal audio oscillator. Can be modulated from an external source providing 6 volts across 5000 ohms.

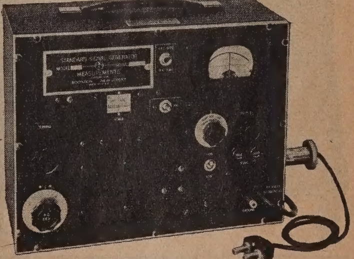
FIDELITY: Flat within two db from DC to 15,000 cycles. Distortion is less than 1% at 75 kilocycles deviation. Transient response is excellent.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 36 watts.

DIMENSIONS: 10" high x 13" wide x 7" deep, overall.

WEIGHT: Approximately 25 pounds.

Special one-band Model 78-FM Signal Generators, with a tuning ratio of approximately 1.2 to 1, are available for use within the limits of 30 to 165 megacycles.



I. F. CONVERTER - Model M-275

This instrument was designed for use with the Model 78-FM Standard Signal Generator to provide carrier output at the IF frequencies used in FM and Television receivers.

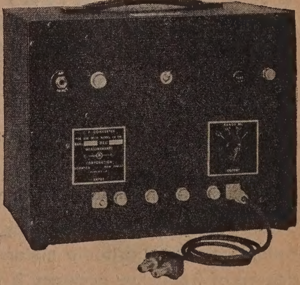
(Special Frequencies up to 23 Mc. available on order)

CARRIER FREQUENCIES: 4.5, 10.7, 21.7 Mc.

OUTPUT VOLTAGE: 10 microvolts to 1.0 v. when used with Model 78-FM.

BAND WIDTHS: 5% down, ± 250 Kc. from center frequency.

AMPLITUDE MODULATION: Provision for external AM up to approximately 80%, combined with, or exclusive of, FM. There is negligible spurious FM due to AM. The envelope distortion is less than 10% at 80% modulation.

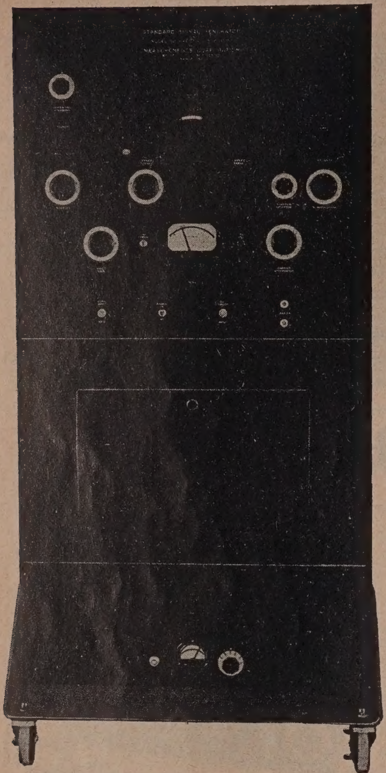


MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION

Laboratory Standards

TELEVISION SIGNAL GENERATOR



MODEL 90

The first commercial wide-band, wide-range Signal Generator to be developed to meet the exacting standards of high definition television use.

CARRIER FREQUENCY:

RANGE: Continuously variable from 20 to 250 megacycles, in eight ranges.

ACCURACY: Built-in crystal frequency standard permits setting to .01%. Dial scale may be set to 0.1%.

STABILITY: Warm-up drift less than .05%. Less than .01% after warm-up.

LEAKAGE: Less than 10 microvolts.

MODULATION:

Continuously variable from zero to 100%.

ENVELOPE: Sinusoidal, or composite television. Bandwidth to 3 db is 4 Mc. Rise time from 10% to 90% modulation 0.15 microsecond. Overshoot less than 5%. Slope less than 5% on 60 cycle square wave.

INPUT IMPEDANCE: 75 ohms ± 10% (RMA Standard)

INPUT LEVEL: 1.5 volts peak to peak minimum level for 100% modulation. Black negative polarity.

MODULATION PERCENTAGE: Zero to 110%; plate modulation.

OUTPUT:

LEVEL: Continuously variable from 0.3 microvolt to 0.1 volt balanced to ground (measured at 100% modulation level).

IMPEDANCE: (a) 107 ohms line to line (balanced).
(b) 53.5 ohms line to ground (unbalanced).
(c) Suitable pads may be employed to alter these impedances.

DIMENSIONS:

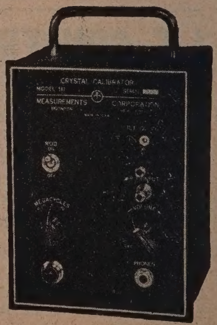
OVERALL: Height—58¾"; Width—28¼"; Depth—25½".

WEIGHT: Model 90—302 pounds.
External Voltage Regulator: 92 pounds.

POWER SUPPLY: 117 volts, 60 cycles. 700 watts.

CRYSTAL CALIBRATOR - Model 111

An extremely accurate instrument for the frequency calibration of equipment in the range of 250 Kc. to 1000 Mc.



FREQUENCY ACCURACY: 0.001%

FEATURES:

- Provides test signals of crystal-controlled frequency at .25, 1 and 10 Mc. intervals.
- Has self-contained detector with a sensitivity of 2 microwatts.

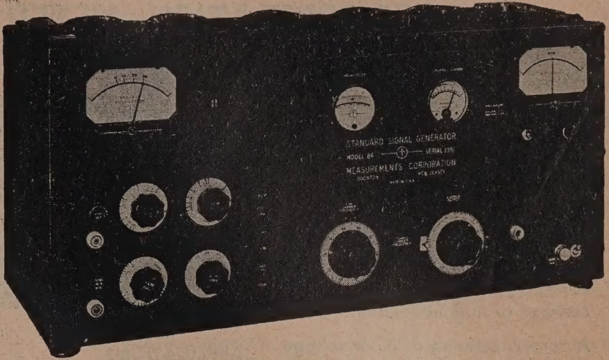
USES: Calibration and frequency checking of signal generators, transmitters, receivers, grid-dip meters and similar equipment where a high degree of frequency accuracy is required.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 84

300 Mc. - 1000 Mc.



FREQUENCY RANGE: 300 to 1000 megacycles, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

AMPLITUDE MODULATION: Continuously variable from 0 to 30% indicated directly on panel meter. Internal sine-wave oscillator; choice of 400, 1000, or 2500 cycles is provided. External modulation up to 30 kilocycles may be applied.

PULSE MODULATION: Repetition rate continuously variable from 60 to 100,000 cycles. Pulse width continuously variable from 1 to 50 microseconds indicated on directly calibrated dial. Pulse delay (with respect to synchronizing output) continuously variable from 0 to 50 microseconds indicated on directly calibrated dial. May be synchronized with an external sine-wave or pulse source.

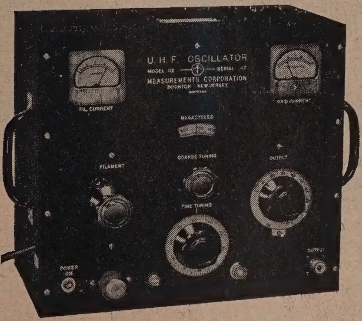
POWER SUPPLY: 117 volts, 60 cycles. 230 watts (with regulator).

DIMENSIONS: 12" high x 26" wide x 10" deep, overall.

WEIGHT: Approximately 135 pounds, including external line voltage regulator.

ACCESSORIES: Included with each instrument are four connecting cables and external voltage regulator.

U. H. F. OSCILLATOR - Model 112



300 Mc. - 1000 Mc.

The Model 112 provides a signal source for the measurement of: standing waves on transmission lines; antenna patterns; filters; attenuators. Also for alignment and tracking of UHF receivers.

FREQUENCY RANGE: 300 to 1000 megacycles.

FREQUENCY CALIBRATION ACCURACY: ± 0.5%.

OUTPUT VOLTAGE: Maximum varies between 0.3 volt and 2 volts. Adjustable over 40 db range.

OUTPUT SYSTEM: 50 ohms.

POWER SUPPLY: 117 volts; 50-60 cycles; 60 watts.

DIMENSIONS: 12½" x 13½" x 8". Weight 22 lbs.

VACUUM TUBE VOLTMETER - Model 62

RANGE: Push button selection of 5 ranges—1, 3, 10, 30 and 100 volts full scale AC or DC.

ACCURACY: ±2% of full scale on each range, both DC and sine-wave AC.

INDICATION: Linear for DC and calibrated to indicate RMS values of a sine-wave or 71% of the peak value of a complex wave on AC.

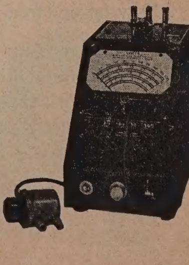
FREQUENCY ERROR: Less than 10% from 30 cycles to over 150 megacycles. Resonant frequency of the probe with input terminals shorted is 350 megacycles.

INPUT IMPEDANCE: The input capacitance is approximately 7 mmf. The input resistance is a function of frequency.

POWER SUPPLY: 117 volts AC, 50 to 60 cycles.

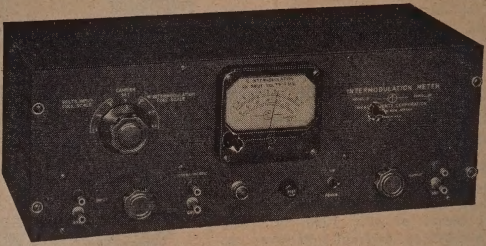
DIMENSIONS: 4¾" wide x 6" high x 8½" deep overall.

WEIGHT: Approximately 8 pounds.



MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

INTERMODULATION METER - Model 31



FEATURES:

- Compact, completely self-contained unit with—
  - Test Signal Generator
  - Analyzer
  - Voltmeter
  - Power Supply
- Direct-reading meter indicates percentage of intermodulation.
- Accurate metering of input voltage to analyzer.
- Easy to operate.
- Quick, accurate measurements.
- May be mounted in standard 19″ relay rack. (7″ relay rack panel space.)
- Connection for oscilloscope.

APPLICATIONS:

- Insuring peak performance from all audio systems.
- Correct adjustment and maintenance of AM and FM receivers and transmitters.
- Checking linearity of film and disc recordings and reproductions.
- Checking phonograph pick-ups and recording styli.
- Checking record matrices.
- Adjusting bias in tape recordings.
- For quality control of all audio components and equipment.

MODEL 30 INTERMODULATION METER

This model has a test generator providing: a low frequency range of 40, 70 and 100 cycles; a high frequency range of 2000, 7000 and 12,000 cycles, either separate or mixed in a 1/1 or 4/1 ratio.

The analyzer will operate from 20 cycles to 200 cycles and from 2000 cycles to 20,000 cycles.

A direct-reading meter measures intermodulation percentages from 0.1% to 30%; test generator output voltages from .01 to 100 v. (–30 to +20 DBM); analyzer input voltages from .0001 to 100 v. (–70 to +40 DBM).

SPECIFICATIONS:

GENERATOR:

LOW FREQUENCY: 60 cycles.
HIGH FREQUENCY: 3000 cycles.
LF/HF VOLTAGE RATIO: Fixed 4/1.
OUTPUT VOLTAGE: 10 v. max. into high impedance or +5 DBM matched to 600 ohms.
OUTPUT IMPEDANCE: 2000 ohms.
RESIDUAL INTERMODULATION: 0.2%.

ANALYZER:

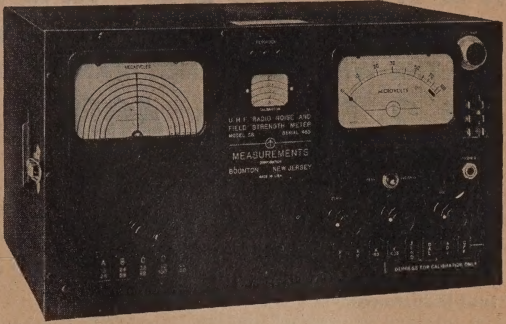
INPUT VOLTAGE: Full scale ranges of 3, 10 and 30 volts RMS. Less than one volt of mixed signal is sufficient for operation.
INPUT IMPEDANCE: Greater than 400 K ohms.
INTERMODULATION: Full scale ranges of 3, 10 and 30%.
ACCURACY: ±10% of full scale.
GENERAL: Power Supply 117 volts, 50/60 cycles. 30 watts. Dimensions: 8″ high x 19″ wide x 9″ deep. Weight 16 lbs. Tubes: 1-12AX7, 1-12AT7, 1-6J5GT, 1-5Y3GT.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

U. H. F. RADIO NOISE and FIELD STRENGTH METER

MODEL 58



This versatile, portable instrument is useful in measuring signal-to-noise ratios, noise levels and for field strength surveys on TV, FM and AM transmitters.

FREQUENCY RANGE: 15 to 150 megacycles in five bands —dial directly calibrated in megacycles.

SENSITIVITY RANGE: 1 to 100,000 microvolts induced in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

GAIN STANDARDIZATION: Internal "shot noise" diode provides calibration standard. Special dial eliminates need for charts.

CIRCUIT: Superheterodyne circuit with tuned RF amplifier eliminates image response.

BAND WIDTH: 150 kilocycles @ 2X down.

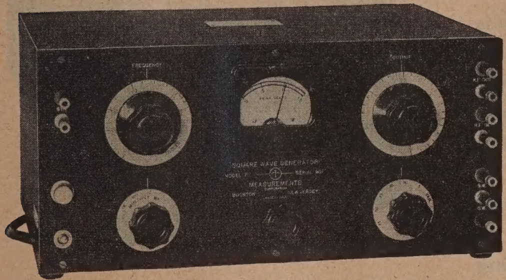
POWER SUPPLY: Built-in regulated dual power supply for operation from either 117 volts AC or 6 volts DC. 70 watts (on AC).

STANDARD EQUIPMENT: Power cables, 15 foot antenna cable, 9 inch loop antenna, carrying strap, and complete instruction book.

DIMENSIONS: 16″ wide x 9″ high x 11″ deep, overall.

WEIGHT: 35 pounds.

SQUARE WAVE GENERATOR - Model 71



POWER SUPPLY: 117 volts, 50-60 cycles. 100 watts.
DIMENSIONS: 7″ high x 15″ wide x 7½″ deep, overall.
WEIGHT: Approximately 20 pounds.

Recommended for television testing and many different applications in developing AM, FM and TV equipment where square-wave analysis is of great importance.

FREQUENCY RANGE: 6 to 100,000 cycles.

WAVE SHAPE: Rise time less than 0.2 microseconds with negligible overshoot at 75 peak volts output. At 5 volts or less rise time is less than 0.1 microsecond.

OUTPUT VOLTAGE: Step attenuator giving 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

SYNCHRONIZING OUTPUT: 25 volts peak.

R. F. MODULATOR: 5 volts maximum carrier input. Translation gain is approximately unity—Output impedance is 600 ohms.

PEAK-TO-PEAK VOLTMETER - Model 67

Designed for audio and video level measurements and the measurement of audio electrical interference. The Model 67 is ideally suited for uses where the indication of true peak values is required.

VOLTAGE RANGE: 5 ranges; .0005 to 300 volts peak-to-peak. (Approximately .0002 to 100 r.m.s. volts.)

SEMI-LOGARITHMIC SCALES: Hand calibrated; 0 to 30 peak-to-peak and 0 to 10 r.m.s. equivalent.

FREQUENCY RANGE: 5 to 100,000 sine-wave cycles per second.

INPUT IMPEDANCE: 1 megohm shunted by 30 mmfd.

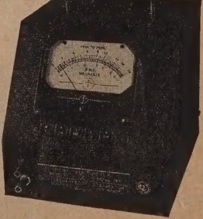
STABILITY: Less than 2% error with line variations from 110 volts to 120 volts.

RECORDER TERMINALS: For external one milliampere graphic recorder or milliammeter.

POWER SUPPLY: 117 volts; 50-60 cycles, 35 watts.

DIMENSIONS: 7½″ high x 7″ wide x 8½″ deep.

WEIGHT: 10 lbs.



MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION

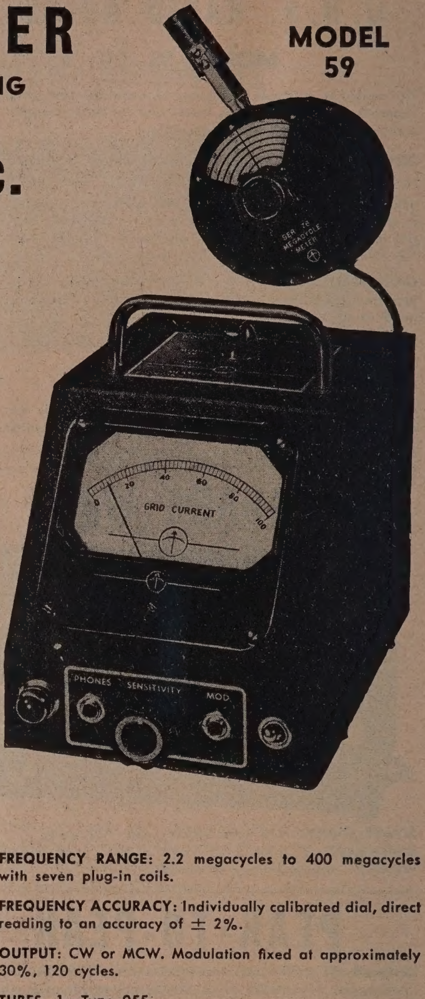
Laboratory Standards

MEGACYCLE METER

MODEL 59

THE ONLY GRID-DIP METER COVERING THE WIDE FREQUENCY RANGE OF

2.2 Mc. to 400 Mc.



- For determining the resonant frequency of tuned circuits, antennas, transmission lines, by-pass condensers, chokes or any resonant circuit.
- For measuring capacitance, inductance, Q, mutual inductance.
- For preliminary tracking and alignment of receivers.
- As an auxiliary signal generator; modulated or unmodulated.
- For antenna tuning and transmitter neutralizing, power off.
- For locating parasitic circuits and spurious resonances.
- As a low sensitivity receiver for signal tracing.
- As a beat-frequency oscillator in conjunction with a fixed frequency oscillator for measuring video or wide-band amplifier bandwidths.
- As an oscillating or absorption marker for use with a sweep-frequency oscillator.
- For transmitter or oscillator frequency checking by beat note method and absorption wave meter method.

And Many Other Applications.

TELEVISION

The Model 59 is most useful in the construction and servicing of television receivers. It can be used for aligning video amplifiers, for peaking coils, sound traps, filters, stagger-tuned i.f.s, stagger-tuned amplifiers, sound i.f.s, local oscillators, carrier circuits, grid mixing circuits, etc. It is very effective for locating interference and for making traps and filters.

FREQUENCY RANGE: 2.2 megacycles to 400 megacycles with seven plug-in coils.

FREQUENCY ACCURACY: Individually calibrated dial, direct reading to an accuracy of ± 2%.

OUTPUT: CW or MCW. Modulation fixed at approximately 30%, 120 cycles.

TUBES: 1—Type 955
1—Type OD3/VR150
1—Type 5Y3GT

DIMENSIONS: Power unit: 5⅛" wide, 6⅛" high, 7½" deep.
Weight: approximately 6½ lbs.
Oscillator unit: 3¾" diameter, 2" deep.
Weight: approximately 1 lb.

POWER SUPPLY: 117 volts, 50-60 cycles, 20 watts.

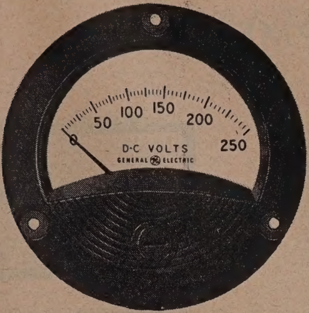
Step-down transformer available for 220 volts, 50 cycle operation.

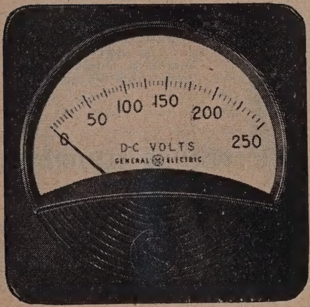
MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

ELECTRIC INDICATING INSTRUMENTS

For Panel Mounting

Internal-pivot Direct-current





These small panel instruments are particularly suitable for use in radio and other communications equipment where compactness, especially minimum depth behind the panel, is essential. Thinness is obtained by the use of a unique single-unit, high-torque element of the permanent-magnet, moving-coil type. In this element, the pivots, instead of being secured to the outside of the armature winding, are solidly mounted on the **inside** of the armature shell.

G-E internal-pivot instruments are available in a variety of standard ratings to measure direct current and voltage (Type DW-71). They are of the 2½-inch classification. The behind-the-panel depth is 0.89 inch of the molded* Textolite case.

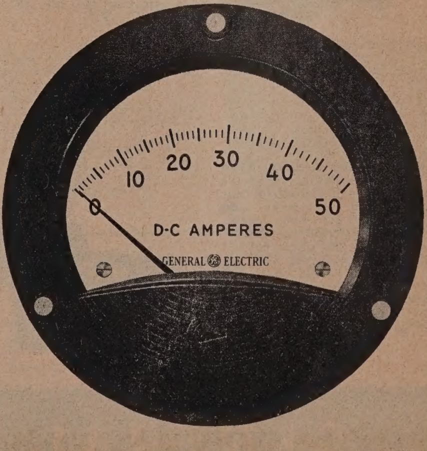
*Registered trade-mark of General Electric Co.

OTHER TYPES

Many other types of G-E indicating instruments are available for panel mounting. They include 3½ inch a-c, d-c, r-f, and rectifier types in standard round cases as well as in rectangular cases, such as the one shown below. Also 2½-inch alternating-current and rectifier-type instruments. Still other types can be supplied to meet unusual requirements.

LISTINGS

Range	Approx. Resistance in Ohms	Cat. No.		Price
		Round	Square	
1 volts (d-c)	1,000	495X21	495X41	$11.75
5	5,000	495X25	495X45	11.75
30	30,000	495X30	495X50	11.75
50	50,000	495X31	495X51	11.75
80	80,000	495X32	495X52	11.75
150	150,000	495X34	495X54	11.75
1 milliammeters (d-c)	25	494X30	494X44	10.50
5	7.4	494X33	494X47	10.50
50	2.16	494X37	494X51	10.50
100	.50	494X38	494X52	10.50
200	.252	494X40	494X54	10.50
500	.100	494X43	494X57	10.50
50 microammeters (d-c)	2,030	494X14	494X22	19.00
100	693	494X16	494X24	18.00
200	302	494X18	494X26	14.00
500	68.5	494X20	494X28	12.50

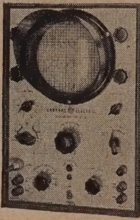


Type DO-71 3½-inch instrument for panel mounting

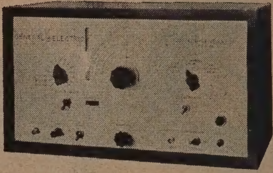
ELECTRONIC RESEARCH, ENGINEERING AND MAINTENANCE EQUIPMENT

TV TEST EQUIPMENT

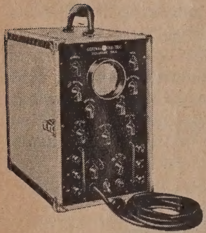
Sweep Generator, Type ST-4A This Variable Permeability Sweep is completely electronic, has no moving parts. Ideal for TV receiver maintenance, TV production and development laboratories, wide band amplifier study, transmission line impedance measurements.



Oscilloscope Type ST-2A Excellent for head-on position work. Unsurpassed for stability and fine trace . . . no bounce when shifting bands. Delivers maximum sensitivity without sacrifice of frequency response Use it to check hum, noise, distortion, modulation, phase relationships. Fits many applications where waveform study is essential.

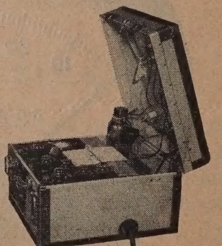


Marker Generator Type ST-5A Functions as a crystal referenced calibrator from 10 mc. to 300 mc. When used with the G-E sweep generator, it provides a multiple of markers spaced 1.5 or 4.5 mc. apart . . . or can be used to supply a marker or markers at any frequency up to from 10 mc. to 900 mc.



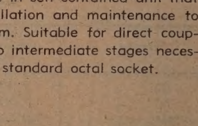
Industrial Oscilloscope Model YNA-4 . . . For tracing circuit trouble in electronic-control equipment, this scope is fast, accurate, and dependable. Ideal for checking welding machines, high wave capacitor discharge panels, variable speed motor controls. Set it down anywhere—the case is insulated . . . carry it easily—weighs only 27 pounds . . . use it in many ways—tests both AC and DC.

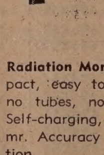
Industrial Tube Analyzer Type YTW-3 . . . This portable equipment is designed so that non-technical personnel can quickly and efficiently determine the performance of mercury vapor and gas rectifier tubes by measuring the arc drop voltage under load. The periodic testing of rectifier tubes can help prevent equipment failure and loss of operating time.



NUCLEONICS EQUIPMENT

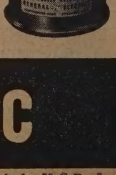
Alpha Survey Meter Type 4SN10A2 A "must" for anyone handling radium or other alpha emitting material. Light, portable, thoroughly reliable even in high humidity. Accuracy 10% of indicated reading. Developed from Navy Type AN/PDR10A and AEC Cat. No. SPC-2C.





Binary Scaler Model 4SN1A3 Provides scale of 2 in self-contained unit that cuts installation and maintenance to a minimum. Suitable for direct coupling — no intermediate stages necessary. Fits standard octal socket.

Radiation Monitor Type 4SN11A2 Compact, easy to use. Infinite shelf life, no tubes, no batteries to wear out. Self-charging, high sensitivity 0 to 20 mr. Accuracy 10% of radium calibration.



GENERAL ELECTRIC

FOR DEVELOPMENT LABS., TV RECEIVER TESTING, INDUSTRIAL TESTING AND BROADCAST STATIONS

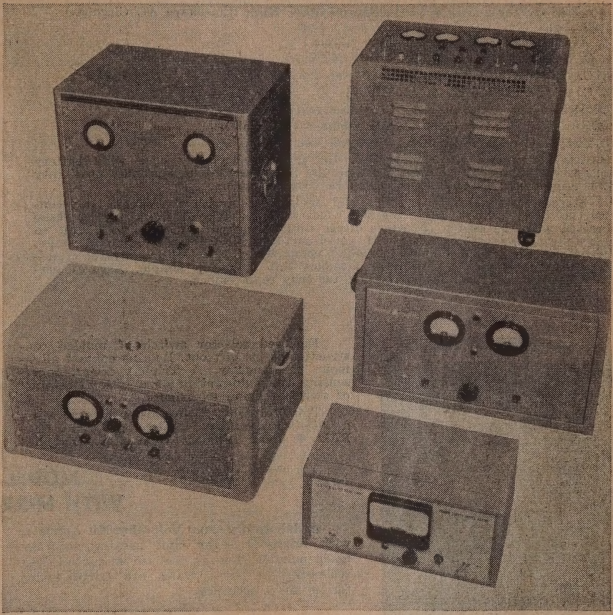
REGULATED POWER SUPPLIES

YPD-4 This General Electric regulated power supply provides a convenient adjustable source of DC voltage from 160 to 1500 volts, 125 milliamperes maximum, which is constant despite changes in load or supply voltage. Its exceptionally wide range of output voltage makes it a versatile power supply for laboratory work.

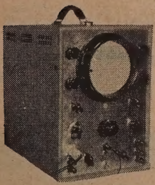
YPD-2 A high-quality, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated variable DC voltage source at medium current consumption is required. DC output 250 to 450 volts (positive or negative may be grounded to the chassis), current output 0 to 300 milliamperes max.

4ST1A1 A superior quality, electronically regulated unit capable of supplying 180 to 300 volts, 60 milliamperes maximum, for general laboratory, development, and production use and wherever a closely regulated DC voltage of low ripple content is required.

4ST9A1 This unit has two separate regulated outputs continuously variable, 0 to 500 volts, 200 milliamperes maximum. Designed for use in laboratories and wherever a closely regulated and well filtered DC voltage is required.



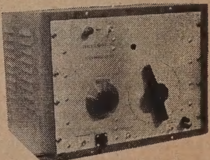
GENERAL PURPOSE



Oscilloscope ST-2C A new 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and TV stations. Wide frequency response without recourse to peaked amplifier coupling circuits, resulting in excellent response. Power requirements: 105-125 volts AC, 50-60 cycles, 120 watts.

TV CHANNEL SWEEP

Type ST-11A Designed for production line use, this turret type sweep and marker covers 12 VHF TV channels. Sweep width: Max. at least 8.5 mc to 13 mc channels 2 to 13 respectively. Width internally adjustable from 0 to max. in 7 steps. Output voltage open circuit .28v with isolating pad.



The instruments shown on these pages represent the complete line made by General Electric at Electronics Park. The catalog at right includes specification sheets and descriptions of all units.

Write for FREE Catalog

Your copy will be sent on request. General Electric Company, Electronics Park, Syracuse, N. Y.

Electronic
TEST EQUIPMENT
GENERAL ELECTRIC

GENERAL ELECTRIC

Radio TRIPLETT Testers

MODEL 630 VOLT-OHM-MIL-AMMETER

RANGES

D. C. VOLTS: 0-3-12-60-300-1200-6000, at 20,000 Ohms/Volt
(For greater accuracy on TV and other High Resistance Circuits.)

A. C. VOLTS: 0-3-12-60-300-1200-6000, at 5,000 Ohms/Volt
(For greater accuracy in Audio and other High Impedance AC Circuits.)

DB.: —30, +4, +16, +30, +44, +56, +70
(For Direct Reading of Output Levels.)

D. C. MICROAMPERES: 0-60, at 250 M. V.

D. C. MILLIAMPERES: 0-1.2-12-120, at 250 M. V.

D. C. AMPERES: 0-12, at 250 M. V.

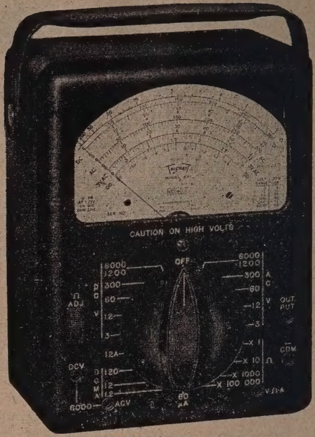
*OHMS: 0-1000-10,000 (4.4-44 at center scale)

*MEGOHMS: 0-1-100 (4400-440,000 Ohms center scale)

OUTPUT: Condenser in series with AC Volt ranges.

*Resistance ranges are compensated for greatest accuracy over wide battery voltage variations. Series Ohmmeter circuits for all ranges to eliminate possibility of battery drain when leaving switch in OHMS position.

Streamlined Tester with large 5½" meter, flush with the panel. Unit construction—Resistors, shunts, rectifier, batteries—all housed in a molded base integral with the switch. Provides direct connections without cabling. Simple to operate—only one switch flush with panel surface, selects both circuit and range. Special 1% resistors are sealed in molded compartment. Batteries easily replaced—Balanced double-spring tension grip makes this operation simple. Assures permanent contact. Precalibrated rectifier for easy replacement.



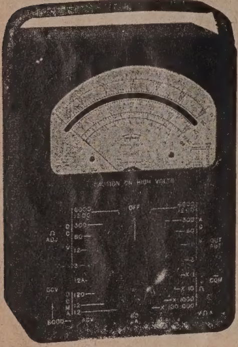
Model 630

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience.

This Volt-Ohm-Mil-Ammeter incorporating a 5½" instrument with 4⅜" scale, has RED ● DOT Lifetime Guarantee. Dial has black markings on white except AC and OHM are red. A completely insulated, molded, black case, 3-7/32"×5½"×7½", and panel with engraved white markings. Leather strap handle.

Weight: 4 lbs.

MODEL 630. U.S.A. DEALER NET $39.50



Model 630-A

MODEL 630-A WITH MIRROR SCALE

A laboratory-type Volt-Ohm-Mil-Ammeter with mirrored scales and greater accuracy made possible through the use of special ½% resistors. The long scales are mirror-scaled for greater accuracy.

Model 630-A has the same ranges and other advanced design features as Model 630 described above.

Weight: 4 lbs.

MODEL 630-A. U.S.A. DEALER NET $49.50

CARRYING CASES For Models 630 and 630-A

CARRYING CASE MODEL 639-P, black leather, has adequate space for Model 630 or 630-A, instructions and accessories. Padded lining of ⅜" sponge rubber. Strong leather strap handle.

MODEL 639-P. U.S.A. DEALER NET $13.50

CARRYING CASE MODEL 639, black leather, strap handle. Adequate space for Model 630 or 630-A, instructions and accessories.

MODEL 639. U.S.A. DEALER NET $8.50

MIRROR SCALE VOLT-OHM-MIL-AMMETER

Widest range tester of its type with additional brand new features: Long 5" mirror scale for better reading accuracy; Resistance ranges to 40 Megohm; Low Ohm Range 0-2000 (12 ohms center scale); D. C. Volt ranges with dual sensitivity (10,000/20,000 Ohm/Volt) provide double the number of full scale readings of average testers. A. C. Volt ranges at 10,000 Ohm/Volt permit checking many audio and high impedance A. C. circuits where a vacuum tube voltmeter usually is required. Low voltage ranges permit direct measurement of many bias and output voltages. Special film type resistors provide greater stability on all ranges.

6" RED ● DOT Lifetime guaranteed meter. Long mirror scale guarantees greater reading accuracy. Insulated, black molded case with removable strap handle, 2½"×5½"×6". Molded black panel with white markings. Leads and instructions furnished.

Weight: Approx. 3 lbs.

39 RANGES

D. C. VOLTS: 0-1.25-5-25-125-500-2500, 20,000 Ohm/Volt
0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt

A. C. VOLTS: 0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt

D. C. MICROAMPS: 0-50, at 250 Millivolts

D. C. MILLIAMPS: 0-1-10-100-1000, at 250 Millivolts

D. C. AMPERES: 0-10, at 250 Millivolts

OHMS: 0-2,000-200,000 (12-1200 center scale)

MEGOHMS: 0-40 (240,000 ohms center scale)

DECIBELS: —30, +3, +15, +29, +43, +55, +69.
(Reference level "0" DB at 1.73 V. on 500 Ohm line.)

OUTPUT: Condenser in series with A. C. Volt ranges

Accessories available to special order for extending ranges: External pin jack shunts for D.C. Current ranges, resistors for A.C.-D.C. volt ranges.

MODEL 625-NA. U.S.A. DEALER NET $49.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

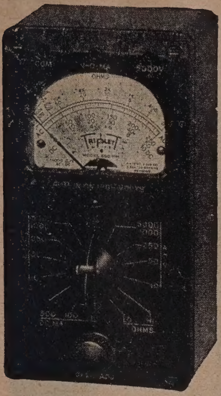
MODEL 629 CASE. U.S.A. DEALER NET $6.50

CAUTION ON HIGH VOLTS
MODEL 625-NA

Model 625-NA

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers



Model 666-HH

POCKET-SIZE VOLT-OHM-MILLIAMMETER

A precision-manufactured marvel of compactness that provides a complete miniature laboratory for D. C. and A. C. voltage, Direct Current and Resistance analyses. Its many ranges, attractive appearance and other unique features provide an answer to the Volt-Ohm-Milliammeter requirements of radio service-men and amateurs, industrial engineers, laboratory technicians, etc. Refinements in design feature:

Greater scale readability on the 3" RED • DOT Lifetime guaranteed instrument with black and red scale markings.

Simplified switching provides greater ease in changing ranges.

Lower jack contact resistance and trouble-free plug-in connections by use of banana-type jacks. Banana jacks at top of panel reduce possibility of connecting leads over panel controls or meter scales.

Greater stability on voltage ranges by use of special resistors throughout and on current ranges by use of 250 M. V. instrument.

RANGES

D. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

A. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

D. C. MA: 0-10-100-500, at 250 Millivolts

OHMS: 0-2000-400,000 (12-2400 center scale)

Attractive new streamlined black molded case, completely insulated. 3 1/16"×5⅞"×2 9/16". Black molded panel with white markings. Battery self-contained, plug-in type, 1.5 V. Eveready No. 935 or equivalent. 50" test leads with clips and plugs furnished.

Weight: 1½ lbs.

Accessories available to special order for extending ranges: External pin jack shunts for Direct Current ranges, resistors for A.C.-D.C. volt ranges, battery and resistors for Ohms ranges.

MODEL 666-HH. U.S.A. DEALER NET $24.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

MODEL 669 CASE. U.S.A. DEALER NET $5.50

POCKET-SIZE VOLT-OHM-MIL-AMMETER

RANGES

D.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

A.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

D.C. M.A.: 0-10-100, at 250 M.V.

D.C. AMP.: 0-1, at 250 M.V.

OHMS: 0-3000-300,000 (20-2000 center scale)

MEGOHM: 0-3 (20,000 Ohm center scale) (Compensated Ohmmeter circuit.)

A New Pocket-Size Volt-Ohm-Mil-Ammeter with these latest specialized features meet your needs for A.C. and D.C. Voltage, Direct Current and Resistance analyses.

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience. UNIT CONSTRUCTION—All resistors, shunts, rectifier and batteries housed in a molded base integral with the switch. Eliminates chance for shorts. Direct connections. No Cabling. All precision film or wire-wound resistors are mounted in their own compartment—assures greater accuracy.

3" 0-200 Microammeter, 250 M.V., RED• DOT Lifetime guaranteed against defects in materials or workmanship. Red and black markings on a white background. Easy-to-read scale.

Precalibrated rectifier unit and batteries easily replaced. One 1.5 Volt Eveready #935 and two 1.5 Volt Eveready #915, or equivalent, self-contained.

Handy and pocket-size, black molded case is completely insulated. Size: 3 1/16" x 5⅞" x 2 11/16". Leather strap handle. Black molded panel with engraved white markings.

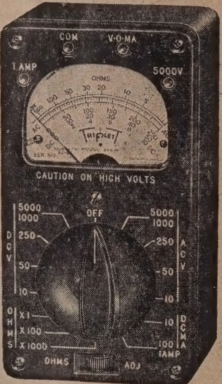
Furnished complete with batteries, 50" test leads and instruction book at an amazingly low price.

Weight: 1½ lbs.

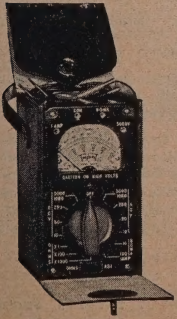
MODEL 666-R . U.S.A. DEALER NET $26.50

CARRYING CASE

MODEL 669, black leather strap handle, snap cover. . . . U.S.A. DEALER NET . . . $5.50



Model 666-R



Model 666-RL

PORTABLE VOLT-OHM-MIL-AMMETER

This is the popular Model 666-R in camera-type black leather case, particularly designed for anyone who wants a completely portable instrument readily accessible for instant use. Among those who like this style are maintenance and repairmen whose work requires equipment with an accent on portability. With the tester hung up by the leather strap handle, the operator is permitted the use of both hands in his work and the tester is kept within easy reach.

When the case is opened, the lower front flap drops down and the top folds back, exposing the entire tester panel and meter dial so that readings can be taken easily from clear, legible black and red markings on the meter dial. Only one switch adjustment is needed to select the range for any A.C. or D.C. Voltage up to 5000, at 1000 Ohms per volt; Direct Current from 0 to 100 Ma. and 1 Amp. The completely enclosed selector switch of molded construction keeps dirt out and retains alignment permanently. Unit construction whereby all resistors, shunts, rectifier and batteries are housed in a molded base provides direct connections, eliminating chances for shorts.

All precision film or wire-wound resistors are mounted in their own compartment assuring greater accuracy.

RANGES AND OTHER TECHNICAL DATA ARE THE SAME AS FOR MODEL 666-R LISTED ABOVE.

MODEL 666-RL. U.S.A. DEALER NET $32.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Net

Radio TRIPLETT Testers

TUBE TESTER

A Triplett Tube Tester with new improved testing flexibility permitting checking any type radio receiving tube, miniature hearing aid tubes, pilot lamps, flashlight bulbs and TV picture tubes. The tester gives both "short" and "open" circuit check of each element of every tube — an accurate analysis of the condition of all tube elements, connections, taps, etc. TV picture tubes are checked without removing them from the receiver, by use of an adapter that may be purchased separately. "Continuity" test is provided for checking electrical appliances, motors, etc.

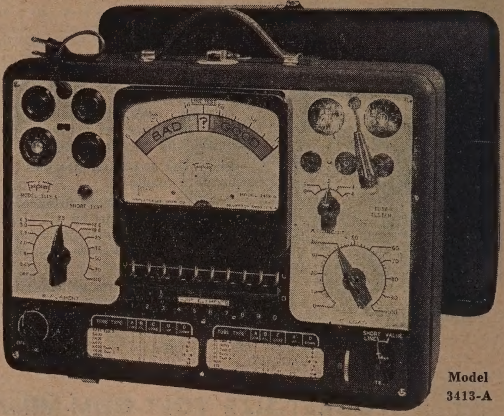
Model 3413-A has flexible 3-position lever switches for complete coverage of present and future tube connections. RMA pin numbering of tube element levers makes for quick reference of tube base connections. Illuminated, easy-to-read roll type tube chart is built into the tester. Simplified test procedure makes it possible for user to add new tube data to chart when desired.

Line Voltage indication on center of meter dial permits observation and adjustment for line fluctuations. Filament voltage: 0.63 volts to 110 volts in 14 steps.

Large 6″ meter, RED ● DOT Lifetime guaranteed, has 3-color easy-to-read GOOD—?—BAD scale.

Portable metal case, 15 11/32″ x 11 1/32″ x 6 1/8″, black satin wrinkle finish, with removable, hinged cover and leather handle. Panel attractively etched in black, silver and red. Complete instructions supplied. Power: 115 V., 50-60 cycle A.C. Wt. 20 lbs.

MODEL 3413-A . . U.S.A. DEALER NET . . $79.50



Model 3413-A

PICTURE TUBE ADAPTER

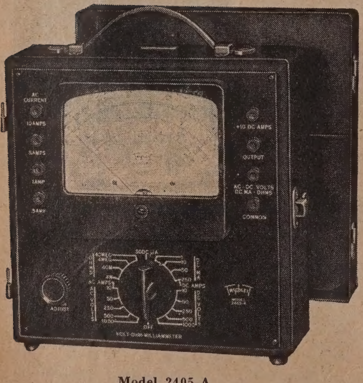
BV Adapter for 3413-A permits testing picture tube right in the receiver or in a shipping carton . . Dealer Net . . $7.90

VOLT-OHM-MIL-AMMETER

20,000 Ohms Per Volt

35 RANGES

D.C. VOLTS: 0-10-50-250-500-1000, 20,000 Ohm/Volt
D.C. AMPS: 0-10, at 250 Millivolt
D.C. MILLIAMPS: 0-1-10-50-250, at 250 Millivolt
D.C. MICROAMPS: 0-50, at 250 Millivolt
A.C. VOLTS: 0-10-50-250-500-1000, 1000 Ohm/Volt
A.C. AMPS: 0-0.5-1-5-10, at 1 Volt-Amp.
OHM-MEGOHM: 0-4000-40,000 Ohm-0-4-40 Megohms (Self-contained batteries)
OUTPUT: Condenser in series with A.C. Volts
DECIBELS: —10 to +15, +29, +43, +49, + 55. (Reference Level "0" DB at 1.73 V. on 500 Ohm line.)
CONDENSER TEST: Capacity check of Paper condensers



Model 2405-A

A perfect combination — ultra sensitive, extra large meter, impressively cased for either shop or portable use. Incorporates the ultimate sensitivity, 20,000 Ohms per volt in a conventional meter of extreme accuracy.

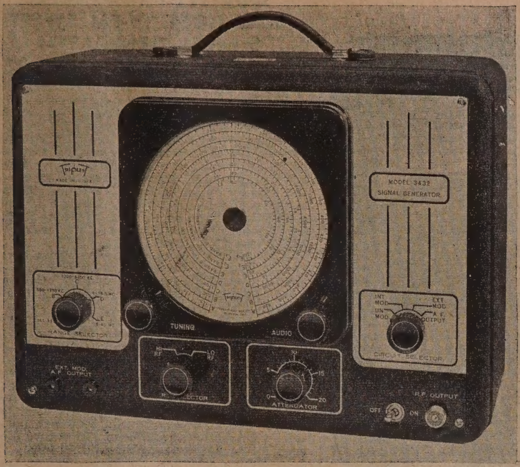
6″ Meter, RED ● DOT Lifetime guarantee. 5¾″ long scale enables easy reading. Plug-in, pre-calibrated rectifier simplifies replacement. Ruggedly constructed selector switch. "OHMS ADJUST" provides adjustment for all resistance ranges with maximum accuracy. Connections made through low contact resistance banana jacks. "SQUARE LINE" case, 10″ x 10″ x 5¾″, black enamel finish, has detachable, hinged cover. Leads and instructions furnished.

Weight: Approx. 11 lbs.

MODEL 2405-A . . . . . U.S.A. DEALER NET $69.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers



Model 3432

RANGES

A—165-525 KC
B—500-1750 KC
C—1700-6200 KC
D—6-18.5 MC

E—18-40 MC
Harmonics to 120 MC
E2—36-80 MC
E3—54-120 MC

TEST OSCILLATOR

A wide-range oscillator with uniformly illuminated dial. Seven long scales with widely separated divisions easily read, have five fundamental ranges—165 KC to 40 MC, and two harmonic ranges directly calibrated 36 to 120 MC.

Unique new feature is the brightly illuminated dial providing distinct illumination of scale markings without the least possibility of glare. Lighting also provides an "ON-OFF" indicator.

The dial is big (330°) with seven scales quickly readable at a glance. It has 10 to 1 ratio vernier tuning for ease of adjustment.

RANGE SELECTOR — 5 position follow-up coil switching with complete shielding.

R. F. SELECTOR — Provides High and Low R. F. Output.

OUTPUT ATTENUATOR — Provides fine control of R. F. Output to Coaxial output cable connector.

CIRCUIT SELECTOR — Provides for internally modulated signal (Variable 0 to 100% at 400 cycles). Variable amplitude of external modulation 40 to 15,000 cycles, unmodulated signal or variable audio 0-10 Volts at 400 cycle.

DOUBLE SHIELDING—All R. F. and audio circuits are double shielded with copper plated steel shields.

Metal case, 15$\frac{11}{32}$"×11$\frac{1}{32}$"×6¼", with black enamel finish. Has leather strap handle for ease in carrying. Power: 115 volt, 50-60 cycle A. C. (electrostatic shielded transformer).

Weight: 14½ lbs.

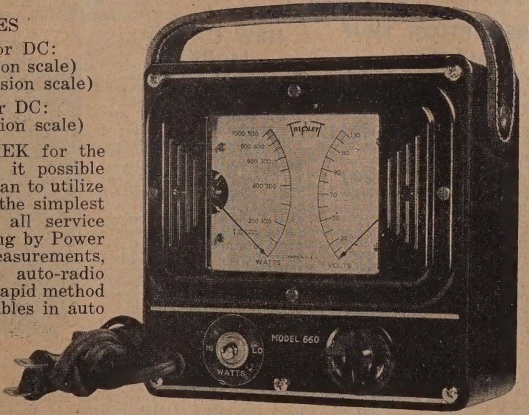
MODEL 3432 . . . U.S.A. DEALER NET . . . $79.50

RADIO & TV SERVICING WITH LOAD-CHEK

RANGES

WATTS—AC or DC:
0-500 (50 division scale)
0-1000 (50 division scale)

VOLTS—AC or DC:
0-130 (65 division scale)



Model 660

The LOAD-CHEK for the first time makes it possible for every technician to utilize what is perhaps the simplest and quickest of all service methods—servicing by Power Consumption Measurements, long proven by auto-radio servicemen as a rapid method of localizing troubles in auto radios. Triplett Model 660 is the first Wattmeter to be produced at moderate cost, and with the proper ranges, to bring this short-cut method within the reach of every radio and TV serviceman.

Following are only two of many time-saving uses of this new instrument:

Locating A Short—The chassis tag may show a normal consumption of 225 Watts. Simply plug the power cord of the chassis into LOAD-CHEK (no loose ends to connect or be in the way). Note the reading—which should be possibly 350 Watts. By removing the rectifier tube you can determine at once which side of the tube the short is on. With a soldering iron and long-nosed pliers you can check through the chassis, locate and correct the trouble without having to lay down tools or to check with lead wires!

Replacing Burned-Out Resistors—With the chassis to be repaired plugged into a LOAD-CHEK MODEL 660, note the wattage reading with the burned out resistor circuit open. Now replace the resistor. Should the increase in watts be greater than the resistor rating, it indicates an extra load has caused the trouble which has not been cleared. LOAD-CHEK is made-to-order for the busy serviceman because it's a Time-Saver; and at its moderate cost can be standard equipment on every service bench.

Black, molded, insulated case, 2½" x 5½" x 6", with removable black leather strap handle. Black molded panel with white markings. Wt. — 2 lbs.

MODEL 660 . . U.S.A. DEALER NET . . $29.50

Model 629 Leather Carrying Case
U.S.A. DEALER NET $ 6.50

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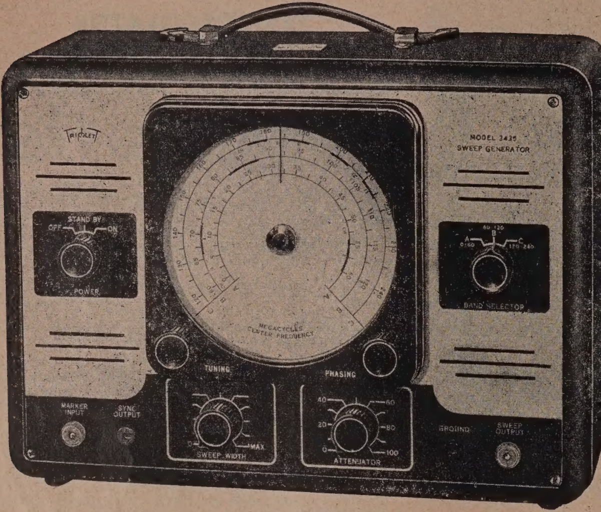
QUALITY-ENGINEERED, LOW COST TV-FM SWEEP SIGNAL GENERATOR



Model 3435
FREQUENCY COVERAGE

Sweep Center Frequency:
Range 1— 0- 60 MC (Fundamental)
Range 2— 60-120 MC "
Range 3—120-240 MC (Harmonic)

Sweep Width: .1-12 MC (Continuously Variable)

MODEL 3435 answers your needs for a quality engineered TV-FM Sweep Signal Generator at an unusually low price. Designed particularly for the service engineer who has his own provision for an external Marker (any good AM Generator).

Buying this sensational new Model will enable you to materially reduce your investment in a Sweep Signal Generator, if you have a good AM Signal Generator to use as the Marker. Connection of external Marker is made simply and quickly through a panel connector. If you do want an external Marker see Triplett Models 1235 Variable Marker or 1236 Crystal Marker.

Model 3435 provides continuous range coverage to 240 MC for all TV Carrier and IF frequencies. No gaps in frequency. Continuous tuning is provided over all TV-FM bands. Continuously variable sweep width control. Sweep at any width between .1 to 12 MC. Phase controlled sweep voltage for scope horizontal input. Main frequency dial marked with channels as well as frequencies. Uniformly lighted dial—large and easy to read. Standby switch for temporary silencing of Generator during other work on equipment under test. Shielding and wiring designed for good control over output. Copper plated steel construction throughout. Miniature tubes used for high frequency circuits. Stability increased by use of ceramic trimmers, zero temperature coefficient capacitors, silver plated coils, and rugged construction.

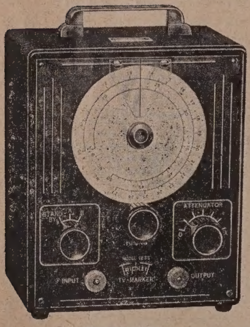
Metal case with black suede enamel finish, 15$\frac{11}{32}$" x 11$\frac{1}{32}$" x 6¼". Leather handle. Copper plated feet for improved grounding when working over metal work bench top. Panel has black, white and red characters etched on aluminum.

Accessories — Co-Axial cables for low-loss RF output. Heavy braid ground strap. Rubber covered lead for Sync output or additional ground. Balanced 300 ohm output cable.

Power — 105-115 Volts, 50-60 Cycles, 25 Watts. Wt.: 15 lbs.

MODEL 3435—U.S.A. DEALER NET $114.50

ABSORPTION TV-IF MARKER



Model 1235

Frequency Coverage:
9.5 to 50 MC in two bands.

Triplett first to provide:
Control over amplitude of Marker dip.

Standby feature. Removed from circuit by merely turning switch.

Other special features:
May be used with any type Sweep Generator.

Two tuning ranges providing complete coverage of all present TV-IF frequencies and ample provision for the future.

Designed as companion unit for 3435 Sweep Generator.

Although designed as a companion unit for Triplett Model 3435 Sweep Signal Generator, it can be used with any Sweep Generator as an external Marker. There are no complications in use, for connection is made quickly and easily through a panel connector. A standby switch is provided for temporary silencing of Generator during other work on equipment under test. Attenuation—continuously variable from 0 to maximum of Marker dip.

Copper plated steel construction throughout. Large 4" dial has two easy-to-read scales etched on the dial.

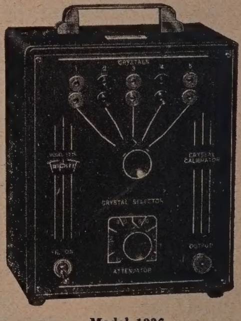
Metal case, with black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet for improved grounding when working over metal work bench top. Panel is black and red etched on aluminum.

Accessories—Co-Axial cable for low-loss connection to Sweep Generator. Coaxial cable for connection to test setup.

Power: None required. Weight: 4 lbs.

MODEL 1235 . . . . U.S.A. DEALER NET . . . $29.50

NEW CRYSTAL MARKER



Model 1236

Frequency Coverage:
Up through 19 MC on crystal (fundamentals)
Up through 216 MC on crystal (harmonics)
(Crystals not included.)

Model 1236 provides Marker frequencies of crystal controlled accuracy for TV, IF or RF requirements. By purchasing ONLY those crystals needed for a particular TV service area and the most-used IF frequencies, this new unit provides utmost Marker accuracy and offers a speedy selection of the desired crystal-controlled signal.

This Marker saves plenty of time in checking bandpass characteristics of curves — simply throw the switch to the desired crystal — eliminating delays resulting from constant tuning and retuning required in the use of variable markers. Signals for the most accurate and fastest means of aligning local oscillators in TV receivers and many other applications. When using a 1 MC crystal, Model 1236 becomes a standard for checking other signal generators or receivers.

Designed as a companion unit to Triplett 3435, it receives its power by plugging into a panel jack in the Sweep Generator.

Attenuation—Low impedance single control T-pad attenuator, continuously variable. Shielding—Copper plated steel construction throughout. Stability—Increased by use of latest high-frequency techniques.

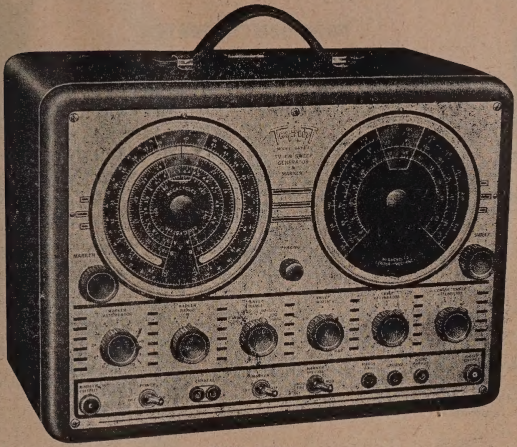
Metal case, black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet. Black, red and aluminum etched panel.

Accessories — Coaxial cable for low-loss connection to Sweep Generator.

WEIGHT: 3¾ lbs.

MODEL 1236 . . . . U.S.A. DEALER NET . . . $24.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION



Model 3434A

A FEW REASONS YOU'LL WANT MODEL 3434-A

★ Continuously variable sweep width from 100 KC to 12 MC.

★ Illuminated Frequency dial marked with channels and frequencies.

★ Variable Marker provides continuous tuning over all present TV Video and Sound IFs. Illuminated Mirrored dial.

★ Designed to provide HIGH OUTPUT for stage-by-stage alignment.

★ Self-contained Horizontal Bar Generator covers all channels on Marker Harmonics.

TV-FM SWEEP SIGNAL GENERATOR WITH BUILT-IN MARKERS

FREQUENCY COVERAGE

Sweep Center Frequency: Range 1– 0- 60 MC
Range 2– 60-120 MC
Range 3–120-240 MC
Sweep Width: .1-12 MC
(Continuously Variable)
Marker Frequency: 3.5- 5 MC (Fundamental)
19.5-30 MC (Fundamental)
29 -50 MC (Fundamental)
Usable to 250 MC on Harmonics
Crystal Frequency: To 20 MC (Fundamental)
Can be used to produce Harmonics up to 216 MC. (Plug-in Crystals not included.)
Modulation: 600 Cycle on Both Crystal and Marker frequencies.
Audio: 600 Cycles.

Model 3434-A provides a complete service laboratory for TV-FM servicing and other electronic requirements. No gaps in frequency. Continuous tuning over all TV-FM bands. Provisions for simultaneous presentation of two Markers. Audio output for quick check on video and sound amplifiers. Ladder type attenuator for coarse and fine output adjustment. Provision for simultaneous presentation of Crystal and Variable Markers. Illuminated, mirror-scaled Marker dials for precise adjustment. Smooth action dial drive with vernier scale. Balanced network for balanced input receivers. Sweep standby switch for temporary silencing of Generator during other work on equipment under test. Line filter. Regulated power supply. Completely shielded. Copper plated steel construction throughout.

Attractive steel case, black enamel finish, 15$\frac{11}{32}$" x 11$\frac{1}{32}$" x 8¼". Copper plated feet for improved grounding. Leather handle. Black, white and red etched markings on aluminum panel. Accessories—Two Co-Axial cables; heavy braid grounding strap; Polystyrene covered, shielded leads for audio, Phase 60 cycle output and additional ground.

Power: 105-115 volt, 50-60 cycle, 55 Watts. Wt. 23 lbs.

MODEL 3434-A—U.S.A. DEALER NET . . . $199.50

MODEL 3441 TV-FM OSCILLOSCOPE

Push-Pull vertical and horizontal output amplifiers.

VERTICAL AMPLIFIER—Response usable beyond 4.0 MC. Will show a 300 KC square wave with no distortion. Three frequency response ranges with a three-range compensated attenuator.

HORIZONTAL AMPLIFIER—Frequency Range
Flat within ±20% from 20 Cycle to 150 KC. Deflection Sensitivity—.1 RMS Volts/Inch.

INPUT IMPEDANCE—Vertical Amplifier
2 Megohms in parallel with 20 MMF. with low capacity probe.
2 Megohms in parallel with 45 MMF. at input terminals.

CALIBRATING METER (ILLUMINATED)—Reads peak to peak voltages from 0 to 1000 Volts in 8 ranges, the low range being 0-0.3 volt peak to peak. Reading peak to peak voltages with Triplett Model 3441 makes it possible to view the percentage of positive and negative; plus reading peak to peak voltage direct. Where reading peak to peak voltage on a VTVM only peak to peak voltage is known.

PHONE JACK is on front panel connected to the output of the vertical amplifier so you can hear as you see. This makes a convenient way to familiarize the visual pattern with the familiar audio sounds. Having a high gain amplifier system available also is ideal for tracing audio circuits and checking for noisy components.

LINEAR TIME BASE—10 CPS to 60 KC/Second linear, available at panel.

TUBE COMPLEMENT—5UP1, 2-7A5, 5Y3, VR150, 6AC7, 12AT7, 3-6SN7, 2X2. Total 11.

Wide frequency range provide for Television servicing requirements.

Phased 60 CPS horizontal sweep and return trace eliminator for use with Sweep Generators.

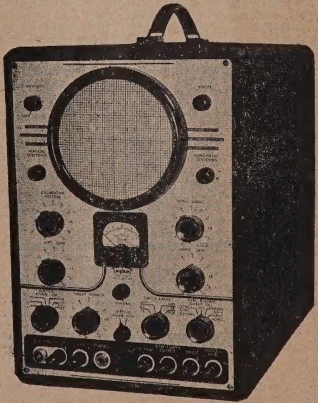
Synchronizing and horizontal Sweep Selector combined in same control for simplicity in operation.

CASE—Metal, with black suede enamel finish, 15 11/32"×11 1/32"×16". Leather handle. Copper plated feet for improved grounding.

PANEL—Black, red and white characters etched on aluminum.

ACCESSORIES—Two Co-Axial leads for Vertical Input. Rubber covered leads to plug into Binding Post. Low capacity probe.

POWER—105-115 Volts, 50-60 Cycles, 80 Watts. Wt.: 38 lbs.



Model 3441

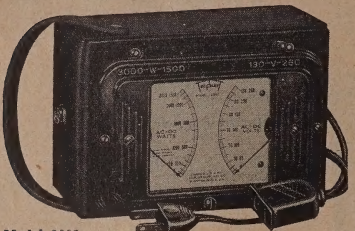
MODEL 3441 U.S.A. DEALER NET $199.50

No. 9989 CRYSTAL (Demodulating or Signal Tracing PROBE, for use with MODELS 3441 or 3440 . U.S.A. DEALER NET . $9.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

APPLIANCE TESTERS


Model 2002

MODEL 2002

RANGES: 0-1500-3000 Watts AC-DC at 10 Amp. normal, 20 Amp. Max., 40 Amp. momentary; 0-130-260 Volts AC-DC.

Model 2002 shows power consumption of industrial equipment, radios, electric ranges, refrigerators, washers, etc., under actual running conditions, on either DC or AC between 25 and 133 cycles. Wattmeter on the left and Voltmeter on the right permit Watts and Volts to be read simultaneously or independently. Shows if voltage remains within limits under operating loads. Shows faulty power lines. Heavy inner construction. Heavy leather case, with snap cover and leather handle, 6½" x 4½" x 3¼". Storage space for cord and plug furnished. Wt. 2 lbs.

MODEL 2002 . . . . U.S.A. DEALER NET $39.50

MODEL 2006

RANGES 0-25 AC-DC Amperes; 0-130-260 AC-DC Volts.

Model 2006 is designed for those who prefer the Voltmeter-Ammeter method of testing electric ranges, refrigerators, washers and other household appliances, plus many industrial uses. Simultaneous readings of line voltage and current drain. Compact, portable, heavy leather case, with strap handle, 6½" x 4½" x 3¼". Adequate storage space for cord and plug furnished. Wt. 2 lbs.

MODEL 2006 . . . . U.S.A. DEALER NET $34.50

VU METER DB METER

Volume Unit and Decibel Meters are used to measure sound or noise levels in amplifiers for Public Address, Theatres, Broadcasting Studios, Broadcasting Static Equipment, etc.

VU Meters are used for volume level measurements—including broadcast monitoring. Ballistic characteristics comply with standardization recommendations of NBC and CBS and Bell Telephone Laboratories. Internal impedance 3900 Ohms. Steady state reference 1 Milliwatt. For 600 Ohm line. Dynamic characteristics provide for 99% full scale deflection in .3 seconds. Specify scale type when ordering:

Type "A": 0-100 (black) —20 to +3 VU on top arc (red).
Type "B": 0-100 (black) —20 to +3 VU on bottom arc (red).

	Net Price
Model 426 VU	$16.50
Model 426 VU (Illuminated)	18.00
Model 327-T VU	15.50
Model 327-T VU (Illuminated)	17.00

DB Meters permit the operator of public address systems, etc., to make instant adjustments to prevent sound blasting or distortion. General purpose type reads up 6 and down 10 decibels. Zero decibel = 1.73 Volts. Calibrated for use on a 500 Ohm line. Reference level 6 Milliwatts. Resistance: 5000 Ohms. They consist of a sensitive D. C. instrument coupled to a copper-oxide rectifier. Standard damping is provided unless highly damped instruments are specified. Quotation on request.

	Net Price
Models 321-T or 327-T	$12.40
Models 321-T or 327-T (Illuminated)	14.00
Models 421 or 426	13.40
Models 421 or 426 (Illuminated)	15.00

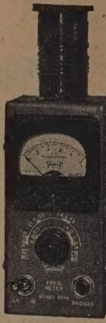
HIGH RANGE D.C. VOLTMETERS FOR AMATEURS

Designed particularly for radio amateurs. High range 3" D. C. Voltmeters—1000 ohms per volt. Provided with special external metalized multipliers mounted on bakelite strip. Specify this type when ordering, or standard voltmeters will be furnished. Available 3" case, Models 321-T, 327-T:

Range	Price	Range	Price
0-1000	$13.10	0-4000	$13.10
0-2000	13.10	0-5000	13.10
0-3000	13.10		

RADIO AMATEUR EQUIPMENT

FREQUENCY METER


Model 3256

A new band-switching, tuned Absorption type Frequency Meter covering five amateur bands. Incorporates the new germanium crystal and a D. C. Milliameter indicator for greater sensitivity. Direct calibration on panel—no coils to change; switching permits instantaneous band change. Audio jack is provided for monitoring of phone signals—another new feature. Fully shielded. Calibration is in megacycles in the following bands: 3.5-4 MC; 7-7.3 MC; 14-14.4 MC; 20-21.5 MC; 28-30 MC. Coil is removable and other coils may be substituted for special bands, if desired.

USEFUL FOR CHECKING: (1) Fundamental frequency of oscillating circuits. (2) Presence, order and amplitude of harmonics. (3) For parasitic oscillations. (4) Neutralization of R. F. amplifiers. (5) Standing wave ratio on transmission lines. (6) Presence of undesirable or small quantities of R. F. (7) Monitoring of phone signals.

A fully shielded unit of compact pocket size. Overall height, including coil, 7½"; width 2½"; depth 2¼". Attractive gray "hammered" enamel finish with black trim.

MODEL 3256 . . . . U.S.A. DEALER NET $17.50

WATTMETERS — ELECTRODYNAMOMETER

These instruments can be used on single phase A. C. or D. C. as Wattmeters. On special order they can be made up as voltmeters or ammeters. Instruments are self-contained to 300 Volts—10 Amperes. Over that external connection can be made. For use on frequencies up to 133 cycles per second. Available in three-inch model 361. Case dimensions same as 321-T, except for depth, 2" back of the flange (2 15/16" over studs). Wattmeters can be combined in the Triplett Twin case with a voltmeter or Ammeter. Accuracy within ±2%. Standard ranges as follows:

MODEL 361 — SINGLE PHASE

Range Watts	Normal Voltage	Normal Amps.	Sc. Div.	Net Price
0-75	150	½	75	19.50
0-150	150	1	75	19.50
0-300	150	2	60	19.50
0-750	150	5	75	19.50
0-1500	150	10	75	19.50
0-150	300	½	75	21.50
0-300	300	1	60	21.50
0-600	300	2	60	21.50
0-1500	300	5	75	21.50
0-3000	300	10	60	21.50

DOUBLE RANGE WATTMETERS (Double Voltage Limits Only)

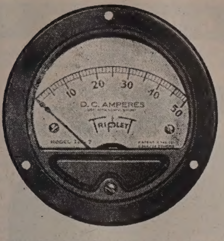
0-75-150	150-300	½	75	26.00
0-150-300	150-300	1	75	26.00
0-300-600	150-300	2	60	26.00
0-750-1500	150-300	5	75	26.00
0-1500-3000	150-300	10	75	28.50

SENSITIVE RELAYS

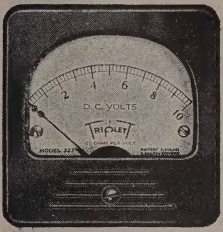
Highly sensitive Triplett relays of the D'Arsonval moving coil type, are carefully designed to give dependable, satisfactory performance. Since relays cover such a wide field and most of them are made to special order, no standard models are listed. Contacts are normally rated at 25 Milliamperes, 25 Volts; higher ratings if required. Instrument relays are provided in 2", 3" or Twin cases. Years of instrument experience are available to every relay user through Triplett's extensive service. Send us your applications with information specifying maximum and minimum currents and voltages which will pass through relay coil and contact points, etc.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

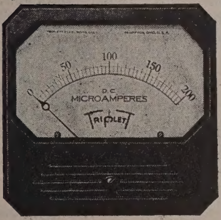
Indicating TRIPLETT Instruments



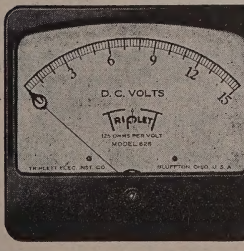
Models 221-T, 231-S, 241-T; 222-T, 232-S, 242-T; 321-T, 331-S, 341-T; 322, 332, 342



Models 227-T, 237-S, 247-T; 327-T, 337-S, 347-T



Models 426, 436, 446 and 466



Models 626, 636, 646; 726, 736, 746

Models		Scale Lengths		Flange	Body Dia.	Body Depth		Case Material
D. C.	A. C.	D. C.	A. C.			D. C.	A. C.	
221-T	231-S	1.76″	1.58″	2 11/16″ Dia.	2 7/32″	15/16″	1 5/16″	Molded
222-T	232-S	1.76″	1.58″	2 9/16″ Dia.	2 1/16″	1 1/16″	1 7/16″	Metal*
223-T	233-S	1.76″	1.58″	2 5/16″ Dia.	2 1/16″	1 1/16″	1 7/16″	Metal*
227-T	237-S	1.76″	1.58″	2⅜″ Sq.	2 5/32″	1″	1⅜″	Molded
321-T	331-S	2.49″	2.22″	3½″ Dia.	2¾″	15/16″	1⅝″	Molded
322	332	2.49″	2.22″	3¼″ Dia.	2 9/16″	1 13/32″	1 13/32″	Metal*
324	334	2.49″	2.22″	3 1/16″ Dia.	2¾″	1 17/32″	1 17/32″	Metal*
327-T	337-S	2.49″	2.22″	3″ Sq.	2¾″	1″	1⅜″	Molded
421	431	3.11″	2.78″	4¼″ x 3 15/16″	2¾″	15/16″	15/16″	Molded
421-A	431-A	3.11″	2.78″	3½″ x 3 3/16″	2¾″	15/16″	15/16″	Molded
422	432	3.11″	2.78″	4⅜″ Dia.	3 9/16″	1 11/32″	1 11/32″	Molded
426	436	3.11″	2.78″	4¼″ x 4″	3⅛″	15/16″	15/16″	Molded
420	430	4.28″	3.6″	4⅝″ x 4 3/16″	2¾″	27/32″	31/32″	Molded
521	531	3.11″	2.78″	5¼″ Dia.	4⅜″	1 9/16″	1 9/16″	Molded
524	534	3.11″	2.78″	4¾″ Dia.	4⅜″	1⅝″	1⅝″	Molded
626	636	5.6″	5.3″	6″ x 5⅜″	3⅛″	1 1/32″	1 1/32″	Molded
726	736	6″	5.75″	7 17/32″ x 6 29/32″	3½″	15/16″	15/16″	Molded

*Molded base.

D.C. VOLTMETERS — 125 Ohms per Volt

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-300	9.30	10.30	11.30	12.80	13.30	16.30

D.C. VOLTMETERS — 1000 Ohms per Volt

0-10	$ 9.90	$10.90	$11.90	$13.40	$13.90	$16.90
0-150	10.30	11.30	12.30	13.80	14.30	17.30
0-300	12.60	13.60	14.60	16.10	16.60	19.60
0-500	14.10†	15.10	16.10	17.60	18.10	21.10
0-1000	28.40*	29.40*	30.40*	31.90*	32.40*	35.40*

125 Ohms/Volt sensitivity supplied unless otherwise specified on order. † Instruments supplied with External wire-wound series resistors at prices shown. * Supplied with external resistor boxes at prices shown above. All other instruments are self-contained.

D.C. MICROAMMETERS

0-20	$13.50	$14.50	$15.50			
0-50	10.50	11.50	12.50	$14.00	$14.50*	$17.50*
0-100	10.00	11.00	12.00	13.50	14.00*	17.00*
0-200	8.50	9.50	10.50	12.00	12.50	15.50
0-500	8.00	9.00	10.00	11.50	12.00	15.00

* Supplied with knife-edge pointer.

D.C. MILLIAMMETERS

0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-250	7.50	8.50	9.50	11.00	11.50	14.50
0-300	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

D.C. AMMETERS

0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50

A.C. VOLTMETERS

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-150	8.50	9.50	10.50	12.00	12.50	15.50
0-300	10.30	11.30	12.30	13.80	14.30	17.30

A.C. AMMETERS

0-3	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-5	7.50	8.50	9.50	11.00	11.50	14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50

A.C. MILLIAMMETERS

0-10	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

R.F. AMMETERS (with internal couples)

0-.5	$ 8.50	$ 9.50	$10.50	$12.00	$12.50	$15.50
0-1	8.50	9.50	10.50	12.00	12.50	15.50
0-1.5	8.50	9.50	10.50	12.00	12.50	15.50
0-2.5	8.50	9.50	10.50	12.00	12.50	15.50
0-5	8.50	9.50	10.50	12.00	12.50	15.50
0-10	8.50	9.50	10.50	12.00	12.50	15.50

Also available with external couples; prices on request. Models 241-T, etc. correspond to D.C. Models 221-T, 341-T to 321-T, etc.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION — OTHER RANGES AVAILABLE

Net

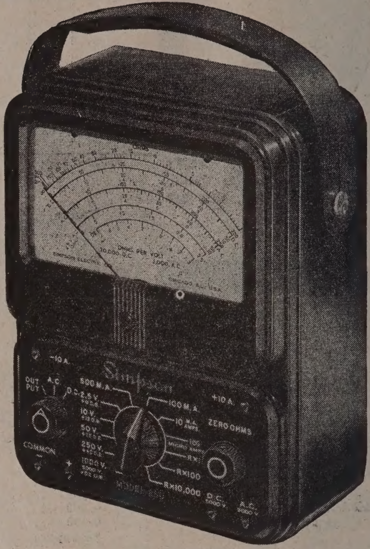
★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 260

Set Tester

World's Most Popular
High Sensitivity Set Tester
For RADIO and TELEVISION



There are more Simpson 260 high sensitivity volt-ohm-milliammeters in use today than all others combined. No other instrument of its kind has approached the world-wide popularity of the Simpson 260. In no other tester of its kind will you find the combination of useful ranges, accuracy, ruggedness, beauty and sensitivity developed to such a high degree of perfection.

Removal of the Model 260 from its heavy, handsome case of molded bakelite, will disclose how it differs from most set testers. You will see a sub-panel with a score of small recesses each holding a separate resistor or other component. You will notice complete absence of cable wiring. All connections are short and direct, thus offering a strength and firmness of assembly and the finest of insulation to reduce chances of shorts. All components are readily accessible. The front panel is a thing of beauty and long life. Pin jacks are recessed so no metal parts are exposed. All figures and symbols are molded into a heavy Bakelite panel and filled with durable white for long wear and legibility.

At 20,000 ohms per volt the 260 is highly dependable, rugged and accurate. Its practically negligible current consumption assures remarkably accurate voltage readings. It provides DC current readings as low as 2 microamperes and up to 10 amperes. Dependable resistance readings can be made up to 20 megohms and as low as 1/5 ohm. With the 260 you can measure automatic frequency control diode balancing circuits, grid currents of oscillator tubes and power tubes, bias of power detectors, automatic volume control diode currents, high-mu triode plate voltage, as well as a wide range of other measurements which cannot be checked with ordinary servicing instruments.

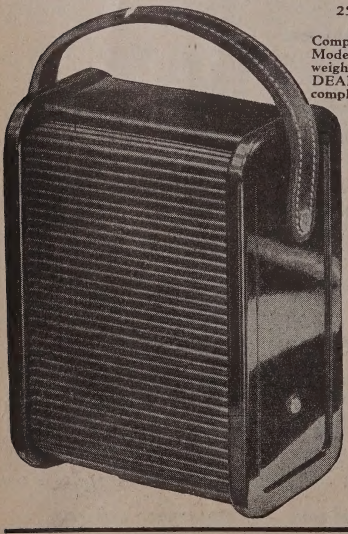
RANGES

Model 260 Volt-Ohm-Milliammeter
20,000 Ohms per Volt DC, 1,000 Ohms per Volt AC
Volts, AC and DC: 2.5, 10, 50, 250, 1000, 5000
Output: 2.5, 10, 50, 250, 1000
Milliamperes, DC: 10, 100, 500
Microamperes, DC: 100
Amperes, DC: 10
Decibels (5 ranges): —12 to +55 DB.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).

25,000 VOLT DC PROBE FOR TELEVISION TESTING

Complete, nothing to add, for use with Model 260. Weight: 6 oz. Shipping weight: 8 oz.

DEALER'S NET PRICE complete with Instructions..........$9.95



DEALER'S NET PRICES

Model 260, complete with test leads and Operator's Manual (Size: 5¼"x7"x3⅛". Weight: 3½ lbs. Shipping Wt.: 5 lbs.)	$38.95
Leather Carrying Case	6.75
Eveready Leather Carrying Case	8.75
Model 260 RT in Roll Top Safety Case, complete with test leads and Operator's Manual (Size: 6⅜"x9"x4¾". Weight: 6½ lbs. Shipping Wt.: 9 lbs.)	46.90

Model 260 available in standard all black or two tone tan and brown, at above prices. Specify color desired.

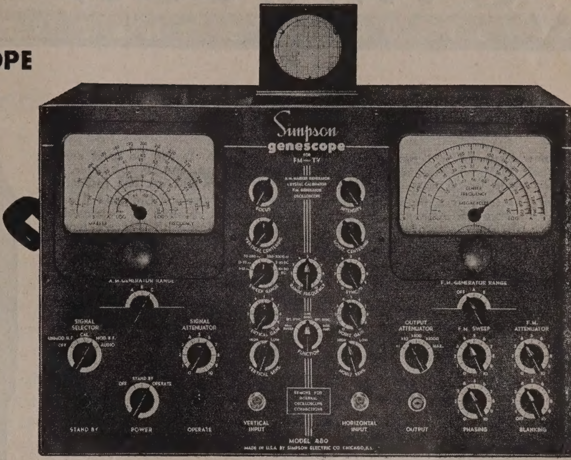
MODEL 260RT SET TESTER IN ROLL TOP SAFETY CASE

The Model 260, when placed inside our patented housing of heavy molded bakelite and permanently fastened in position, offers the highest degree of efficient, economical instrument protection. Now you can buy the famous 260 complete in this roll top safety carrying case with its built-in lead compartment at less than the price of a 260 and a leather carrying case. A flick of the finger rolls the top up and the instrument is ready to use. A downward flick rolls the top down and your instrument is fully protected.

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 480 FM-TV GENESCOPE



The Simpson Model 480 Genescope is the result of many months of painstaking research and it is offered as our interpretation of a modern FM and TV instrument providing all of the necessary signal sources for the proper alignment and servicing of FM and TV receivers.

In addition to a signal source, the Genescope includes a high sensitivity oscilloscope of unique advanced design, complete in every detail and equipped with a high frequency crystal probe for signal tracing.

The variable oscillator sections are mounted one on each side of the oscilloscope section and are provided with large precision vernier dials having a 20:1 ratio and 1000 division logging scales. They are easy to read and can be quickly set to an exact frequency.

Modern FM and TV development and servicing requires the use of test equipment made to exacting standards. With this in mind we offer you the Genescope with the assurance that everything possible has been done to make it the most accurate, flexible and convenient instrument available.

There are many vital component parts in the Genescope, almost all of which have been made to our exacting standards within our own modern plants. Most of these vital components have been developed and designed by us and substantial sums have been spent on modern tooling. The care we have taken to properly design and produce these parts is worthwhile assurance that the Genescope will render many years of uninterrupted service and always produce accurate results.

The center section of the Genescope contains the oscilloscope and all associated controls. The cathode ray tube of the oscilloscope is mounted vertically in the case in order to conserve bench space. The pattern on the tube is brought into view by use of a highly polished adjustable mirror at the top of the cabinet. The mirror may be quickly adjusted for any position of the operator. The tube face is placed well below the top surface of the cabinet in order to shield it from incident light thus producing a clear, sharp image unhampered by narrow angle light shields. The mirror when closed provides adequate protection for the cathode ray tube when not in use.

Direct connection to vertical and horizontal deflection plates and other internal functions are available through removable cover on the front panel.

RANGES

AMPLITUDE MODULATED OSCILLATOR

- Band A—3.2-15.6 megacycles
- Band B—15-76 megacycles
- Band C—75-250 megacycles
- 30% modulation at 400 cycles or unmodulated
- Continuously variable attenuator
- Visual method of beat frequency indication

FREQUENCY MODULATED OSCILLATOR

- Band A—2-120 megacycles
- Band B—142-260 megacycles
- Sweep width variable from zero to 15 megacycles
- Sweep rate 60 cycles per second
- Specially designed frequency sweep motor
- Continuously variable attenuator

Crystal calibrator — 5 megacycles ± .05%
Audio Oscillator 400 cycles
AM and FM oscillator sections provided with large, easy to read dials with 20-1 vernier control and 1000 division logging scale.
Output impedance 75 ohms
Step attenuator for control of output

OSCILLOSCOPE

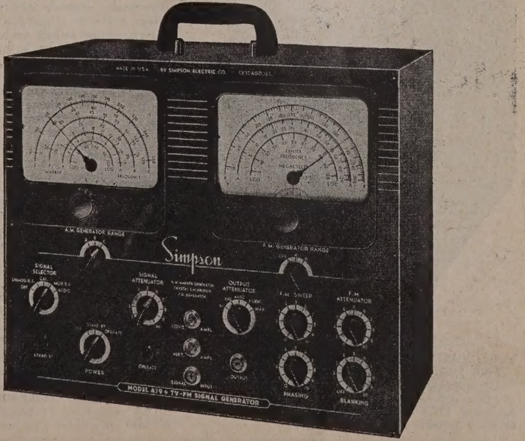
Vertical sensitivity—35 mv per inch
Horizontal sensitivity—70 mv per inch
Linear sweep frequency—3 cycles to 60 kilocycles
60 cycle sine sweep
Frequency essentially flat to 200 KC. usable to over 3 megacycles
Size: 22"x14"x7½". Weight 39 lbs. Shipping Weight 48 lbs.
DEALER'S NET PRICE complete with Test Leads and Operator's Manual........$395.00

MODEL 479
TV-FM SIGNAL GENERATOR

A modern instrument for today's TV-FM problems. Exactly the same circuits, ranges and functions as the Model 480, described above, with the exception of the oscilloscope.

Size 17" x 14" x 7½". Weight 29 lbs. Shipping Weight 35 lbs.

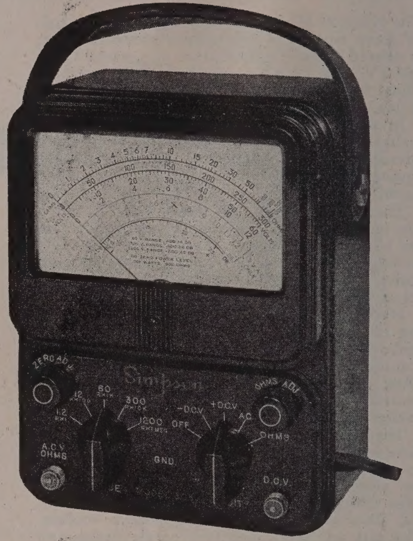
DEALER'S NET PRICE with Test Leads and Operator's Manual........$269.00



*** Simpson**

INSTRUMENTS THAT STAY ACCURATE

MODEL 303 VACUUM TUBE VOLT-OHMMETER



The new Simpson 303 really is a versatile instrument. It can be used as an electronic DC voltmeter, an ohmmeter, an AC voltmeter, an AF voltmeter, an RF voltmeter (with accessory probe), an output-meter, and an FM indicator.

The 303 truly is a worthy companion of the world famous Simpson Model 260 Volt-Ohm-Milliammeter. Simpson engineers spent months of painstaking research in the laboratory, working in close co-operation with TV set manufacturers to produce the 303. This ruggedly built instrument has a dimension of only 120 cubic inches, and is 60 to 70% more compact than any similar instrument. In achieving this compactness for greater portability Simpson did not sacrifice accuracy or functional value. Its large 4½-inch meter is easy to read.

Also, the 303 has a low current consumption. Features such as low current consumption and wide voltage and resistance ranges make the 303 an extremely versatile instrument.

Like all other instruments bearing the Simpson name, the 303 is of the highest quality construction throughout, but sells at an amazingly low price.

SPECIFICATIONS

DC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200 (30,000 with Accessory High Voltage Probe)
Input Resistance—10 megohms for all ranges
DC Probe—with one megohm isolating resistor
Polarity reversing switch
OHMS: Ranges—1000 (10 ohm center)
100,000 (1000 ohms center)
1 megohm (10,000 ohms center)
10 megohms (100,000 ohms center)
1000 megohms (10 megohms center)
AC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200
Impedance (with cable) approx. 200 mmf shunted by 275,000 ohms
AF VOLTAGE: Ranges—1.2, 12, 60
Frequency Response—Flat 25 to 100,000 cycles
DECIBELS: Ranges— −20 to +3, −10 to +23, +4 to +37, +18 to +51, +30 to +63
Zero Power Level—1 M. W., 600 ohms
GALVANOMETER: Zero center for FM discriminator alignment and other galvanometer applications
R. F. VOTAGE: (Signal tracing with Accessory High Frequency Crystal Probe)
Range—20 volts maximum
Frequency—Flat 20 KC to 100 M.C.

LINE VOLTAGE: 105-125 V. 50-60 cycles
SIZE: 5¼"x7"x3⅜" (bakelite case). Weight: 4 lbs. Shipping Wt.: 6½ lbs.
DEALER'S NET PRICE: Model 303, including DCV Probe, ACV —Ohms probe and Ground Lead with Operator's Manual—$58.75
Accessory High Frequency Probe, $7.50
Accessory High Voltage Probe, $9.95
Also available with roll top case, Model 303RT—$66.70

MODEL 266 VACUUM TUBE VOLTMETER

Ideal for TV - AM - FM

Extremely accurate and packed full of important features. This fine Simpson instrument offers a 1 volt range for the full scale deflection necessary in measuring low RF voltages; a zero center switch embracing all DC voltage ranges for discriminator circuit alignment; a special probe with low input capacitance of approximately 4 micro-microfarads for checking RF voltages.

DC volt input resistance ranges from 50 to 200 megohms; AC volt input impedance at 60 cycles is approximately 10 megohms. The primary of the power transformer is well-regulated—holding close control over filament as well as plate voltage, and the DC input circuit is filtered so that the pressure of superimposed alternating currents does not affect DC measurements.

Housed in a sturdy case of attractive hardwood with lead compartment in rear of case. There is a large, clearly marked 4½" meter for quick, easy readings.

25,000 Volt DC Probe for Television Testing

Complete, nothing to add, for use with Model 266
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions........$11.35

RANGES

Volts: (AC and DC) 0-1, 5, 10, 50, 100, 250, 500, 1000, 5000
Milliamperes, DC: 0-1, 5, 10, 50, 100, 250, 500
Amperes DC: 0-10
Ohms: 0-1000 (10 ohms center)
0-10,000 (100 ohms center)
0-100,000 (1000 ohms center)
0-1 megohm (10,000 ohms center)
0-10 megohms (100,000 ohms center)
0-100 megohms (1 megohm center)
0-1000 megohms (10 megohms center)

For 105-125 volts, 50-60 cycle.
Size: 8½"x9½"x8". Weight: 10¼ lbs.
Shipping Weight: 14 lbs.
DEALER'S NET PRICE, complete with Leads, AC Probe and Operator's Manual $125.40

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 476 MIRROSCOPE

Simpson takes pleasure in presenting the new and revolutionary Model 476 Mirroscope.

The objectives behind the design of the Model 476 were to eliminate certain inherent disadvantages found in the conventional type of oscilloscope.

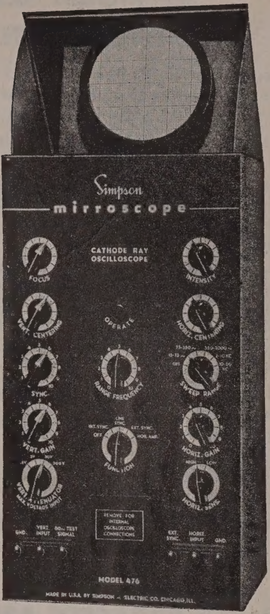
By use of the Mirroscope principle the 5″ cathode ray tube is mounted in a vertical position. This construction reduces bench space requirements to an area of only 9″ x 8″ thereby permitting better concentration of associated equipment for any type of test procedure.

The cathode ray image is reflected from a high grade mirror mounted in the adjustable cover at the top of the cabinet, thus the viewing surface is brought near eye level when the instrument is used on benches of normal height. The mirror angle is quickly and easily adjusted to any position of the operator.

The cover with integral side wings forms an effective shield against external light sources or may be closed down for protection of the tube and mirror when the instrument is not in use.

The upright construction permits location of controls and connections for maximum convenience and allows for internal cathode ray tube connections at the front of the panel instead of the rear.

These and many other advantages will be disclosed when the construction and specifications of the Model 476 Mirroscope are considered fully.



SENSITIVITY:

Vertical direct	— 12 volts rms per inch.
Vertical amplifier	— 20 millivolts rms per inch.
Horizontal direct	— 14 volts rms per inch.
Horizontal amplifier	— 38 millivolts rms per inch.

INPUT IMPEDANCE:

Vertical direct	— 10 megohms, 15 mmf.
Horizontal direct	— 10 megohms, 15 mmf.
Vertical amplifier	— 300,000 ohms, 30 mmf.
Horizontal amplifier	— 500,000 ohms, 15 mmf.

Horizontal trace expansion is over 4 times tube diameter. This makes it possible to examine minute portions of a response pattern for finer detail.

Linear Sweep frequency is continuously adjustable in five overlapping ranges from 15 cycles to 60,000 cycles. Internal, external or line frequency synchronization with variable amplitude is available.

Means for intensity or "Z axis" modulation is provided. Approximately 14 volts peak will blank a trace of normal intensity.

The vertical amplifier frequency response is within 3DB from 20 cycles to over 300,000 cycles and is usable to well over four megacycles. Square wave slant and overshoot is held to less than 5 per cent of amplitude. This response will be found adequate for ail phases of television receiver service including observation and diagnosis of Sync. signals.

TUBE COMPLEMENT:

5UP4	Cathode Ray Tube.
4—6J6	Horizontal and Vertical Amplifiers.
1—12AU7	Vertical pre-amplifier.
1—6J6	Linear Sweep oscillator and Sync. injector.
2—6X4	High voltage rectifiers.

LINE VOLTAGE: 105-125 volts, 50-60 cycles.

SIZE: Height 16¼″ Width 9⅛″
Depth 8″ over all

WEIGHT: 24 lbs.; Shipping weight 30 lbs.

High Frequency Crystal Probe........................$7.50

DEALERS NET PRICE including operators manual $179.50

Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 488
FIELD STRENGTH METER

The Simpson Model 488 Television Field Strength Meter provides means for the measurement of Television signals in any locality.

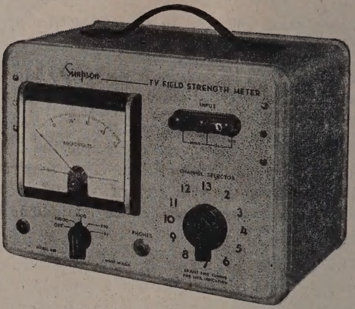
Although special consideration was given to fringe area applications in the design of this instrument it will be found of extreme value in all types of installations.

Location of maximum signal areas, antenna orientation, comparison of antenna systems, adjustment of boosters and checking antenna and lead-in installations are only a few of the many functions available.

THE 50 MICROVOLT FULL SCALE RANGE IS AN OUTSTANDING FEATURE FOR THOSE CONCERNED WITH FRINGE AREA INSTALLATIONS WHERE MAXIMUM EFFICIENCY MUST BE ATTAINED. The 500, 5,000 and 50,000 microvolt ranges extends the usefulness of the Model 488 into areas of higher signal strength.

The large 4½ inch modernistic meter is easily read from a considerable distance and all controls and connections arranged for greatest accessibility.

Model 488 is housed in a beautiful gray hammerloid finished case with heavy leather handle for greater portability.



SIZE: 8″ x 11″ x 8½″.
WEIGHT: 11½ lbs. Shipping wt. 15 lbs.
LINE VOLTAGE: 105-125 volts, 50-60 cycle.
DEALER'S NET PRICE, including
operating instructions and shoulder strap..$89.50

MODEL 381
CAPACITY BRIDGE

Once again Simpson has demonstrated its leadership in the industry by introducing an entirely new, small, compact, easy to use capacity bridge.

The Model 381 embodies a new and revolutionary circuit which enables even the inexperienced to make capacity measurement with ease and assurance.

Simplicity and ease of operation are features of this new instrument. You merely press a button for the desired range, adjust the bridge arm for maximum meter deflection and read the capacity on the scale.

The small size of this tester, together with its wide range of capacity measurement and low price makes the Model 381 the ideal instrument for Radio and Television service dealers, broadcast engineers, electric repair shops, X-ray servicing, industrial maintenance departments or any other service where condensers are tested.

Housed in a beautiful bakelite case with a durable etched aluminum panel and many specially designed parts, the Model 381 Capacity Bridge exemplifies the usual high quality construction found in all Simpson instruments.

Simpson
CAPACITY BRIDGE
ADJUST TO MAX
MODEL 381
MMF.
MFD.
MFD.
MFD.

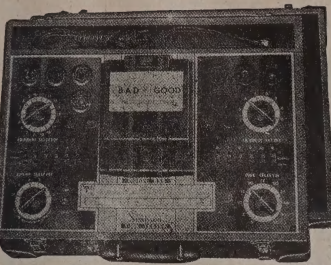
Four ranges of capacity are available as follows:

Range 1	10 mmfd. to 500 mmfd.
Range 2	.0005 mfd. to .05 mfd.
Range 3	.05 mfd. to 5 mfd.
Range 4	.5 mfd. to 500 mfd.

SIZE: 3⅝″ x 5½″ x 2⅜″.
WEIGHT: 1¾ lbs. Shipping weight: 3 lbs.
LINE VOLTAGE: 105-125 volts, 50-60 cycle.
DEALER'S NET PRICE..$22.75

* Simpson

INSTRUMENTS THAT STAY ACCURATE.



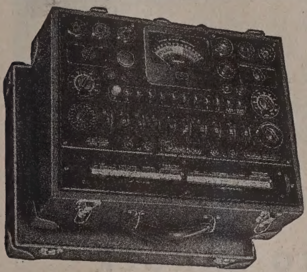
For 100-130 volts, 50-60 cycles.
Size: 16¾"x12½"x6". Weight: 14 lbs.
Shipping Weight: 19 lbs.
DEALER'S NET PRICE, complete with
Operator's Manual $79.50

MODEL 555 Tube Tester

Here is a tube tester Simpson engineered to test all tubes for today's radio receivers and any that may be developed within the foreseeable future. It is outstanding in its simplicity of operation and its attractive appearance.

Check These Many Features

- Basic RMA recommended circuit. Tests any tube regardless of base connections or internal connections of elements.
- Simpson designed 3-position lever operated toggle switches with molded rotor carrying silver plated contacts, self-cleaning through wiping action.
- Sockets for all receiving tubes on the market.
- Provision for future tube developments.
- No adapters or special sockets required.
- Properly fused, provides for line adjustment from 100 to 130 volts; smooth vernier control.
- Beautiful modern panel of shining, silver and black anodized enduring aluminum.
- Large illuminated meter for easy readings.
- Unique jewel-like molded lucite housing encloses Neon bulb indicating shorts and inter-element leakages.
- Line adjustment control below dial opening. Easy to operate.
- Case of sturdy plywood with heavy fabricoid covering, slip hinges.
- Simpson Patented "No Backlash" Roll Chart.



For 105-125 volts, 50-60 cycle.
Size: 16"x12½"x6¾". Weight: 17½ lbs.
Shipping Weight: 27 lbs.

DEALER'S NET PRICE, complete with
Operator's Manual $108.50

Tan and brown panel with brown leatherette case.

MODEL 335 Plate Conductance Tube Tester

With Simpson Patented "No Backlash" Roll Chart

Model 335 tests tubes under conditions simulating actual use in a radio set. The dial indicates percentage of rated plate conductance. With a minimum of settings a reading is quickly obtained which is a percentage of the tube's rated value.

Regardless of tube load, filament voltages are automatically maintained with minimum variation.

Each tube element is individually connected to the proper potential. Reliable short test is provided and Diodes are tested on low voltage. When you have finished a tube test, the Simpson one button automatic reset returns all switches to the normal position.

Tests all receiving tubes, including 9 pin miniatures, and sub-miniatures as used in hearing-aids, etc. Space is provided for new sockets.

SIMPSON MODEL 445

Tube and Set Tester with the famous Simpson "No Backlash" Roll Chart

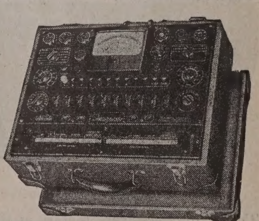
Model 445 combines a 20,000 ohms per volt Set Tester and a Plate Conductance Tube Tester. The tube tester dial indicates percentage of rated plate conductance which can also be considered as a percentage of mutual conductance since, in most cases, the amplification factor remains constant. Tests the new 9-pin miniature tubes and sub-miniature tubes.

The volt-ohm-milliammeter set tester provides the ranges that have made the Simpson Model 260 the most famous set tester in the world.

HIGH VOLTAGE PROBE FOR TELEVISION SERVICING AVAILABLE
25,000 volts DC — 20,000 ohms per volt.
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions........$9.95

RANGES

Volts (20,000 ohms per volt D.C., 1000 ohms per volt A.C.): 0-2.5, 10, 50, 250, 1000, 5000.
Milliamperes (D.C.): 0-10, 100, 500.
Microamperes (D.C.): 0-100.
Output (A.C.) volts: 2.5, 10, 50, 250, 1000.
Ohms: 0-2000 (12 ohms center)
0-200,000 (1200 ohms center)
0-20 megohms (120,000 ohms center).



Size: 16x12½"x6¾". Weight: 20 lbs. Shipping Weight: 26 lbs.
DEALER'S NET PRICE, complete with Test Leads and
Operator's Manual $137.50
Tan and brown panel with brown leatherette case.

THE SIMPSON PATENTED "NO BACKLASH" ROLL CHART

The exclusive "No-Backlash" feature automatically takes up the slack in the paper chart and, by keeping the chart in constant tension, makes it impossible to turn the selector wheel without moving the chart. This results in precision selection at all times. The "No-Backlash" feature also prevents the paper chart from tearing, insures proper alignment, and presents at all times a neat, flat surface.

The selector wheel gear ratio makes it possible for tube selections to be obtained with a minimum of effort.

The entire Roll Chart mechanism is securely fastened to the instrument panel. Quick access to the roll chart can be obtained by removing four panel screws, so that the addition of tube data or the mounting of a new chart is a matter of a few minutes.

In addition to the neat, flat reading surface made possible by the "No-Backlash" feature, the lucite window was designed so that only two settings appear, which is especially convenient for the settings of multi-purpose tubes.

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 340 SIGNAL GENERATOR

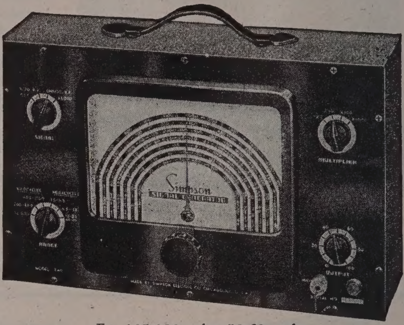
75 Kilocycles to 120 Megacycles—fundamentals to 30 Megacycles. From its lustrous black anodized panel to the big nine-inch dial and knife edge pointer that mean easy readability, the Model 340 is an instrument packed with Simpson engineering refinements for greatest utility and long-lasting accuracy.

An electron coupled circuit, using three tubes—full wave rectifier, modulator, and oscillator — and standard 30% modulation at 400 cycles, assures extreme stability and output uniformity. Close settings are permitted by a smooth vernier control.

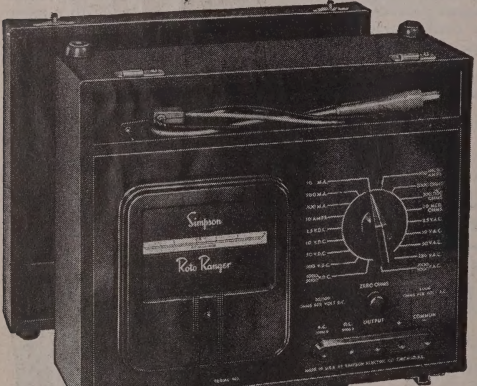
RF coils provide range of 75-220; 200-600; 550-1700 KC; and 1.5-4.5, 4.2-14; 9-30; 36-120 megacycles. Fundamentals range to 30 MC, and the dial is direct reading to 120 MC.

Shielding in the Model 340 is complete; coils, attenuator, and signal selector being individually shielded. The oscillator and modulator are sealed in a rigidly welded, entirely closed chassis. In addition, the line cord is shielded, thus reducing leakage to a negligible point.

The signal output is controlled through a step attenuator and non-inductive potentiometer, providing smooth and complete control of the signal output. A special jack is provided in the Model 340 to obtain high output on the 120 MC band.



For 105-130 volts, 50-60 cycles.
Size: 16″x10″x6″. Weight: 15¼ lbs.
Shipping Weight: 20 lbs.
DEALER'S NET PRICE, complete with
Operator's Manual $84.50



MODEL 221

ROTO RANGER

(High Sensitivity AC-DC Volt-Ohm-Milliammeter)

RANGES

20,000 ohms per volt DC, 1000 ohms per volt AC.
Volts, AC: 2.5, 10, 50, 250, 1000, 5000.
Volts, DC: 2.5, 10, 50, 300, 1000, 5000.
Milliamperes, DC: 10, 100, 500.
Microamperes, DC: 100.
Amperes, DC: 10.
Output: 2.5, 10, 50, 250, 1000.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).
Size: 12¾″x10⅛″x5⅜″.
Weight: 9 lbs. Shipping Weight: 13 lbs.
DEALER'S NET PRICE, complete with Test Leads and Operator's Manual....................$69.85

Twenty-five separate meters at the turn of a switch. That is what you get in the new Simpson Model 221 Roto Ranger. The necessity of reading numerous scales, so common in ordinary volt-ohm-milliammeters, is forever eliminated when you own a Roto Ranger. The chances for errors in making readings are reduced to a minimum. The Model 221 provides a separate direct reading scale for each range and does it automatically. Calibrations are not cramped. Each scale is full size, the same as it would be for a separate instrument. As the selector switch on the panel is moved to the range desired, an ingenious mechanism rotates the proper range into position behind the meter window.

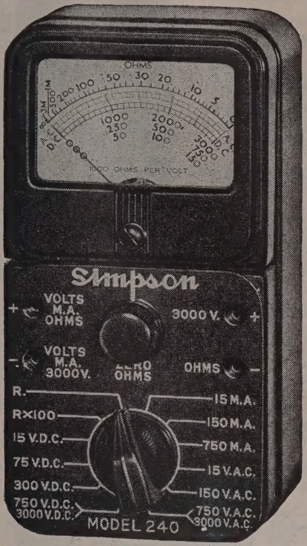
HIGH VOLTAGE PROBE AVAILABLE FOR TELEVISION SERVICING

30,000 V. DC — 20,000 ohms per volt.
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions ....$ 9.95

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODELS 240 and 230 VOLT-OHM-MILLIAMETERS



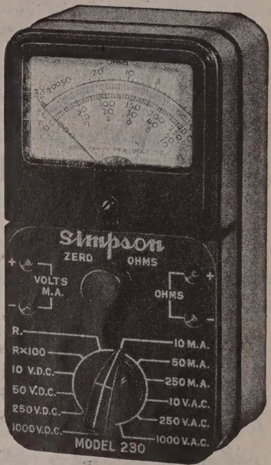
These two "Micro-Tester" portables are famous throughout the world for their ruggedness and built-in accuracy. They exemplify the construction features and utility that distinguish the entire Simpson line shown in this section.

Both are shock-proof and incorporate the celebrated Simpson movement with its FULL BRIDGE-TYPE CONSTRUCTION AND SOFT IRON POLE PIECES. Resistors are in matched pairs to provide the greatest possible accuracy for all ranges.

Model 240 — the "Hammeter" — was designed for the additional voltage and sensitivity demanded in radio testing. With its maximum voltage range of 3000 AC or DC, it was the first self-contained pocket portable instrument built expressly to check high voltage and all the component parts of transmitters and receivers.

Model 230, with a maximum voltage of 1000 volts AC or DC, is ideal for most industrial testing. Its ranges are adequate for most line voltages, for telephone, teletype, and general purpose testing.

Both models are housed in heavily molded bakelite cases, with all numbers and symbols recessed in the panel and filled with white enamel for greatest legibility and ease of reading. Both have full size 3″ meters.



MODEL 240

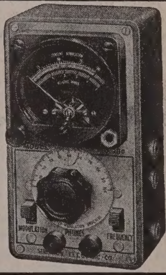
AC Volts: 0-15, 150, 750, 3000 (1000 ohms per volt)
DC Volts: 0-15, 75, 300, 750, 3000 (1000 ohms per volt)
DC Milliamperes: 0-15, 150, 750
Ohms: 0-3000 (center scale 30)
0-300,000 (center scale 3000)
Accuracy: DC 3% — AC 5%
Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.
DEALER'S NET PRICE, complete with Leads and Printed Instructions $26.35

MODEL 230

AC Volts: 0-10, 250, 1000 (400 ohms per volt)
DC Volts: 0-10, 50, 250, 1000 (1000 ohms per volt)
DC Milliamperes: 0-10, 50, 250
Ohms: 0-1000, 0-100,000
Accuracy: DC 3% — AC 5%
Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.
DEALER'S NET PRICE, complete with Leads and Printed Instructions $24.95

MODEL 380 WAVEMETER MODULATION INDICATOR

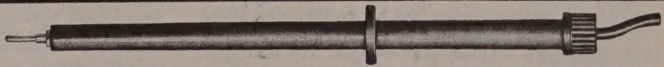
The ideal instrument for the Ham



1. An accurate band-spread wavemeter, and a sensitive 0-100 microammeter as a resonance indicator.
2. Separate plug-in coils for 10, 20, 40 and 80 meter bands supplied — coils for other bands available at slight extra cost.
3. Additional between-band coverage available at the flip of a switch.
4. Push button switch for dual meter sensitivity.
5. Provision for headphones for use in station monitoring and quality control.
6. A direct-reading Percentage Modulation Indicator with the instrument calibrated at 0-110% Modulation.
7. Designed to function on the 144, 235, and 420 megacycle bands without coils, but with a quarter wave antenna section.
8. Used as a field strength indicator to determine radiation pattern.

Size: 3″x5⅞″x2½″. Weight: 2 lbs. Shipping Weight: 4 lbs.
DEALER'S NET PRICE, complete with 4 coils, 2 ft. antenna, and Operator's Manual $37.85
Leatherette covered carrying case, with separate compartments for the instrument and 4 coils 8.00

HIGH VOLTAGE TV PROBE



Here are Simpson's four High Voltage Test Probes for Television servicing, each designed for use with the models listed here. They are molded of high temperature polystyrene to provide high dielectric strength and maximum insulation. Their small diameter permits reaching in small spaces and narrow openings.

Size diameter 9/16″, Length 11½″, Weight 6 oz. Shipping Weight 2 lbs.

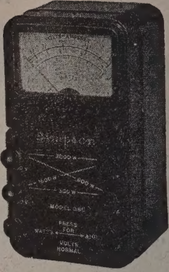
DEALER'S NET PRICES

High Voltage Probe for 260 (25000 V) Complete, nothing to add	$ 9.95
High Voltage Probe for 221 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 303 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 266 (25000 V) Complete, nothing to add	11.35

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 390 VOLT-AMP-WATTMETER



RANGES
AC Current, 60 cycles
Volts: 0-150, 0-300
Amperes: 0-3, 0-15
Watts: 0-300, 0-600, 0-1500, 0-3000

Ruggedly constructed for full load, continuous operation, the Simpson Model 390 is the first tester of its size ever made to give you volt, ampere and wattage readings in one compact instrument. It embraces two ranges each of voltage and current, providing four wattage ranges which cover practically all types and makes of appliances. The panel has volt-ampere combinations clearly indexed to the proper wattage range on the scale, which makes the instrument easy to use. All readings are shown on one meter. In normal position, the meter indicates volts. Ampere and watt readings are obtained by depressing button on the panel. The widely separated binding posts make it possible for the Model 390 to be used as an individual voltmeter or as an ammeter. The Model 390 has a molded bakelite case with all figures recessed in the panel, which are filled with white enamel for better legibility.

Size: 3″x5⅞″x2½″. Weight 1½ lbs. Shipping Weight: 4 lbs.

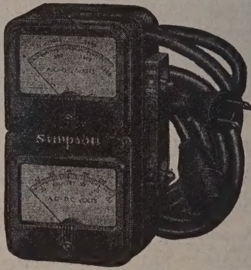
DEALER'S NET PRICE, complete with Break-in plug, leads and Operator's Manual	$39.50
Leatherette Covered Carrying Case, with compartment for Break-in plug and leads	5.50

MODELS 391 and 392
AC-DC VOLT-WATTMETERS

Designed for simultaneous reading of volts and watts, each of these handy little testers has two separate 3″ square meters, one for volts and one for watts. Each has a built-in cord and plug for connection to the line outlet, and a receptacle for connecting the appliance under test. The ranges for each meter are selected by separate toggle switches recessed in the molded bakelite case. The low power consumption combined with the high efficiency of these instruments results in negligible loss and error in reading.

Model 391 (3000 watts max.)
Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1500, 0-3000
Size: 3″x5⅞″x2½″. Weight: 1½ lbs. Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating Instructions $30.00
Leatherette carrying case........ 5.50

Model 392 (5000 watts max.)
Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1000, 0-5000
Size: 3″x5⅞″x2½″. Weight: 1½ lbs. Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating instructions $35.00
Leatherette carrying case........ 5.50

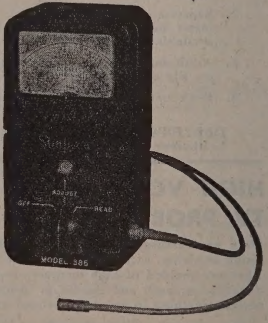


MODEL 385 TEMPERATURE INDICATOR

This is the newest addition to the Simpson Appliance Tester line. You will find this a compact instrument which is ideal for measuring temperatures from +70° F to as low as —50° F, where fast accurate temperature readings are important. The scale is designed so that the center portion is expanded, making the most widely used temperatures easy to read. The Model 385 is ideal for use in the refrigeration service field and wherever temperature readings are important, such as deep freeze units, home refrigerators, walk-in coolers and air conditioning units. The temperature readings can be taken at the end of the 15′ lead which is supplied with the unit. The lead cord is small in diameter, making it possible to close the door of the equipment, thus obtaining temperature indications under actual conditions.

The probe can also be immersed in liquids where critical temperatures must be maintained.

Range: −5° to +70° F.
Battery, self-contained
Size: 3″x5⅞″x2½″.
Weight: 1½ lbs.
Shipping Weight: 4 lbs.
DEALER'S NET PRICE, complete with Test Lead and Operating Instructions $30.00
Leatherette Carrying Case 5.50



* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 370 AC AMMETER

(With self-contained current transformer)

(For use on 60 cycles)

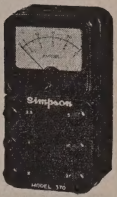
In the Model 370, a current transformer and indicating instrument have been combined in one small case to meet the consistent demand for a small multiple range AC ammeter, at a price that you can afford. Its many uses include the measurement of current drawn by all types of electric appliances and motors, heating elements, lamps, radio sets, etc.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 0-2.5, 0-5, 0-10, 0-25 Amperes



MODEL 371 AC VOLTMETER

This instrument is a "must" for the industrial service kit or the lineman. Designed primarily for testing line voltages applied to motors, heating equipment or other industrial installations, the ranges are such that many additional applications will suggest themselves.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$18.40
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-150, 0-300, 0-600 Volts

MODEL 372 OHMMETER

A complete instrument with self-contained batteries. Has a wide range from .2 ohms to 50 megohms. "Ohms" adjuster compensates for variations in battery voltages. Wire wound and matched metallized resistors are used throughout. The basic movement has a sensitivity of 85 microamperes.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Test Leads	$25.50

RANGES

0-500 ohms (5 ohms center)
0-5000 ohms (50 ohms center)
0-50,000 (500 ohms center)
0-500,000 (5000 ohms center)
0-5 Meg. (50,000 ohms center)
0-50 Meg. (500,000 ohms center)

MODEL 373 DC MILLIAMMETER

The Model 373 provides for DC current measurements from .02 to 1000 MA. This tester is ideal for radio servicing and experimental work; checking burglar alarm circuits, railroad signal systems, telephone work, etc.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 5, 10, 25, 50, 100, 250 0-1000 MA.

MODEL 374 DC MICROAMMETER

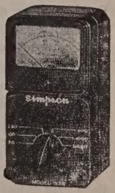
Incorporates a basic movement of 50 microamperes sensitivity with self-contained shunts for all other ranges. This tester can be used with external resistors or multipliers as a high sensitivity voltmeter at 20,000 ohms per volt. It is of particular value in photoelectric cell and other experimental work. The meter may be shorted out of the circuit by setting the selector knob to "short" position.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$23.00
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-50, 100, 250, 500, 1000 Microamperes



*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 375 DC AMMETER

(Self-Contained)

A new multi-range instrument which is extremely useful in testing the current in DC circuits. Provides a complete range from a fraction of an ampere to 25 amperes without the necessity of using auxiliary external shunts. Excellent for checking auto radios and experimental work in DC circuits.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2-5, 5, 10, 25
Amperes

MODEL 376 DC VOLTMETER

(Rectifier Type 1000 ohms per volt)

An AC Voltmeter, especially useful in circuits where a limited amount of current is present. Makes an excellent output meter when used with proper condenser. The wide variety of ranges covers both primary and secondary voltage ranges of transformers used in radio sets, toys and appliances.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 10, 25, 50, 100, 250,
500, 1000 AC volts

MODEL 377 DC VOLTMETER

(Resistance 1000 ohms per volt)

Measures all dry battery voltage, both A and B, for radio sets, also grid and plate voltage and filament voltage in battery-operated sets. High ranges may be used for checking DC line voltage.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2.5, 5, 10, 25, 50,
100, 250, 500, 1000
DC Volts

MODEL 378 AC MILLIAMMETER

(With self-contained current transformer)

Here is the instrument that answers your need for a low csot, handy size milliammtter that combines a current transformer and an indicating instrument in one case. It offers five separate ranges, making it suitable for a wide variety of testing jobs.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$22.60
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 25, 100, 250,
1000 MA.

MODEL 379 BATTERY TESTER

Designed in accordance with the engineering specifications of leading battery manufacturers, this compact instrument is so ruggedly built that it will stand a lifetime of hard usage. The loading resistors have an accuracy of 1% and properly load all radio and hearing aid A and B batteries.

A single rotary switch selects the voltage of the battery under test and brings into line the correct loading resistor. The full 3" dial has three separate arcs, one for all radio A batteries, one for hearing aid A batteries, and one for all B batteries.

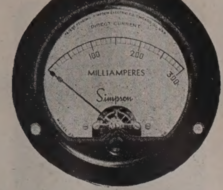
A percentage scale shows the exact condition of the battery in percentage of full voltage. The voltage reading can be quickly obtained by multiplying the percentage reading by the selector-switch voltage setting.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, including Test Leads and Operator's Manual	$23.70
Leatherette covered Carrying Case, with compartment for leads	5.50

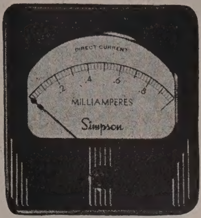
Net

Simpson PANEL INSTRUMENTS



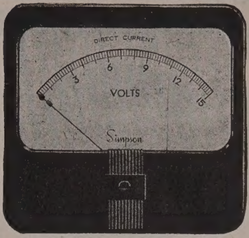
MODELS 25, 35, 45, 55

3½" ROUND CASE—OPEN FACE STYLE. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2 9/16". Bakelite case.



MODELS 27, 37, 47, 57

3½" RECTANGULAR CASE. Width, 3"; height, 3⅛". Mounts in round hole. Body diameter, 2¾". Scale length 2 9/16". Bakelite case.



MODELS 29, 39, 49, 59

4½" RECTANGULAR CASE. Width 4 21/32", height, 4 13/64". Mounts in round hole. Body diameter 2¾". Scale length 3 29/32". Bakelite case.

AMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE	D. C.			A. C.		
0-1	$7.65	$8.70	$9.75	$7.50	$8.10	$ 9.90
0-1.5	7.65	8.70	9.75	7.50	8.10	9.90
0-2	7.65	8.70	9.75	7.50	8.10	9.90
0-3	7.65	8.70	9.75	7.50	8.10	9.90
0-5	7.65	8.70	9.75	7.50	8.10	9.90
0-10	7.65	8.70	9.75	7.50	8.10	9.90
0-15	7.65	8.70	9.75	7.50	8.10	9.90
0-25	7.65	8.70	9.75	7.80	8.40	10.50
0-50	7.65	8.70	9.75	....	9.30	12.60
15-0-15	7.65	8.70	9.75	....	....	.....
30-0-30	7.65	8.70	9.75	....	....	.....
50-0-50	7.65	8.70	9.75	....	....	.....

AC-DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters can be supplied with external shunts and include 6 foot leads. Higher range AC ammeters can be supplied with external current transformers and include 2 foot leads.

WATTMETERS—DYNAMOMETER TYPE

RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79	RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79
0-75	150	.75	$18.60	$19.80	$25.80	0-600	300	3.0	$20.70	$21.75	$27.75
0-150	150	1.5	18.60	19.80	25.80	0-1500	300	7.5	20.70	21.75	27.75
0-300	150	3.0	18.60	19.80	25.80	0-3000	300	15.0	20.70	21.75	27.75
0-750	150	7.5	18.60	19.80	25.80						

A. C. VOLTMETERS—RECTIFIER TYPE

RANGE	MODEL→ APPROX. RESISTANCE	45-47	49
0-1	1000 ohms per volt	$12.75	$13.65
0-3		12.75	13.65
0-5		12.75	13.65
0-10		12.75	13.65
0-15		12.75	13.65
0-50		12.75	13.65
0-100		12.75	13.65
0-150		12.75	13.65
0-300		12.75	13.65
0-1	2000 ohms per volt	13.05	14.25
0-3		13.05	14.25
0-5		13.05	14.25
0-10		13.05	14.25
0-15		13.05	14.25
0-50		13.05	14.25
0-100		13.05	14.25
0-150		13.05	14.25
0-300		13.05	14.25

MILLIAMMETERS

0-1	600 ohms	$12.60	$13.65
0-2	400	12.60	13.65
0-5	200	12.60	13.65

MICROAMMETERS

0-100	3400 ohms	$15.15	$16.50
0-200	2400	13.50	14.85
0-300	1800	13.35	14.55
0-500	1200	13.05	14.25

D. C. GALVANOMETERS

SCALE	SENSITIVITY MICRO-AMPERES	MODEL→ RESIST.	125-127	25-27
50-0-50	500-0-500	46 ohms	$7.65	$ 8.70
50-0-50	75-0-75	2000	9.45	10.50

R. F. AMMETERS

INTERNAL THERMOCOUPLE TYPE

MODEL→ RANGE	135-137	35-37	39
0-1	$9.30*	$10.50*	$12.75
0-1.5	9.30	10.50	12.75
0-2	9.30*	10.50*	12.75
0-2.5	9.30	10.50	12.75
0-3	9.30*	10.50*	12.75
0-5	9.30*	10.50*	12.75
0-8	9.30	10.50	12.75
0-10	9.30	10.50	12.75

RF MILLIAMMETERS

†0-115	....	$21.46	.....
0-150	....	12.60	$14.55
0-250	....	12.60	14.55
0-500	....	12.60	14.55

†0-100 linear scale—50 divisions.

VOLUME LEVEL INDICATORS—DECIBEL METERS

ZERO POWER LEVEL—6 MW. 500 OHM LINE

MODEL→ RANGE	145-147	45-47	49
GENERAL PURPOSE TYPE −10 to +6 db 5000 ohms	$11.25	$12.30	$13.95
HIGH SPEED TYPE −10 to +6 db 5000 ohms	.....	13.20	14.85
LOW SPEED TYPE −10 to +6 db 5000 ohms	.....	13.20	14.85

VOLUME LEVEL INDICATORS—VU METERS

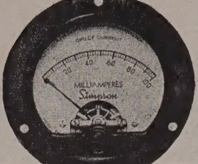
REFERENCE LEVEL—1 MW. 600 OHM LINE

Not illuminated A or B Scale—3900 ohms.........	.....	$15.90	$16.80
Illuminated A or B Scale—3900 ohms................	.....	.....	19.50

Model 142—4- Rectangular ▲

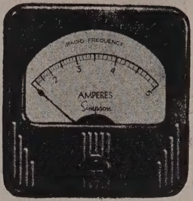
Net

Simpson PANEL INSTRUMENTS



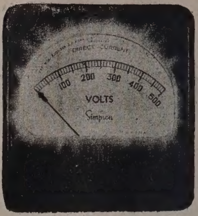
MODELS
125, 135, 145, 155

2½″ ROUND CASE—OPEN FACE STYLE. Flange diameter, 2¾″; depth overall, 2 5/16″; body diameter, 2 11/64″; scale length., 1⅞″. Bakelite case.



MODELS
127, 137, 147, 157

2½″ RECTANGULAR CASE. Width 2⅜″; height, 2⅜″. Mounts in round hole. Body diameter, 2 3/16″. Scale length 1⅞″. Bakelite case.



MODEL 27-37-57
ILLUMINATED

3½″ RECTANGULAR CASE. Width 3″; height 3⅛″. Mounts in round hole. Body diameter 2¾″. Scale length 1 5/16″. Bakelite case.

The 2½″ and 3½″ rectangular instruments indicated (*) are also carried in stock with lucite illuminated dials. Supplied complete with socket and 6 volt bulb for an additional cost of $1.50 dealer's net. R.F. ammeters lucite illuminated must be supplied with external thermocouple. Add $4.95 for couple. All instruments are calibrated for use on non-magnetic panels.

VOLTMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1.5	....	....	....	$ 7.95	$ 8.85	$ 9.75
0-3	$ 7.95	$ 8.85	$ 9.75	7.95	8.85	9.75
0-5	7.95	8.85	9.75	7.95	8.85	9.75
0-8	7.95	8.85	9.75	....	....	....
0-10	7.95*	8.85*	9.75	7.95*	8.85*	9.75
0-15	7.95	8.85	9.75	7.95*	8.85*	9.75
0-25	7.95	8.85	9.75	7.95	8.85	9.75
0-50	7.95*	8.85*	9.75	7.95	8.85	9.75
0-100	7.95	8.85	9.75	7.95	8.85	9.75
0-150	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-200	7.95	8.85	9.75	....	....	.....
0-250	7.95	8.85	9.75	8.85	9.60	10.50
0-300	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-500	7.95	8.85*	9.75	12.75	13.50	14.40
0-750	7.95	8.85	9.75	12.75	13.50	14.40
0-1000	11.85	12.75*	13.65	12.75	13.50	14.40
0-1500	11.85	12.75	13.65	.....	.....	.....
0-2000	11.85	12.75*	13.65	.....	.....	.....
0-2500	11.85	12.75	13.65	.....	.....	.....
0-3000	11.85	12.75*	13.65	.....	.....	.....
0-4000	11.85	12.75*	13.65	.....	.....	.....
0-5000	11.85	12.75*	13.65	.....	.....	.....

External resistors are furnished on A. C. meters having a range of 500 volts or higher. D.C. 1000 volts or higher.

MILLIAMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1	$7.65*	$8.70*	$9.75	....	....	....
0-1.5	7.65	8.70	9.75	....	....	....
0-3	7.65	8.70	9.75	....	....	....
0-5	7.65	8.70	9.75	....	....	....
0-10	7.65*	8.70*	9.75	$7.50	$8.10	$9.90
0-15	7.65*	8.70*	9.75	7.50	8.10	9.90
0-20	7.65	8.70	9.75	....	....	....
0-25	7.65*	8.70*	9.75	7.50	8.10	9.90
0-50	7.65*	8.70*	9.75	7.50	8.10	9.90
0-75	7.65	8.70	9.75	....	....	....
0-100	7.65*	8.70*	9.75	7.50	8.10	9.90
0-150	7.65	8.70*	9.75	....	....	....
0-200	7.65*	8.70*	9.75	....	....	....
0-250	7.65	8.70	9.75	7.50	8.10	9.90
0-300	7.65*	8.70*	9.75	....	....	....
0-500	7.65*	8.70*	9.75	7.50	8.10	9.90
0-750	7.65	8.70	9.75	....	....	....
0-1000	7.65	8.70	9.75	....	....	....

MICROAMMETERS

MODEL→	125-127	25-27	29
RANGE		D. C	
0-25	$13.65	$14.85	$17.10
0-50	10.80	11.85	13.05
0-100	10.20	11.25	12.60
0-200	8.55	9.60	10.95
0-500	7.95	9.15	10.35

MILLIVOLTMETERS

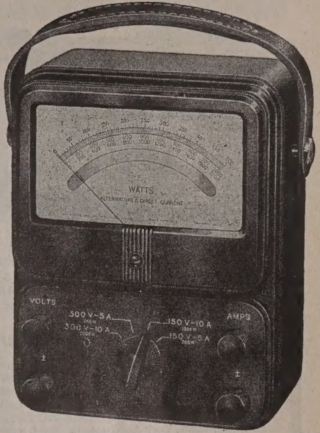
MODEL→	125-127	25-27	29
RANGE		D. C.	
0-50	$7.65	$8.70	$9.75
0-100	7.65	8.70	9.75

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 880 DYNAMOMETER INSTRUMENTS
- A.C. - D.C. - Accuracy ½ of 1 %

These Simpson Precision Portable Instruments are offered in a wide selection of ranges, to meet practically every demand for general purpose testing. They provide a high degree of accuracy plus the stamina to maintain that accuracy. Large 4½-inch hand drawn scales, mirrored, with knife edge pointers. Cases are of heavily molded bakelite, with leather carrying handles.



SINGLE PHASE WATTMETERS

Max. Volts	Amperes Normal	Amperes Maximum	Watts Low Range	Watts High Range	Price
150-300	1	1.5	100	200	$60.45
150-300	2	3.0	200	400	60.45
150-300	5	7.5	500	1000	60.45
150-300	10	15.	1000	2000	60.45
150-300	20	30.	2000	4000	66.00
150-300	50	75.	5000	10000	66.00
DOUBLE CURRENT RANGES					
150-300	2.5- 5	3.75- 7.5	250-500-1000		$76.95
150-300	5-10	7.5 -15.	500-1000-2000		76.95

VOLTMETERS

0-150	$60.45	0-75-150-300 (Triple Range)	$76.95
0-150-300 (Double Range)	71.55	0-150-300-600 (Triple Range)	76.95

AMMETERS

0-1-2 (Double Range) $66.00

MODEL 9 AND 10 SERIES

These Models are supplied in the same heavy molded bakelite cases used for Model 880 with a large 4½" hand drawn scale, mirrored, and knife edge pointer.

MODE!. 9 - D'ARSONVAL MOVEMENT (ACCURACY ½ of 1 %) — MODEL 10 - IRON VANE MOVEMENT (ACCURACY 1 %)

Range	MODEL 9 (DC)	MODEL 10 (AC)
Volts		
50	$49.50	$43.95
100	49.50	43.95
150	49.50	43.95
300	55.00	49.50
Double Range Volts		
15-150	55.00	....
150-300	60-45	55.00
300-750	66.00	60.45
Triple Range Volts		
15-150-300	63.75	....
150-300-600	66.00	60.45

Range	MODEL 9 (DC)	MODEL 10 (AC)
Milliamperes		
1	$57.15	....
50	49.50	$43.95
100	49.50	43.95
500	49.50	43.95
Amperes		
5	49.50	43.95
15	49.50	43.95
30	49.50	43.95
50	49.50	43.95
100	49.50	....

Range	MODEL 9 (DC)
Double Range Milliamperes	
10-100	$55.00
25-250	55.00
100-500	55.00
Double Range Amperes	
2.5-5	55.00
5-10	55.00

Range	MODEL 9 (DC)
Triple Range Amperes	
2-5-10-25	$60.45
10-25-50	60.45
Microamperes	
50	$71.55
100	67.00
200	64.95

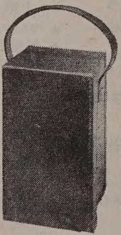
ALL PRICES DEALERS NET

All portable instruments above can be furnished in the Simpson Roll Top Safety Case at an additional price of $8.00.

LEATHER AND LEATHERETTE CARRYING CASES — TEST LEADS

1-113011

1-111818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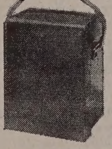
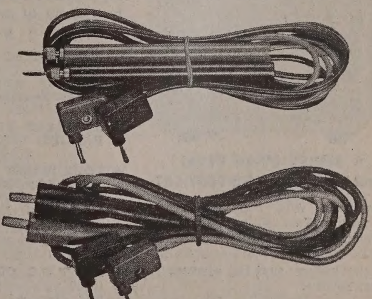

1-114236

1-111818	Leather Carrying Case for Model 260	Dealer's Net $6.75
1-114236	Eveready Leather Carrying Case for Models 260-303	Dealer's Net 8.75
1-114299	Eveready Leather Carrying Case for Microtester	Dealer's Net 5.50
1-113011	Leatherette Covered Carrying Case for Microtester	Dealer's Net 5.50
1-113413	Leatherette Covered Carrying Case for 391-392	Dealer's Net 5.50
1-113644	Leatherette Covered Carrying Case for Model 380	Dealer's Net 8.00

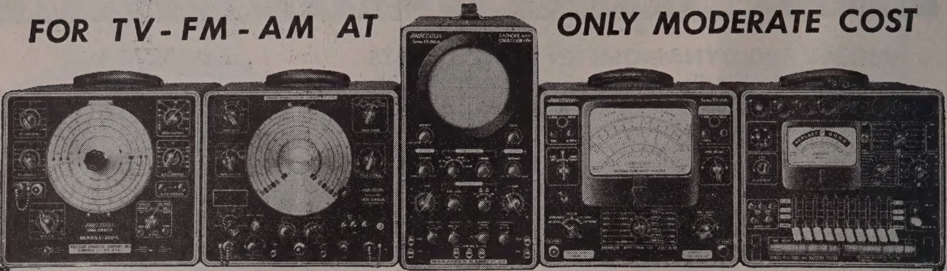


With Test Prods or Alligator Clips as shown. Colored red and black for easy identification. Length 48". Rubber insulated. Dealer's net prices.

0-008380	With Test Prods and Elbow Terminals	$1.25
0-008379	With Test Prods and Spade Terminals	1.25
0-008377	With Alligator Clips and Elbow Terminals	1.25
0-008376	With Alligator Clips and Spade Terminals	1.25

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

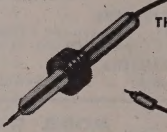
THESE FIVE MATCHED "PRECISION" INSTRUMENTS PROVIDE A COMPLETE MODERN BASIC LABORATORY FOR TV-FM-AM AT ONLY MODERATE COST



SERIES E-200-C Modern Multi-band **SIGNAL and MARKER GENERATOR** (see page F-42)	**SERIES E-400** Wide Range H.F. **SWEEP SIGNAL GENERATOR** (see page F-41)	**SERIES ES-500A** 5 in. Hi-Sensitivity Wide Range **OSCILLOSCOPE** (see page F-41)	**SERIES EV-10A** True Zero-Center **VTVM-MEGOHMMETER** with 7 in. Meter (see page F-42)	**SERIES 612** Modern Free-point **TUBE and BATTERY TESTER** (see page F-46)

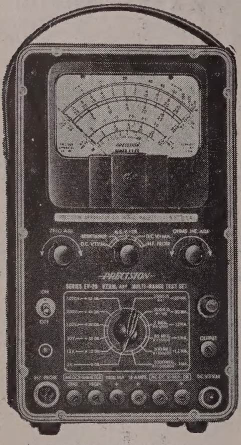
OTHER MATCHED COMBINATIONS

The instruments shown above, and other "Precision" equipments, are available in various enclosure styles...Panel Mounts, Portable, Counter Types, etc. . . . designed to suit individual applications, field or shop. The illustration shows only one of the many possible "matched combinations" of diversified "Precision" Test Equipment. Each combination provides a selected and Basic, modern, efficient Laboratory at moderate cost.



SERIES TV
THE SUPER HIGH VOLTAGE SAFETY TEST PROBE
for High D.C. Potential Measurements up to 60,000 volts.
(see page F-45)

All prices are subject to change without notice



★ SERIES EV-20 VTVM and MULTI-RANGE TEST SET

Complete with coaxial Circuit Isolating Test Probe, Shielded Ohmmeter Test Cable, Standard #227 Super-Flex Test Leads, Ohmmeter battery and full operating instructions.

In modern, black ripple finished cabinet. Dimensions—10½"x6¼" x5". Shipping Weight: 11 pounds.
CODE: Party NET PRICE: $68.25

SERIES EV-20 VTVM and Multi-Range Test Set

TRUE ZERO — CENTER ON ALL VTVM RANGES
WITH DIRECT READING HIGH FREQUENCY SCALES
Plus Complete Standard 1000 Ohms/Volt Functions
48 Ranges to 1200 Volts*, 2000 Megohms, 12 Amperes, +63 DB

Series EV-20 is a compact, high sensitivity, laboratory-type, circuit-testing instrument, incorporating the most modern electrical and physical design. It provides unparalleled performance, accuracy and versatility required for AM-FM-TV and general electronic circuit analysis.

Functionally similar to the deluxe Series EV-10A VTVM, with extra large 7" meter, (described on page F-42) the Series EV-20 (with 4½-inch meter) affords a highly efficient instrument at moderate cost.

RANGE SPECIFICATIONS

- ★ **SIX ALL-ZERO CENTER VTVM RANGES:** 13⅓ Megs. Constant Input Resistance. ±3, ±12, ±30, ±120, ±300, ±1200 volts. ***Direct Reading to ±12 KV and ±30 KV** with TV Test Probe described on page F-45.
- ★ **SIX SELF-CONTAINED RESISTANCE RANGES:** 0-2000 - 200,000 **ohms.** 0-2-20-200-2000 **Megohms.**
- ★ **FOUR DIRECT READING HIGH FREQUENCY VTVM RANGES:** 0-3-12-30-120 volts. (Requires RF-10A High Freq. Vacuum Tube Probe, Net Price $14.40. No crystal rectifiers employed.)
- ★ **SIX AC-DC AND OUTPUT VOLTAGE RANGES** at 1000 ohms per volt. 0-3-12-30-120-300-1200 volts.
- ★ **EIGHT D.C. CURRENT RANGES:** 0-300 microamps. 0-1.2-3-12-30-120 1200 MA. 0-12 Amperes.
- ★ **SIX DECIBEL RANGES** from —20 to +63DB. Calibrated for 600 ohm, 1 mw., zero DB.
- ★ **ROTARY RANGE — FUNCTION SELECTORS** eliminate frequent and inefficient shifting of test leads.

IMPORTANT FEATURES

- ★ **VOLTAGE REGULATED — BRIDGE CIRCUIT**
- ★ **DIRECT READING, ALL ZERO-CENTER VTVM** — indicates **both** Polarity and Magnitude without switching or test lead reversal.
- ★ **SHIELDED CONNECTORS** for D.C.—VTVM **and** RF—VTVM. Permits simultaneous and non-interfering connection of both the Circuit Isolating Test Probe and optional H.F. Vacuum Tube Probe Series RF—10A.
- ★ **DUAL - BALANCED ELECTRONIC BRIDGE OHMMETER—MEGOHMMETER** uses two 1.5 volt cells easily replaced at rear of cabinet.
- ★ **ADDITIONAL 1000 OHMS/VOLT FUNCTIONS** permit routine AC-DC voltage, DB and current measurements free of power line.
- ★ **4⅝" RECTANGULAR METER** — 200 microamperes, ±2%. D'Arsonval construction.
- ★ 1% Film type, Metallized and Wire-Wound resistors for all shunts and multipliers.
- ★ Heavy gauge; round-cornered, louvred steel case with plastic handle. Etched, anodized, aluminum panel.

-PRECISION- TEST EQUIPMENT

STANDARD OF ACCURACY

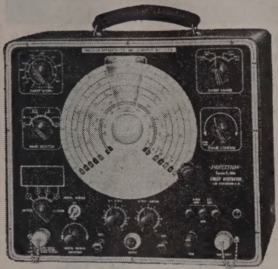
All prices are subject to change without notice

Series E-400

Wide Range Sweep Signal Generator

Narrow and Wide Band Sweep

Direct Reading from 2 to 480 Megacycles



Incorporating selected and true ultra-high frequency components and circuits, Series E-400 has been Application Engineered specifically for modern F.M. and TV. oscillographic alignment methods.

Stressing utmost simplicity of operation, flexibility, stability and accuracy, Series E-400 affords an unparalleled standard of performance and value.

Through careful, intensive development, "Precision" engineers have "designed out" costly, extraneous elements that might lead to undue obsolescence. As a result, Series E-400 is a *fundamental requirement* for the efficient TV.-F.M. Service Laboratory.

FEATURES

★ **Direct Frequency Reading** — 2 to 480 MC in 7 bands without skip. Harmonically calibrated from 240 to 480 MC.

★ **6 Position Rotary Band Switch** covers complete spectrum. Last position provides pure crystal oscillator only. No coil switching. Multiple oscillator B supply switch assures maximum frequency accuracy and stability.

★ **6½" Etched Aluminum Tuning Dial** — Engine turned finish.

★ **1500 Point Vernier Scale** permits close calibration and simple resetting of odd frequencies.

★ **Engraved Transparent Lucite Frequency Indicator** affords readings free from parallax.

★ **Voltage Regulated Oscillators** free of power supply variations.

★ **The Basic Circuit and Tube Complement** — Uses 2 separate 6C4 high frequency beat oscillators plus a 6J6 reactance-modulated high frequency oscillator. This positively minimizes generation of unwanted extraneous signals. Also employs a 6J6 mixer-buffer, a 6C4 multiple crystal oscillator and a 6J6 final marker-mixer amplifier. 6X5 full wave rectifier. VR-105 voltage regulator.

★ **Selected, True High Frequency Circuit Components** render high operating efficiency, stability and accuracy. Uses ceramic and air dielectric trimmer, coupling, by-pass and loading capacitors; rugged ceramic-lucite suspended National SLF tuning condenser; modern miniature HF tubes; mica-filled low-loss sockets; shock mounted reactance modulator; multi-section copper-plate shielding; etc.

★ **Narrow and Wide Band Sweep — 0 to 1 MC and 0 to 15 MC** continuously adjustable. Permits easy band width setting for both F.M. and TV. requirements.

★ **Dual Continuous R.F. Attenuators** triple shielded. Smooth, stepless, effective control from **extra high output for single stage alignment** to minimum levels for multi-stage adjustments.

★ **Wide Range Phasing Control** for Hor. sweep of oscilloscope.

★ **Multiple Crystal Marker-Calibrator** built-in. Simultaneously accommodates 4 crystals individually rotary selected. .01% accuracy 4.5 MC and 2 MC crystals **furnished as standard equipment.** Crystal signal separately attenuated for internal or external use.

★ **Crystal Calibrated and Control** — Each instrument calibrated against crystal standards. The 2 MC crystal, as furnished, provides for crystal monitoring in addition to use as calibrator for external signal generators.

★ **Terminated RG/U Type Coaxial Output Cable** for efficient signal transmission with minimum standing wave effects. LOW-HIGH taps plus open line switch for extra high as well as normal output signal level requirements.

★ **8 Element Double Section Balanced Line Filter** plus **Thorough Multi-Section Copper Plate Shielding** of instrument assures minimum leakage and radiation.

★ **Simultaneuos A.M. and F.M.** test facilities for anti-A.M. check of F.M. second detector circuits. A.M. input jacks also permit use as an H.F. A.M. Generator.

★ **External Deviation** input facility for sweep frequencies other than internal source.

★ **Fuse Protected** at panel extractor fuse post.

★ **Heavy Gauge, Etched-Anodized Aluminum Panel.**

★ **Fully Licensed** under W. E., A. T. & T. and Remco patents.

★ **Series E-400** (illustrated)—In Louvred, portable, copper-plated case. Size 10½" x 12" x 6". Complete with test cables, 2 crystals and elaborate Technical Manual.
Code: Nancy. **NET PRICE $134.50**

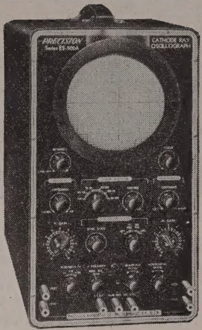
★ **E-400-PM** — Consists of E-400 on 12¼" x 19" steel panel for standard rack mount. Complete as above.
Code: Niece. **NET PRICE $140.00**

Series ES-500A

High Sensitivity, Wide Range, 5" Oscilloscope

Push-Pull Vertical and Horizontal Amplifiers

20 MV. per inch "V" Sensitivity



Series ES-500A affords the ultimate in performance, visibility and operational flexibility at moderate cost. "Precision" engineers have incorporated every necessary basic feature which they have found to be required to meet the needs of the rapidly advancing art of electronics, A.M., F.M., and TV.

Series ES-500A provides an unparalleled combination of high sensitivity, extended frequency range and other essential operating features specifically desired for experimental and commercial visual circuit analysis.

FEATURES

★ **High Sensitivity, Extended Range, Voltage Regulated, Push-Pull Vertical Amplifier**—20 MV (.02 V) per inch deflection sensitivity. 10 cycles to 1 MC response. 2 megohms input resistance. Approx. 22 mmf. input capacity.

★ **Frequency Compensated Vertical Input Step Attenuator** — X1, X10, X100 plus continuous variable gain control in cathode follower input stage.

★ **Vertical Phase-Reversing Switch** permits inversion of all patterns at will. Non-frequency discriminating.

★ **Extended Range, Push-Pull Horizontal Amplifier**—150 MV (.15 V) per inch high deflection sensitivity adequate for most all "H" drive purposes. 10 cycles to 1 MC response at full gain. ½ megohm input resistance. Approx. 20 mmfd. input capacity.

★ **Linear Multi-Vibrator Sweep Circuit**—10 cycles to 30 KC plus line or external sweep.

★ **Amplitude Controlled, 4-Way Synch. Selection**—Internal Positive, Internal Negative, External and Line.

★ **"Z" Axis Modulation** input facility for blanking, timing, etc.

★ **Internal, Phasable 60 cycle Beam Blanking** for elimination of alignment retrace; clean display of synch. pulses, etc.

★ **Sweep Phasing Control** for sinusoidal line sweep usage. Wide angle bridge circuit.

★ **Direct H and V Plate Connections** and Audio Monitoring phone jacks at rear. All four plates accessible.

★ **High Intensity CR Patterns** through use of adequate high voltage power supply with 2X2 rectifier.

★ **The Circuit and Tube Complement**—6C4 Vertical input cathode follower. 6CB6 first "V" amplifier. 6C4 "V" phase inverter. Push-Pull 6AU6's vertical CR driver. 7N7 first "H" amplifier and phase inverter. Push-Pull 6AU6's horizontal CR driver. 7N7 Multi-vibrator internal linear sweep oscillator. 5Y3 low voltage rectifier. 2X2 high potential rectifier. VR-150 voltage regulator. 5CPI/A CR Tube.

★ **7 Four-Way Lab.-Type Input Terminals**—Take banana plugs, phone tips, bare wire or spade lugs.

★ **Light Shield and Mask** removable and rotatable.

★ **Extra Heavy-Duty Construction** and components to assure **"Precision"** performance.

★ **Heavy Gauge, Etched-Anodized, No-Glare, Aluminum Panel.**

★ **Fully Licensed** under patents of W. E. and A. T. & T. Co's.

★ **Series ES-500A** (illustrated)—In louvred, black-ripple, heavy gauge steel case. Size 8¼" x 14½" x 18". Complete with light shield, calibrating mask and instruction manual.
Code: Quick. **NET PRICE $169.50**

Series TV Super-High Voltage Television Safety Test Probes On Page F-45

-PRECISION- TEST EQUIPMENT

STANDARD OF ACCURACY

All prices subject to change without notice

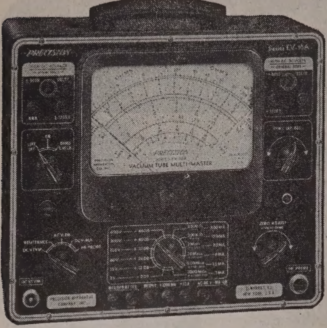
PRECISION SERIES EV-10A VTVM — Megohmmeter

TRUE ZERO-CENTER VTVM WITH 7" FULL-VIEW METER

FOUR DIRECT READING HIGH FREQUENCY SCALES

Plus standard 1000 Ohms per Volt Functions.

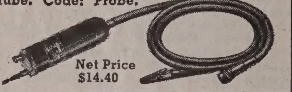
Ranges to 6000 Volts, 2000 Megohms, 12 Amperes, +70 DB.



- **EV-10A (MCP)** (illustrated) In black ripple finished, heavy gauge steel case. Size 10½" x 12" x 6". Complete with tubes, battery, and test probes. **Code: Place. NET PRICE $94.50**
- **EV-10A (P)** In hardwood portable case with tool compartment. **Code: Phone. NET PRICE $97.25**
- **EV-10A (PM)** Consists of Series EV-10A on steel panel. Size 12¼" x 19", for standard rack mount. **Code: Panel. NET PRICE $100.00**

★ SERIES RF-10A VACUUM TUBE R.F. PROBE

Accessory for Series EV-10A & EV-20; affords direct high frequency voltage measurements. Connects directly to VTVM panel. Employs 9002 miniature tube. Code: Probe.



Net Price $14.40

A WIDE-RANGE, ZERO-CENTER ELECTRONIC INSTRUMENT, stressing the utmost in performance, accuracy, and ease of manipulation. The Series EV-10A permits rapid check of voltage, current, and resistance conditions encountered in modern A.M., F.M., and TV Networks, without materially disturbing the performance of circuits under analysis.

RANGE SPECIFICATIONS

- ★ **Eight All Zero-Center VTVM Ranges.** ±3, ±12, ±60, ±120, ±300, ±600, ±1200, ±6000 volts D.C.
- ★ **High Input Resistance —**
  13⅓ megs. constant to 600 volts.
  26⅔ megohms at 1200 volts.
  133⅓ megohms at 6000 volts.
- ★ **4 Direct Reading High Freq. Ranges:** 0-3-12-60-120 volts (Requires Series RF-10A High Frequency Vacuum Tube Test Probe described and illustrated at left.)
- ★ **Ranges to ±30 KV. and ±60 KV.** when employed with Series TV High Voltage Probe described on page F-45.
- ★ **Six Ohmmeter-Megohmmeter Ranges:**
  0-2000-200,000 ohms.
  0-2-20-200-2000 megohms.
- ★ **Eight A.C.-D.C. and Output Voltage Ranges** at 1000 ohms per volt. 0-3-12-60-120-300-600-1200-6000 V.
- ★ **Eight D.C. Current Ranges:**
  0-300 microamperes
  0-1.2-6-30-120-600-1200 MA. 0-12 amps.
- ★ **Eight DB Ranges:** -20 to +77DB. Calibrated for 1MW, 600 ohms zero DB.

IMPORTANT FEATURES

- ★ **Voltage Regulated—Bridge Type Circuit:** affords practical freedom from tube and line voltage variations.
- ★ **True Zero-Center VTVM—Indicates both** magnitude and polarity **without** reversal of test prods **on all ranges.**
- ★ **Rotary Range and Function Selectors** minimize shifting of test leads.
- ★ **Recessed 6000 volt Safety Jacks.**
- ★ **Shielded Coax Test-Cable Connectors** permit both D.C. and R.F. probes to be connected simultaneously.
- ★ **Duo-Balanced Electronic—Bridge Ohmmeter—Megohmmeter.** Uses 2 self-contained 1.5 volt batteries.
- ★ **Special 1000 Ohms/Volt Functions** permit routine AC-DC circuit tests free of need for power line.
- ★ **Extra-large 7" Rectangular Meter.** 200 microampere, ±2% sensitivity.
- ★ **Highest Quality Components** employed throughout • 1% wire, film and matched resistors • Silverplated switch contacts • Leakage-resistant, plastic insulated hook-up wire • Etched-anodized aluminum panel • Heavy duty line cord.

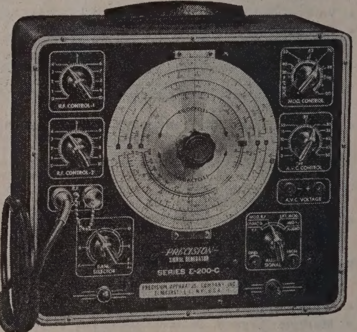
Precision Series E-200-C Signal Generator

A Modern Multi-Band Signal and Marker Generator for A.M., F.M., and Television Alignment.

Featuring "Servicing by Signal Substitution." The Dynamic Speed Approach to Receiver Alignment and Adjustment Problems.

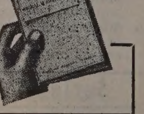
SPECIFICATIONS

- ★ FREQUENCY COVERAGE: 88 KC. to 120 MC. 30 MC. on fundamental. 6½" Dial direct reading in 8 bands to 120 MC. No charts required.
- ★ ACCURACY — CONSTANCY OF CALIBRATION: 1% accuracy on all bands. Uses "PRECISION" developed "UNIT-OSCILLATOR" construction.
- ★ 0-1000 POINT VERNIER SCALE, direct reading to one part in 1000.
- ★ THE CIRCUIT—single-ended 6SJ7 in stable E.C.O. circuit—modulated by a 6C5 sine-wave audio oscillator. 5Y3 Full wave rectifier.
- ★ 400 CYCLE SINE-WAVE AUDIO OSCILLATOR — over 50 volts output.
- ★ DUAL R.F. ATTENUATORS — smooth stepless control of R.F. signal.
- ★ SHIELDING — Compartment shielding of vital components — Power transformer electrostatically shielded—A.C. line is R.F. filtered.
- ★ SHIELDED COAXIAL OUTPUT CABLE and (LO-HI) cable connectors.
- ★ FOUR TYPES OF SIGNALS — "Unmod. R.F.", "400 cycle Mod. R.F.", "EXTERNALLY Mod. R.F.", "400 cycle Audio Output."
- ★ DIRECT READING VARIABLE MODULATION — 0-100% — triples signal utility as against obsolete fixed modulation of only 30 or 40%
- ★ DIRECT READING A.V.C.-A.G.C. SUBSTITUTION SYSTEM — Overcomes alignment troubles arising from varying receiver A.V.C. and A.G.C. voltage.
- ★ HAND CALIBRATED — Each instrument is INDIVIDUALLY calibrated.
- ★ FULLY LICENSED under patents of A. T. & T. and W. E. Co's.
- ★ Not only an efficient Signal Generator for purposes of alignment but also SPECIFICALLY DESIGNED for "Servicing by Signal Substitution."
- ★ IDEAL MARKER GENERATOR — Exceptional stability and high accuracy renders Series E-200-C an excellent variable frequency Marker Generator for use with the Series E-400 or similar high quality Sweep Signal Generator.



★ **Series E-200-C** — (illustrated) In black ripple finished, portable steel case. Size 10½x12x6". Complete with tubes, output cable and FREE copy of "Servicing by Signal Substitution."
Code: Trade. NET PRICE $71.25

★ **E-200-C-PM**—Consists of Series E-200-C on steel panel size 12¼x19", for standard rack mount.
Code: Trace. NET PRICE $76.75



"SERVICING BY SIGNAL SUBSTITUTION" 12th Edition . . . The modern ECONOMICAL solution to your daily service problems . . . Nothing complex to learn, no extraneous equipment to purchase . . . A systematic method of DYNAMIC SIGNAL ANALYSIS based entirely on fundamentals . . . Fully described in a bound illustrated text "Servicing by Signal Substitution." This highly valuable book is supplied with Series E-200-C at no charge.
Additional copies available at your Precision distributor or directly from factory at 40c per copy.

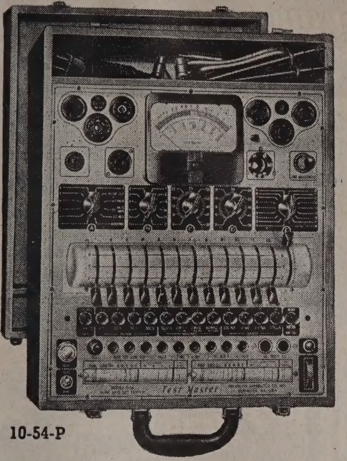
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 10-54 *Electronamic Test Master*

Combination Tube Performance Tester, Battery Tester, and 35 Range, Push-Button Operated, Supersensitive, A.C.-D.C. Set Tester.

Ranges to 6000 Volts, 60 Microamps, 12 amps, +70 DB, 60 Meg. 20,000 Ohms per Volt D.C.—1000 Ohms per Volt A.C.


10-54-P

ELECTRONAMIC (Reg. U. S. Patent Office)

More than just Mutual Conductance: (Technical details in main catalog)

Series 10-54 affords to the discriminating instrument purchaser, THE COMPLETE PORTABLE SERVICE LABORATORY; engineered to meet the expanding needs of modern radio electronics. Provides every necessary facility for high speed, reliable tube and circuit testing associated with Industrial Electronics, Communications, Radio (A.M.-F.M.), Television, Laboratory, etc. . . .

CIRCUIT TESTING FEATURES

A complete, wide-range, high speed, push-button operated, super-sensitive test set without any additional panel controls. Self-contained.

- ★ **Six D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **Six A.C. Voltage Ranges:** 1000 ohms per volt.
- ★ **Six Output Ranges** at 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **Ranges to 60,000 Volts D.C.** via use of Series TV Super high voltage test probe. Not included with 10-54. See page F-45.
- ★ **Seven D.C. Current Ranges:**
  0-60-120 microamperes.
  0-1.2-12-120-1200 MA. and 0-12 amperes.
- ★ **Four Self-Contained Resistance Ranges:**
  0-6000-600,000 ohms; 0-6-60 megohms.
- ★ **Six Decibel Ranges** from —20 to +70 DB.
- ★ **Automatic Push-Button** range selection.
- ★ **1% Wirewound and Metallized Resistors.**

TUBE AND BATTERY TESTING FEATURES

- ★ A TUBE "PERFORMANCE" TESTER: "Precision" ELECTRONAMIC circuit, effectively tests all tubes over a complete "Path of Operation" not just at one arbitrary operating point or for just one inconclusive characteristic.
- ★ TESTS ALL MODERN TUBE TYPES: Noval 9 pin, 7 pin Acorn, dual capped H.F. tubes, Single-Ended TV. and F.M. amplifiers, low power transmitting tubes, sub-miniature types, etc. . . . **including direct facilities up to twelve element prongs!**
- ★ ABSOLUTE FREE-POINT LEVER ELEMENT SELECTION: Highest possible, practical order of obsolescence insurance. Locates every tube element regardless of base position.
- ★ ABSOLUTE FREE-POINT, INTER-ELEMENT SHORT-CHECK and Visible Filament Continuity System.
- ★ DUAL SHORT-CHECK SENSITIVITY: Permits special application tube selection.
- ★ INDIVIDUAL TUBE SECTION TESTS of multi-section tubes.
- ★ A.M. and F.M. CATHODE RAY TUNING INDICATORS directly tested.
- ★ FILAMENT VOLTAGES ¾ to 117 V.
- ★ BALLAST UNIT TESTS.
- ★ NOISE and CONDENSER TESTS.
- ★ MICRO-LINE ADJUSTMENT via continuously variable line voltage control.
- ★ PILOT AND SIGNAL LIGHT TESTS.
- ★ ACCURACY of test circuits closely maintained by use of individual, internal calibrating controls.
- ★ ROLLER TUBE CHART: BUILT-IN.
- ★ EXTRACTOR FUSE POST.
- ★ Test circuits completely transformer-isolated from power line.
- ★ TELEPHONE-TYPE, CABLED, plastic-insulated, moisture-resistant wire.
- ★ 4⅝" FULL VISION METER: 50 microampere, 2% accuracy.
- ★ TESTS RADIO A, B and C DRY BATTERIES via a "PRECISION" engineered circuit which performance checks each battery under actual load conditions. **Battery quality read directly on a 3-color scale.**

10-54-P (illustrated above) Hardwood, tapered, portable case, 13¾"x17¼"x6¾". With ohmmeter batteries and high voltage test leads.
Code: Habit.
NET PRICE $139.50

10-54-C (see 10-12-C illustration and description below) In modern, attractively finished, steel counter cabinet.
Code: Handy. Complete: NET PRICE $144.25

10-54-PM (see 10-12-PM illustration and description below) In standard Panel Mount, with dust cover.
Code: Harem. Complete: NET PRICE $144.25

Series 10-12 *Electronamic Tube Master*

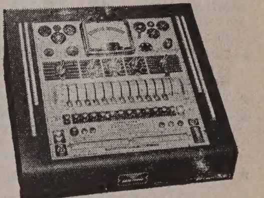
Truly Free-Point Tube and Battery Performance Tester.

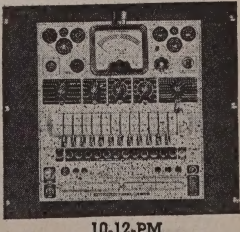
ELECTRONAMIC (Reg. U. S. Patent Office)

More than just Mutual Conductance: (Technical details in main catalog)

The 10-00 Series of TUBE and TEST MASTERS represent the culmination of many years' development of tube testing equipment to meet the exacting needs of the rapidly advancing field of electronics.

Incorporating the "PRECISION" ELECTRONAMIC Tube Performance Testing Circuit, plus an advanced, "PRECISION" developed, multiple element, master lever selector system, it truly can be said that the MASTER 10-00 Series offers, to the discriminating equipment purchaser, the highest possible practical order of test results and anti-obsolescence insurance.


10-12-C


10-12-PM

TUBE AND BATTERY TESTING FEATURES

The Series 10-12 Electronamic Tube Master incorporates the same time-proven circuit and exacting performance details described for the Series 10-54, above, under the heading: "Tube and Battery Testing Features."

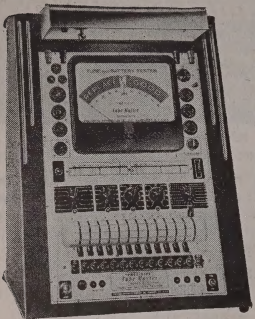
★ **10-12-P** (see 10-54-P illustration and description above) In hardwood, tapered, portable case with tool compartment. **Code: Facil.**
Complete: NET PRICE $101.75

★ **10-12-C** (illustrated at right) In modern, chrome-trimmed, round edged counter cabinet. Fine dull black ripple finish on heavy gauge steel. Size 17"x17⅞"x7½" sloping to 3" at front. **Code: Faith.**
Complete: NET PRICE $106.50

★ **10-12-PM** (illustrated at right) Consists of 10-12 chassis, mounted onto standard size steel panel, 17½"x19" with dust cover. Fine, dull black ripple finish.
Code: Favor.
Complete: NET PRICE $106.50

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice



Series 10-15 *Electronamic Test Master*
Ultra-Modern, De Luxe Tube and Battery Merchandiser With Large 9 Inch Meter

ELECTRONAMIC (Reg. U. S. Patent Office)
More than just Mutual Conductance:
(Technical details in main catalog)

- ★ Incorporates the **Electronamic** tube performance and battery testing circuit, described for Series 10-54 on page F-43.
- ★ Designed particularly for equipment-conscious, progressive radio service-sales organizations, and tube-selling sections of department stores.
- ★ PROMOTE CUSTOMER CONFIDENCE and **tube sales** via this impressive **"Precision"** Tube Merchandiser.
- ★ DIRECT READING non-confusing tube performance indications in large, easy reading terms of Replace-Weak-Good.
- ★ ILLUMINATED by built-in, large chromium reflector.
- ★ **10-15 Tube and Battery Merchandiser** (illustrated). Heavy gauge steel cabinet in fine, dull black ripple, with chrome trim and reflector. Size 24" high, 17½" wide, base depth 10" tapering to 4" at top.
  Code: Gable. Complete: NET PRICE $143.50
- ★ **10-15PM**—On heavy gauge steel panel with dust cover. Panel 22¾" x 19" for standard rack mount. Fine, dull black ripple finish.
  Code: Gavot. Complete: NET PRICE $138.25

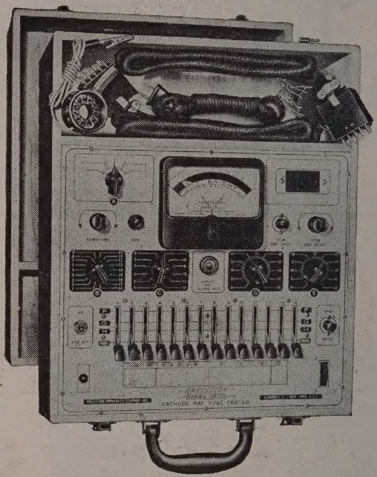
Series CR-30 CATHODE RAY TUBE TESTER
TESTS ALL TV PICTURE TUBES
(Magnetic and Electrostatic)
OSCILLOSCOPE AND INDUSTRIAL CATHODE RAY TYPES

Series CR-30 is a complete, self-contained instrument particularly engineered for the very special needs of reliable, rapid and economical cathode ray tube testing, in the field, shop or laboratory.

Series CR-30 is indispensible to the efficient TV Service-Installation Technician, TV Service Laboratory and wherever one is called upon to answer the performance question, "Is it the cathode ray tube or is it the chassis?"

Series CR-30 incorporates a Beam Current test circuit which checks overall electron-gun performance for Proportionate Picture Brightness. Additional direct testing facilities are provided for positive check of accelerating anodes and deflection plate elements.

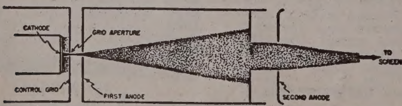
The Precision CR-30 should not be confused with mere adapters connecting to ordinary receiving tube testers which were never designed to meet the very specialized needs of CR tube checking. Similarly, it is not to be confused with neon lamp units or similar devices of limited technical merit and which do not check all CR tubes or all tube elements.



GENERAL AND TECHNICAL SPECIFICATIONS

- ★ **Tests All Modern Cathode Ray Tubes**—Magnetic and Electrostatic, 'Scope Tubes and Industrial Types without removal from carton or TV chassis.
- ★ **Tests All CR Tube Eelements**—Not just a limited few.
- ★ **Absolute Free-Point 14 Lever Element Selection System,** independent of multiple base pin and floating element terminations, for Short-Check, Leakage Testing and Quality Tests. Affords maximum anti-obsolescence insurance.
- ★ **Beam Current Test Circuit** checks all CR Tubes and Electron-gun in operation. It is the Electron Beam (and NOT total cathode emission) which traces the pictures or patterns on the face of the CR tube.

  Total cathode emission can be very high and yet Beam Current (and picture brightness) unacceptably low. **The CR-30 will reject such tubes** because it is a **Beam Current** tester. Conversely, total cathode emission can be low and yet Beam Current (and picture brightness) perfectly acceptable. **The CR-30 will properly pass such tubes** because it is a **Beam Current tester.** The significance of the above rests in the fact that Beam Current (and picture brightness) is primarily associated with the condition of the **center** of the cathode surface and not the overall cathode area. (See illustration below.)



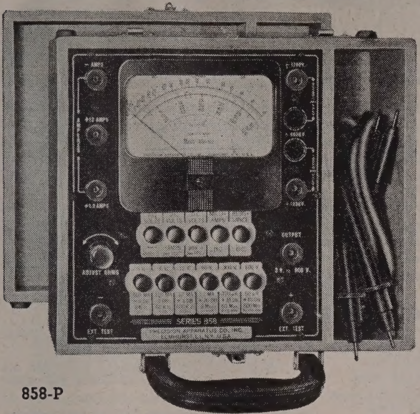
- ★ **Voltage Regulated, Bridge Type VTVM** provides the heart of the super-sensitive, tube quality test circuit. Such high sensitivity is also required for positive check of very low current anodes and deflection plates.
- ★ **Multiple Test Sensitivities** plus selectable element test potentials permit proper accommodation of all CR tube types, Magnetic and Electrostatic.
- ★ **Micro-Line Voltage Adjustment**
  Meter-monitored at filament supply.
- ★ **Accuracy** of test circuits closely maintained by use of factory adjusted internal calibrating controls; plastic insulated, telephone type cabled wiring; highest quality, conservatively rated components.
- ★ **Built-in, High Speed, Roller Tube Chart.**
- ★ **Test Circuits** Transformer isolated from power line.
- ★ **4⅝" Full Vision Meter** with scale-plate especially designed for CR tube testing requirements.
- ★ **Heavy Gauge Aluminum Panel,** etched and anodized.
- ★ **PLUS** many other **special "PRECISION"** details and features.

SERIES CR-30—In hardwood, tapered portable case, with hinged removable cover. Extra-Wide Tool and Test Cable Compartment. Overall Dimensions 17¼" x 13¾" x 6¾". Complete with standard picture tube cable, universal CR Tube Test Cable and detailed Instruction Manual.
Code: Daisy. **NET PRICE $99.75**

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 858 High Sensitivity *Multi-Master*
Dual-Range Sensitivity
High Speed, A.C.-D.C. Multi-Range Test Set. 54 Ranges to 6,000 Volts, 60 Microamperes, 12 Amps, 600 Megs. +70DB. 20,000 and 1,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C.



858-P

Series 858 MULTI-MASTER features a "Precision" designed, positive action Push-Button Range and Function selection system, affording the ultimate in operational efficiency.

Designed for reliable measurements in modern T.V., F.M., A.M. and other critical electronic circuits where only minute current drain of the measuring instrument can be tolerated.

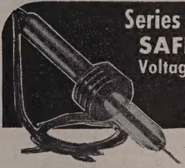
The dual-range sensitivity feature provides the equivalent of another instrument at standard 1000 ohms per volt sensitivity, in conformance with many point to point voltage readings listed by receiver service manuals.

When employed in conjunction with the Series TV super-high voltage test probe (described below), direct reading facilities to 60,000 volts are provided.

- ★ **858-P** (illustrated) In hardwood, portable case, with tool compartment. Size 9"x10"x4½". Complete with ohmmeter batteries and high voltage test leads. **Code: Judge.** **NET PRICE $59.75**
- ★ **858-L** In modern bakelite case with plastic carrying handle. Size 7½" x 8½" x 3". Complete with ohmmeter batteries and high voltage test leads. **Code: Jetty.** **NET PRICE $56.50**

SPECIFICATIONS

- ★ EIGHT D.C. VOLTAGE RANGES both 20,000 and 1000 ohms per volt.
- ★ EIGHT A.C. and OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.
- ★ EIGHT D.C. CURRENT RANGES: 0-60-120 microamperes. 0-1.2-12-120-600 MA. 0-1.2-12 amps.
- ★ SIX RESISTANCE RANGES: self-contained to 60 megohms. 0-6000-60,000-600,000 ohms. 0-6-60-600 megohms.
- ★ EIGHT DB RANGES: —26 to +70DB.
- ★ Two Pin Jacks for all standard ranges.
- ★ 4⅝" 50 microamp. meter. ±2%.
- ★ 1% Wire and Metallized Resistors.
- ★ Safety Jacks for 6000 volt ranges.
- ★ HIGHEST GRADE MATERIALS and plastic insulated wiring employed.
- ★ ETCHED AND ANODIZED, heavy gauge aluminum panels: resistant to moisture and wear.



Series TV Super High Voltage SAFETY TEST PROBES*
Voltage Ranges to 60,000 Volts D.C.
With standard V.T.V.M.
or high sensitivity V-O-M

* U. S. Patent No. Des. 162813

"Precision" engineering solves the high voltage TV. test problem with utmost safety to the operator. *Series TV. has been custom designed and patent protected for YOUR safety FIRST.* Cartridge style high voltage tubular multiplier permits use of a single "TV" probe with most popular high sensitivity test sets and V.T.V.M.'s. *See reverse side of "Precision" price sheet for details.)*

The brief features below reveal how Series TV. has been *specifically engineered* as a true High Voltage Testing Device.

- ★ **Custom Molded Polystyrene Head,** heavy duty bakelite handle and barrier, specially machined internal lucite components, all spell out "HIGH VOLTAGE ENGINEERED."
- ★ **High Dielectric Anti-Leakage Paths** and wide, multi-channelled guard-barrier reiterate "HIGH VOLTAGE ENGINEERED."
- ★ **Internal and External Protective Grounding** — Full handle length grounded internal flash-over-shield. External, grounded arc-back barrier. HIGH VOLTAGE ENGINEERED!
- ★ **Heavy Duty Shielded Connecting Cable.**
- ★ **Ceramic, Helical Film-Type, Cartridge Multiplier** manufactured specifically for VERY HIGH VOLTAGE APPLICATION. **Removed and changed without tools!**
- ★ **Positive Grounds and HV Connections** via high compression contact springs.

SERIES TVP—Test Probe less multiplier cartridge, with instructions. **Code: Ebony.** **NET PRICE $12.35**

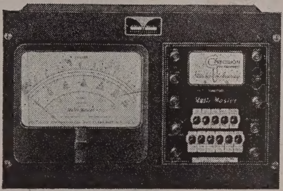
SERIES TV-1 (illustrated) with 30 KV cartridge for "Precision" Series EV-10 and EV-10A VTVM. **Code: Elegy.** **NET PRICE $14.75**

SERIES TV-2 with 30 KV cartridge for "Precision" (or any) 20000 ohms/V. test set with 6000 V. range. **Code: Every.** **NET PRICE $14.75**

SERIES TV-3 with 30 KV cartridge for "Precision" Series EV-20 VTVM. **Code: Eclat.** **NET PRICE $14.75**

TVM — Cartridge Multipliers only for Series TV. See reverse side of "Precision" price sheet.

Series 866 De Luxe *Multi-Master*
Panel-Mounted A.C.-D.C. Test Set,
9" Meter and Remote-Control Selector Unit
5000 and 1000 Ohms per V., D.C., 1000 Ohms per V., A.C.



A laboratory type, high sensitivity test set indispensable to the well equipped, modern test laboratory and electronics classroom.

The extra-large 9" meter and remote-control selector unit afford unparalleled operational efficiency with maximum physical meter protection via panel mounting above the work level.

RANGE SPECIFICATIONS OF SERIES 866 are similar to those described for Series 858 above. 5000 and 1000 ohms/V.D.C.

54 ranges to 6000 volts, 300 microamperes, 12 amperes, 200 megohms, +70 DB.

- ★ **866** (illustrated) In standard panel mount, size 19"x12¼" with dust cover. Complete with high voltage test leads and ohmmeter batteries. **Code: Novel.** **NET PRICE $74.50**

Series 847 Dual Sensitivity *Multi-Master*
5000 and 1000 Ohms per Volt

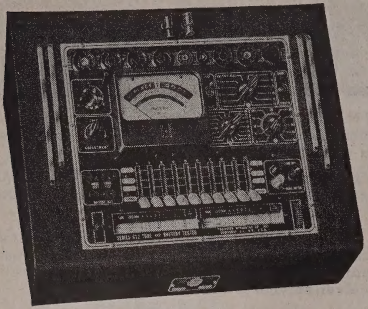
Physically similar to Series 858 at top of page, the Series 847 is a moderate sensitivity, wide range test set specifically prescribed for applications wherever ruggedness is of greater import than extremely high sensitivity. Range specifications are identical to the Series 866 above.

- ★ **847-L — Code: Index .... NET PRICE $51.25**
- ★ **847-P — Code: Ivory .... NET PRICE $54.50**

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 612 CATHODE CONDUCTANCE TUBE TESTER
A Modern, Free Point, Lever Operated Tube and Battery Tester.



The new "600" Series brings to the field of modern electronic tube checking *the highest practical order of obsolescence insurance with utmost simplicity of operation, AT MODERATE COST.* This has been achieved with full conformity to the well-known "Precision" standards of quality, workmanship, and performance.

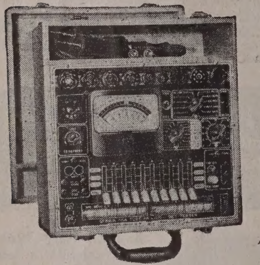
The "600" tube testing parameters are based upon the well-established, time-proven emission testing principles as have been recommended by both tube manufacturers and R.T.M.A. The "600" line affords advanced design features and performance which render it incomparable amongst instruments in its category and price range.

- ★ **612-C** (illustrated) In modern, chrome-trimmed, counter cabinet. Black ripple finish. Size 16" x 13½" x 7", sloping to 3" at front. **Code: Bison. Complete: $72.25**
- ★ **612-P** In hardwood, portable case (as illustrated for 654, below). Size 12" x 13" x 6". **Code: Begin. Complete: $72.50**
- ★ **612-MCP** Open style Metal Case Portable. Size 10½" x 12" x 6". **Code: Brine. Complete: $69.75**
- ★ **612-PM** In standard size panel mount 12¼" x 19" with dust cover. **Code: Blaze. Complete: $75.25**

TUBE AND BATTERY TESTING FEATURES

- ★ TESTS ALL MODERN TUBE TYPES including 7 pin Acorns, Noval 9 pin, dual capped H.F. tubes, F.M. and TV. amplifiers.
- ★ FILAMENT VOLTAGES ¾ to 117 volts.
- ★ ABSOLUTE FREE-POINT 10 element lever selection for merit and short tests.
- ★ 4½" METER, 2% ACCURACY.
- ★ DUAL SHORT-CHECK SENSITIVITY.
- ★ INDIVIDUAL TESTS OF MULTI-SECTION TUBES including tuning indicators.
- ★ BALLAST UNIT TESTS.
- ★ MICRO-LINE ADJUSTMENT.
- ★ NOISE and CONDENSER TEST pin jacks.
- ★ Pilot Light Test Socket.
- ★ DYNAMIC "UNDER-LOAD" TEST for all popular radio A, B, and C dry batteries.
- ★ Built-in, brass geared roll chart.
- ★ Anodized, deep-etched, heavy gauge aluminum panel, resistant to wear.
- ★ Panel-mounted Fuse Extractor Post.
- ★ Telephone type cabled, plastic-insulated, moisture resistant hook-up wire.
- ★ Each instrument individually calibrated and sealed.

Series 654 COMBINATION TUBE, BATTERY & SET TESTER
20,000 OHMS PER VOLT D.C. 1,000 OHMS PER VOLT A.C.
Ranges to 6,000 V., 120 Microamperes, 12 Amps., 60 Megs., + 70 DB.



The Series 654 is available in the same four model types as described for the Series 612 above.

	Code	Net Price
654-P (Illus.)	Hardy	$109.75
654-MCP	Hurry	$107.00
654-C	House	$112.50
654-PM	Heart	$112.50

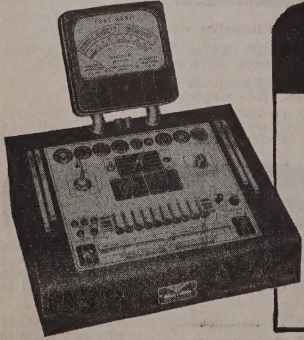
★ SERIES 654 is an economical, compact *High Sensitivity Service Laboratory* designed to meet the specific needs of modern electronics service, installation and maintenance, A.M., F.M., and TV.

Series 654 incorporates the identical tube and battery testing features of the Series 612 above, *PLUS* a complete wide range, high sensitivity A.C.-D.C. circuit tester.

CIRCUIT TESTING FEATURES

- ★ **5 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **5 A.C. and Output Voltage Ranges:**
  1000 ohms per volt.
  0-12-60-300-1200-6000 volts.
  Ranges to 60,000 Volts D.C. via use of Series TV. Super high voltage test probe. Not included with 654. See page F-45.
- ★ **6 D.C. Current Ranges:** 0-120 microamperes. 0-1.2-12-120 MA. 0-1.2-12 Amperes.
- ★ **3 Wide Resistance Ranges:** 0-600-600,000 ohms. 0-60 Megs. Self-contained batteries.
- ★ **5 Decibel Ranges** from —12 to +70 DB.
- ★ **Fully Rotary Selective** Ranges and Functions.
- ★ **Only 2 Pin Jacks** for all standard ranges.
- ★ Recessed 6,000 V. safety pin jacks.
- ★ 50 microampere, 4⅝" Wide-Angle meter.
- ★ 1% Wirewound and film-type resistors.
- ★ All circuits isolated from power line.

Series 614 DE LUXE TUBE & BATTERY MERCHANDISER
Counter Display Type Tube and Battery Tester with Large 7" Chrome Trimmed Meter.



The Series 614 has been designed for the progressive tube and battery department where an exceptionally attractive instrument is desired to step-up tube and battery sales with minimum investment.

The 7" meter provides a full view of test results.

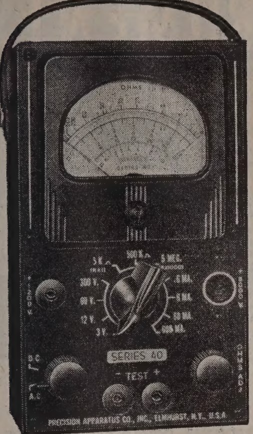
The tube and battery testing circuit of Series 614 is electrically identical to that described for Series 612 at top of page.

★ **614 Tube and Battery Merchandiser** (illustrated)—In modern, chrome-trimmed, fine black ripple finished cabinet. Offset mounted meter. Cabinet size 16" x 13½" x 7", slopes to 3". **Code: Early. NET PRICE $94.50**

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

Series 40 Compact Wide-Range Circuit Tester

31 Range A.C.-D.C. Test Set . . . Self-Contained to 6000 Volts, 600MA, +70DB, 5 Megohms with Full Size 3" Rectangular Meter. 1000 Ohms per Volt A.C. and D.C.



★ **Series 40** (illustrated) In molded bakelite case with plastic handle. 3¾"x 6¼"x2½". Complete with ohmmeter batteries and test leads. **Code: Visit.**
NET PRICE $26.25

In molded bakelite carying case, Series 40 meets the need for a compact, yet rugged test set to withstand hard usage as is imposed by the service technician, maintenance engineer, production inspector, trouble-shooter, etc.

The Series 40 offers every advanced design feature and full-bodied components as are regularly incorporated in "Precision's" larger multi-range test sets, including: Rotary Range Selection—1% shunts and multipliers—heavy duty insulated pin jacks—Large numeralled, easy reading meter.

ALL RANGES, including 6000 volts and 5 Megohms, are SELF-CONTAINED NO EXTERNAL BATTERIES OR MULTIPLIERS ARE REQUIRED.

RANGE SPECIFICATIONS

- ★ 6 A.C.-D.C. AND OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-12-60-300-1200-6000 volts.
- ★ 4 D.C. CURRENT RANGES: 0-.6-6-60-600 MA.
- ★ 3 RESISTANCE RANGES: 0-5000-500,000-5 megohms.
- ★ 6 DECIBEL RANGES —22 to +70 DB.
- ★ FULL SIZE 3" RECTANGULAR METER: 400 microamperes ±2%.
- ★ 1% WIRE & FILM-TYPE RESISTORS.
- ★ ONLY 2 PIN JACKS serve all standard functions.
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, etched aluminum panel: resistant to moisture and wear.

LC-2 LEATHER INSTRUMENT CASE: Genuine top-grain heavy cowhide case, custom designed for the Series 40. Richly finished in dark brown. **Code: Young. NET PRICE $5.75**

Series 85 High Sensitivity Test Set

20,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C. 34 Self-Contained Ranges to 6000 Volts, 120 Microamperes, 12 Amperes, +70DB, 60 Megohms.

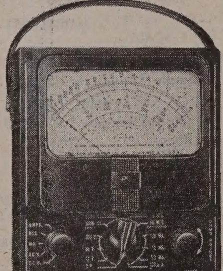
The Series 85 is a bakelite cased, laboratory styled, portable instrument.

Combining high sensitivity with small overall size, Series 85 is "Application Engineered" for production, lab., school and service-maintenance phases of modern electronics: A.M., F.M., and TV.

★ **When used with the Series TV super-high voltage test probe, D.C. voltage ranges up to 60,000 volts are provided for Television and similar high potential, low current circuits. See page F-45.**

SPECIFICATIONS

- ★ **6 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **6 A.C.-Output Voltage Ranges:** 1000 ohms per volt 0-3-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0-120 microamps. 0-1.2-12-120 MA and 0-1.2-12 amps.
- ★ **4 Resistance Ranges:** Self-contained. 0-6000-600,000 ohms; 0-6-60 megs.
- ★ **6 Decibel Ranges:** —26 to +70DB.
- ★ **4⅝" Rectangular Meter.** 50 Microampere. 2% accuracy.
- ★ **1% Wire & Film-type Resistors.**
- ★ **Rotary Range Selection:** All standard functions at 2 tip jacks.
- ★ Recessed 6000 volt safety jacks.
- ★ Anodized, heavy gauge, etched aluminum panel: resistant to moisture and wear.
- ★ **Series 85** (illustrated) in molded bakelite carrying case with plastic handle. 5½" x 7⅛" x 3". Complete with ohmmeter batteries and test leads. **Code: Waist. NET PRICE $39.95**



Series 85

Series 80 Wide Range Test Set

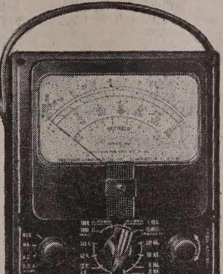
1000 Ohms per Volt A.C. and D.C. 34 Self-Contained Ranges to 6000 Volts, 12 Amperes, +70DB, 10 Megohms.

The Series 80, laboratory styled, rotary selective, multi-range circuit tester has been designed to meet the same high calibre performance standards as the Series 85 (at left) but is specifically intended for use wherein greater resistance to electrical and physical overload is of more importance than extremely high sensitivity.

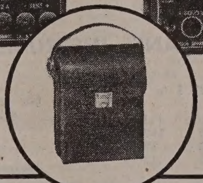
"Application Engineered" for general purpose industrial and radio service-maintenance-test requirements.

SPECIFICATIONS

- ★ **6 A.C.-D.C.-Output Voltage Ranges:** 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0-.6-6-60-300 MA and 0-1.2-12 amps.
- ★ **4 Resistance Ranges:** Self-Contained. 0-1000-100,000 ohms. 0-1-10 megohms.
- ★ **6 Decibel Ranges:** from —20 to +70DB.
- ★ **4⅝" Rectangular Meter:** 400 microampere, 2% accuracy.
- ★ **1% Wirewound and Film-type Resistors.**
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, etched aluminum panel resistant to moisture and wear.
- ★ **Series 80** (illustrated) In molded bakelite carrying case with plastic handle. 5½"x7⅛"x3". Complete with ohmmeter batteries and test leads. **Code: Weave. NET PRICE $34.50**



Series 80



Series LC-1

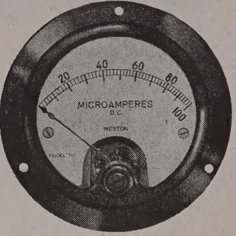
LC-1 LEATHER INSTRUMENT CASE

Custom designed for the Series 80 and 85. Includes a tool and test lead compartment.

Genuine top-grain heavy cowhide with waterproof lined suede interior. Adjustable hand or shoulder strap. Positive snap-lock. Richly finished in dark brown. **Code: Yearn.**
NET PRICE $9.50

All prices are subject to change without notice

Weston RADIO INSTRUMENTS

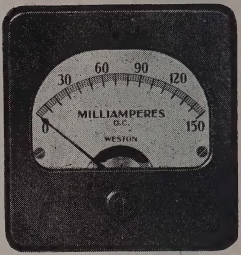


Round Style

PANEL INSTRUMENTS

These panel instruments reflect half a century of instrument skill, and the Weston tradition of building instruments to the highest standards of dependability and service.

Models 301, 425 and 476 are available in round flush bakelite cases 3½" or 3⅜", and 3¼" metal cases with black finish; also in round surface metal and rectangular flush bakelite cases. Models 301 and 425 supplied in round surface bakelite cases. Models 506, 507, 517 regularly supplied in round flush 2½" bakelite and black finished metal cases; flush narrow flange metal and rectangular flush bakelite cases with a clamp for panel mounting. Model 506 available in surface metal case. All are calibrated normally for use on non-magnetic panels. For magnetic panel use, instruments will be adjusted for steel panel thickness of .09". Order instruments in bakelite cases for use on circuits above 300 volts when it is not possible to connect in grounded side of line. For other instrument prices, write to Weston Electrical Instrument Corporation, Newark 5, New Jersey.



Rectangular Style

3½" PANEL INSTRUMENTS

MODEL 301 — D-C VOLTMETERS

Approximate resistance of Model 301 in ohms per volt — 1 to 40 volts, 62; 50 to 150 volts, 200; 200 volts, 250.

Range	Price	Range	Price	Range	Price
3	$14.25	15	$14.25	150	$15.75
5	14.25	30	14.25	200	16.50
8	14.25	50	14.25		
10	14.25	100	15.00		

With Resistance of 1,000 ohms per volt

Range	Price	Range	Price	Range	Price
50	$15.00	300	$18.75	1.5KV	$41.75*
100	15.75	500	23.25	2 KV	46.75*
200	17.25	1KV	30.75	3 KV	56.75*

* Supplied with external resistor.

MODEL 301 — D-C MILLIAMMETERS *

Range	Approx. Res. Ohms	Price	Range	Approx. Res. Ohms	Price
1	105	$14.25	30	1.2	$14.25
1.5	27	14.25	50	2.0	14.25
2	27	14.25	100	1.0	14.25
5	5.7	14.25	150	0.66	14.25
10	2.0	14.25	200	0.5	14.25
15	2.0	14.25	300	0.33	14.25
20	2.0	14.25	500	0.2	14.25

* Milliammeters with ranges above 40 MA. are shunted, and have a drop of approximately 100 MV.

MODEL 301 — D-C AMMETERS *

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

* Ammeters are supplied in self-contained ranges up to 50 amperes inclusive, and have a drop of 50 MV ±5%. Ranges above 50 amperes require external shunts.

MODEL 301 — D-C MICROAMMETERS

Range	Price	Range	Price
20	$30.00	100	$27.00
30	30.00	200	18.00
50	28.25	500	18.00

MODEL 301 — RECTIFIER TYPE A-C VOLTMETERS

Range	1000 ohms per volt	2000 ohms per volt	Range	1000 ohms per volt	2000 ohms per volt
1	....	$25.50	50	$22.50	$25.50
1.5	....	25.50	100	23.25	26.25
3	$22.50	25.50	150	24.00	27.00
5	22.50	25.50	300	26.25	....
15	22.50	25.50			

MODEL 301 — RECTIFIER TYPE A-C MILLIAMMETERS

Range	Price	Range	Price
0.5	$25.50	2	$21.75
1	21.75	5	21.75

MODEL 301 — RECTIFIER TYPE A-C MICROAMMETERS

Range	Price	Range	Price
100	$34.50	250	$25.50
200	25.50	500	25.50

MODEL 301 VU METER

A OR B SCALE..Price $40.50

MODEL 476 — A-C AMMETERS

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

MODEL 476 — A-C VOLTMETERS

Single Ranges: 1.5/3/5/8/10/15/30/50 at $14.25

Range	Price	Range	Price
100	$15.00	250	$17.25
130	15.75	300	18.00
150	15.75	500	21.00

MODEL 425 — THERMOCOUPLE TYPE AMMETERS

Single Ranges: 1/1.5/2/3/5/8/10/15/20 at $21.00

MODEL 425 — THERMO MILLIAMMETERS

Ranges: 10/20/50 ....$52.50
100/115/120/150/200/300/500 ....$24.00

2½" PANEL INSTRUMENTS

MODEL 506 — D-C VOLTMETERS

Approximate resistance of Model 506 in ohms per volt: 3 to 150 volts, 125; 200 volts, 200; 300 volts, 1000.

Range	Price	Range	Price	Range	Price
3	$11.25	10	$11.25	100	$12.00
5	11.25	15	11.25	150	12.75
8	11.25	50	11.25	300	15.75

MODEL 506 — D-C AMMETERS

Single Ranges: 1/1.5/3/5/10/15/30/50 at $11.25

Ammeters, self-contained up to 50 amps., inclusive—drop 50 MV±5%

MODEL 506 — D-C MILLIAMMETERS

Range	Approx. Resis.	Price	Range	Approx. Resis.	Price
1	105	$11.25	30	1.2	11.25
1.5	18	11.25	50	1	$11.25
2	18	11.25	100	.5	11.25
3	18	11.25	150	.33	11.25
5	9.5	11.25	200	.25	11.25
10	3.2	11.25	300	.16	11.25
15	1.5	11.25	500	.1	11.25

Milliammeters above 40 MA are shunted — drop approximately 50 MV.

MODEL 507 — THERMO AMMETERS

For use on any frequency including radio frequency.

Single Ranges: 1/1.5/2/5/8/15/20 at $18.00

MODEL 517 — A-C AMMETERS

Range	Approx. Resis. in ohms	Price	Range	Approx. Resis. in ohms	Price
1	.17	$13.50	20	.0012	$13.50
3	.024	13.50	30	.00085	13.50
5	.01	13.50	50	.00072	13.50
10	.0037	13.50			

MODEL 517 — A-C VOLTMETERS

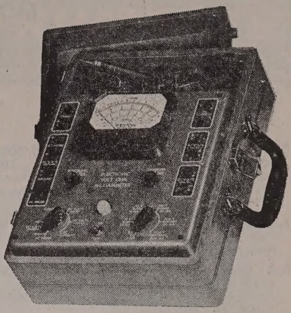
Range	Approx. Ohms per volt	Price	Range	Approx. Ohms per volt	Price
5	10	$13.50	50	52	$13.50
10	14	13.50	130	110	15.00
15	14	13.50	150	110	15.00
25	26	13.50	250	167	16.50
			300	167	17.25

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

MODEL 769 HIGH FREQUENCY ELECTRONIC ANALYZER

A versatile three-in-one instrument built to Weston standards of quality. Provides a conventional Volt-Ohm-Milliammeter, a high impedance Electronic Volt-Ohmmeter, and a stable, probe type Vacuum Tube Voltmeter for use to 300 megacycles. RF and special D-C probe supplied.
Complete stability is attained on all ranges from 3 to 1200 Volts and 200 Ohms to 2000 Megohms full scale.


MODEL 769

RANGES

VOLT-OHM-MILLIAMMETER

D-C VOLTS (at 10,000 ohms per volt):† 3/12/30/120/300/1200.

A-C VOLTS (at 1,000 ohms per volt): 3/12/30/120/300/1200.

DECIBELS: —6 to +62 in six ranges: 1 milliwatt, 0 level, 600 ohm line.

D-C CURRENT: 300 microamperes 1/1.2/6/30/120/600 ma.

RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale. 20/200/2,000 ohms center scale.*

ACCURACY: D-C ±3% A-C ±5%

† For higher ranges to 6000 volts d-c order Model 766 Type 4 Televerter at $21.00 list.

* Ranges from 2 to 2000 megohms operate electronically.

PROBE TYPE VACUUM TUBE VOLT METER

A-C VOLTS: 3/12/30/120.

DECIBELS: —6 to +42 in four ranges. 1 milliwatt, 0 level, 600 ohm line.

ACCURACY: ±5% (direct reading) at 50 cycles to 150 megacycles.
±12% (direct reading) at 150 to 300 megacycles.
±8% (with correction curve) at 150 to 300 megecycles.

ELECTRONIC VOLT-OHMMETER

D-C VOLTS: ±3/12/30/120/300/1200.

RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale. 2/20/2,000 megohms full scale.
20/200/2,000/20,000/200,000 ohms center scale, 20 megohms center scale.

VOLTMETER RESISTANCE: 15 megohms on all ranges.

ACCURACY: ±4% of full scale on all ranges.

RF PROBE

FREQUENCY RANGE: 50 cycles to 300 megacycles.

INPUT RESISTANCE: 5 megohms.

INPUT CAPACITY: Approximately 5 micromicrofarads.

DIMENSIONS: 3½" x ¾".

Size: 10" x 13" x 6⅛".
App. Wgt. 13½ lbs.

PRICE..**$247.50 List**

MODEL 779 SUPER-SENSITIVE ANALYZER

MODEL 779

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges of a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle.

Used for . . . measurement of tube circuits, as in electronic receivers, transmitters and electronic control equipment . . . television and wire communication systems . . . power level in decibels in audio equipment, P.A., telephone or speech lines . . . maintenance of electronic control and alarm systems . . . leakage of condensers . . . resistance of all types of circuits.

For application requiring higher d-c voltage measurements use Model 766 Televerters as listed on next page.

RANGES

Volts		Current		
D-C	A-C	D-C Only	Decibels	Ohms
2.5	2.5	.1 Ma	— 14 to + 2*	0-3000
10	10	1 Ma	— 2 to + 14*	0-30,000
50	50	10 Ma	+ 12 to + 28*	0-300,000
250	250	50 Ma	+ 26 to + 42†	0-30 Meg
1000	1000	250 Ma	+ 38 to + 54††	
		1 Amp	(6 milliwatts,	
		10 Amp	500 ohms, zero level)	

* Substantially flat to 10,000 cycles.
† Substantially flat to 3,000 cycles.
†† Substantially flat to 1,000 cycles.

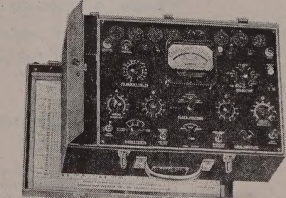
Accuracy: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6⅜" x 9⅛" x 4⅞"
Approx. Weight: 6 lbs.

Model 779 Type 1 (Incl. Test Leads)..**$127.50 List**

MODEL 798 TUBE CHECKER

The Model 798 Tube Checker uses a new method of proportional mutual conductance testing . . . the differential frequency system which provides readings similar to actual operating conditions. This tube checker supplies mutual conductance and "Good-Bad" readings on all receiving tube types . . . tests all Voltage Regulator and low power type Thyratron tubes . . . has adjustable plate, screen, signal and grid bias voltages. Only six settings required for most tubes . . . switching flexibility provides for testing future tubes as they are announced.


MODEL 798

SPECIFICATIONS

Tube Checker ranges: 3000/6000/12000 micromhos.

Tube sockets: 4, 5, 6, and 7 prong, octal, loctal, miniature, acorn and 9 pin types. (Spare miniature socket provided.)

Power Requirements: 105/125 Volts, 50/60 Cycles A-C.

Size: 17¾" x 11⅜" x 6⅛" — **Weight:** 23 Lbs.

Price..$291.50 List

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

MODEL 785 INDUSTRIAL CIRCUIT TESTER

Established in industry as the most complete single unit for general maintenance and ultra-sensitive test purposes, particularly on electronic equipment. Provides 28 ranges for measuring D-C voltage and current; A-C voltage and current; and resistance. Current and voltage ranges can be extended for insulation testing. Provisions for instantaneous current and voltage readings.

RANGES

D-C Volts: (Full scale) 1/10/50/200/500/1000 Volts (20,000 Ohms per volt), 100 Millivolts direct or with external shunt. Accurate within 2% to 500 V.; 3% at 1000 V.

A-C Volts: (Full scale) 5/15/30/150/300/750 Volts (1000 Ohms per volt). Accurate within 3%.

D-C Current: (Full scale) 50 Microamps; 1/10/100 Milliamps; 1/10 Amps. Accurate within 2%. Higher ranges with 100 mv. shunts.

A-C Current: (Full scale) .5/1/5/10 Amperes. Accurate within 3% on 60 cycles. Higher ranges with external current transformers.

Resistance: (Full scale) 3,000/30,000/300,000 Ohms; 3/30 Megohms. (Center scale) 25/250/2,500/25,000/250,000 Ohms. Accurate within 2% of linear arc length on any ohmmeter range.

Sizes: 13″ x 12½″ x 5½″.
Weight (complete) 13½ Lbs.

Model 785 (Oak carrying case)....**$157.50 List**
Model 785 (Steel case) .... **127.50 List**

MODEL 785 ACCESSORIES

Model 766 Televerter — used with any 50 microampere D-C instrument or 20,000 ohm per volt analyzer to extend range to 5,000 or 10,000 volts.

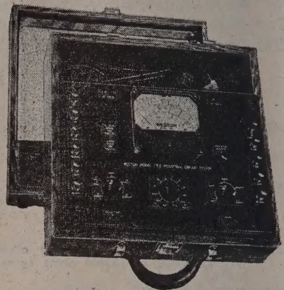
Type 1 (5,000 volts)....................**$18.00 List**
Type 2 (10,000 volts)..................... **24.00 List**

Model 792 Insulation Tester — for insulation and cable resistance measurements to 900 megohms at a test potential of 500 volts. Operates from any 100-130 volt, 50 to 60 cycle line. **$37.50 List**

Model 604 Current Transformer — inserted primary type used to increase A-C current. Type 1, accurate within 1% on frequencies from 25 to 125 cycles, capacity 2 volt-amperes. Type 2, accurate within 1% on frequencies from 50-215 cycles, capacity 5 volt-amperes. Ratios include 200:5, 300:5, 400:5, 500:5.

Type 1 ....(200:5, 300:5) **$18.00 List;**
(400:5, 500:5) **$16.50 List**

Type 2 ....(200:5) **$30.00 List;**
(400:5, 500:5) **$23.50 List**



MODEL 785

100 MV External Shunt — used for extending D-C current ranges of Model 785 beyond 10 amperes.

Price .... **50 amp., $12.75;**
100 amp., $12.75;
250 amp., $14.00;
500 amp., $24.00 List

WESTON POCKET-SIZE TESTERS

Model 697 Volt-Ohm-Milliammeter

MODEL 697

SPECIFICATIONS —

Accurate within 2% D-C
5% A-C

Scale: 2.36″

Ranges: 0-7.5/15/150/750 a-c and d-c (1000 ohms per volt)

Current: 0-7.5/75 milliamperes d-c

Resistance: Full scale 5,000/500,000 ohms. Center scale 35/3500 ohms

Size: $5\frac{9}{16}$″ x 3 ″ x $3\frac{9}{16}$″

Approx. Wt.: 1¾ lbs.

Model 697 (Incl. Test Leads)
$49.50 List

Model 564 Volt-Ohmmeter

SPECIFICATIONS — Accurate within 2%
Scale: 2.36″
Ranges: 3/30/300/600 volts d-c (1000 ohms per volt)
Resistance: Full scale — 1,000/10,000/100,000/1,000,000 ohms
Size: 5-33/64″ x 3-45/64″ x 2-9/16″
Approx. Wt.: 1¾ lbs.

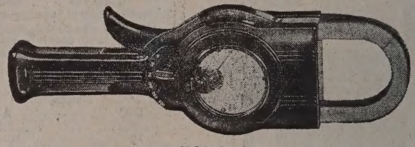
Model 564, Type 3-C (Incl. Test Leads)................................**$54.00 List**

Model 689 Ohmmeters

SPECIFICATIONS — Accurate within 2%
Scale: 2.36″
Ranges: Type 1-E — double range 0-5,000 and 50,000 ohms-full scale.
Type 1-F — double range 0-10 and 0-1,000 ohms-full scale.
5″ x 2⅞″ x 1⅞″
Approx. Wt.: 1 lb.

Model 689, Type 1-E (Incl. Test Leads)..................................**$27.00 List**
Model 689, Type 1-F (Incl. Test Leads)..................................**$25.50 List**

Model 633 Clamp Volt-Ammeter and Clamp-Ammeter



MODEL 633

Model 633 Type VA-1 (Incl. Potential Leads) — **1000/250/**100/25/10 amperes a-c 700/350/175 volts a-c..................**$110.00**

Model 633 Type A-1 — 500/250/100/50/25/10 amperes a-c....**$100.00**

Model 633 Type A-2 — 1000/500/250/100/25/10 amperes a-c..**$100.00**

Model 633 Type A-3 — 2000/1000/500/250/100/50 amperes a-c **$110.00**

Model 9958, 50 Foot Extension Cable, Plug & Receptacle for Model 633 Types A-1, A-2, A-3..**$ 72.00**

Leather Carrying Case (Model 633 Types VA-1, A-1, A-2, A-3) **$ 13.50**

Leather Carrying Case (Model 9958 — Cable, Plug and Receptacle) .... **$ 22.50**

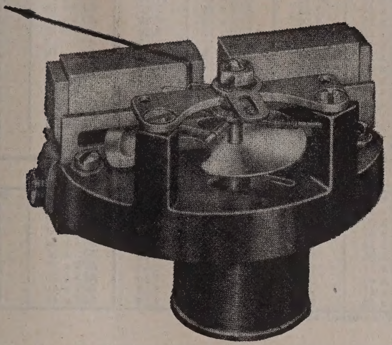
— NOTE —
Model 633 instruments may be used for continuous duty up to 500 amperes.

Approximate Dimensions and Weights

Model 633 Types VA-1, A-1, A-2, A-3........13⅝″x4⅜″x2½″ 3¼ lbs.
Leather Carrying Case (Types VA-1, A-1, A-2, A-3)....14½″x5½″x3⅝″ 2¼ lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle....4¼ lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle) 14″x8½″x3¾″ 4¼ lbs.

Prices Subject To Change Without Notice.

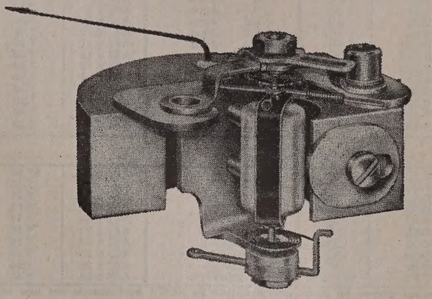
Burlington *Improved* PANEL INSTRUMENTS



Alternating Current

AC and DC types are accurate to within 2% of full scale value at any point on the scale.

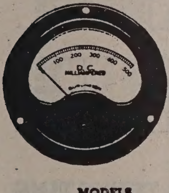
DC instruments combine extremely light weight moving elements and powerful alnico magnets to produce a torque to weight ratio which reduces frictional error to a minimum. This high torque to weight ratio permits use of pivots with ample pivot bearing surface to overcome effects of rough handling, shock, and vibration.



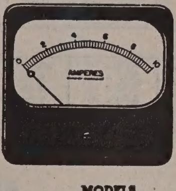
Direct Current

AC instruments are accurate over entire range of commercial power frequencies (25 to 125 cycles). These instruments are of repulsion vane type using carefully aged and impregnated field coils and multipliers which are wound with conductors of ample size so that temperature rise of the windings may be maintained at a minimum, even though instrument is subjected to continuous use in the circuit.

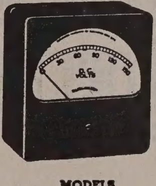
Alnico magnets are used to obtain perfected damping characteristics found in no other AC instrument.



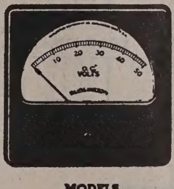
MODELS
Direct Current
221, 421, 431, 441
Alternating Current
222, 422, 432.



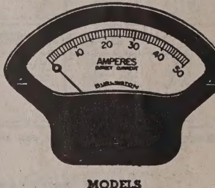
MODELS
Direct Current
731, 741
Alternating Current
732, 742



MODELS
Direct Current
141
Alternating Current
142



MODELS
Direct Current
521, 531
Alternating Current
522, 532



MODELS
Direct Current
841

We welcome your inquiries on Hermetically Sealed Instruments in 1½", 2½", and 3½" types

CASE DIMENSIONS

Model No.					Stud Length		
DC	AC	Body	Flange	Body Depth	DC	AC	Case
141	142		4" x 4¼"	2"	¾"	1"	Rectangular, front-of-board, Bakelite
221	222	2.062" Diam.	2.740" Diam.	1 29/64"	⅝"	25/32"	Round, flush, Metal
421	422	2.156" Diam.	2.690" Diam.	1.4062"	⅝"	25/32"	Round, flush, Bakelite
431	432	2.796" Diam.	3½" Diam.	1½"	¾"	¾"	Round, flush, Bakelite
441		3.5625" Diam.	4⅜" Diam.	1.4531"	¾"		Round, flush, Bakelite
521	522	2.156" Diam.	2⅜" x 2⅜"	1⅜"	⅝"	25/32"	Square, flush, Bakelite
531	532	2.796" Diam.	3" x 3"	1½"	¾"	¾"	Square, flush, Bakelite
731	732	2¼" Diam.	3 11/16" x 3 5/16"	1.0156"	¾"	⅝"	Rectangular, semi-flush, Bakelite
741	742	2¾" Diam.	4" x 4¼"	1"	¾"	¾"	Rectangular, semi-flush, Bakelite
841		2¾" Diam.		1.2187"	¾"		Fan-shaped, semi-flush, Bakelite

See following page for prices and specifications.

Burlington Improved

DIRECT

D. C. MILLIAMMETERS

Range	Scale Div.	Approx. Res.	MODEL 221		MODEL 421		MODEL 521		MODEL 531	
			Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
0-1	50	47 ohms	A82 x 5	$7.50	A72 x 11	$7.50	A73 x 11	$7.50	A75 x 11	$8.10
0-5	50	10 ohms	A82 x 6	7.50	A72 x 14	7.50	A73 x 14	7.50	A75 x 14	8.10
0-10	50	5 ohms	A82 x 7	7.50	A72 x 15	7.50	A73 x 15	7.50	A75 x 15	8.10
0-15	30	9.34 ohms	A82 x 8	7.50	A72 x 16	7.50	A73 x 16	7.50	A75 x 16	8.10
0-25	50	5.6 ohms	A82 x 9	7.50	A72 x 17	7.50	A73 x 17	7.50	A75 x 17	8.10
0-50	50	2.8 ohms	A82 x 10	7.50	A72 x 19	7.50	A73 x 19	7.50	A75 x 19	8.10
0-100	50	1.4 ohms	A82 x 11	7.50	A72 x 20	7.50	A73 x 20	7.50	A75 x 20	8.10
0-150	30	.94 ohms	A82 x 12	7.50	A72 x 21	7.50	A73 x 21	7.50	A75 x 21	8.10
0-200	40	.7 ohms	A82 x 13	7.50	A72 x 22	7.50	A73 x 22	7.50	A75 x 22	8.10
0-250	50	.56 ohms	A82 x 14	7.50	A72 x 23	7.50	A73 x 23	7.50	A75 x 23	8.10
0-300	30	.466 ohms	A82 x 15	7.50	A72 x 24	7.50	A73 x 24	7.50	A75 x 24	8.10
0-500	50	.28 ohms	A82 x 16	7.50	A72 x 25	7.50	A73 x 25	7.50	A75 x 25	8.10
0-750	75	.186 ohms	A82 x 17	7.50	A72 x 26	7.50	A73 x 26	7.50	A75 x 26	8.10
0-1000	50	.140 ohms	A82 x 18	7.50	A72 x 28	7.50	A73 x 28	7.50	A75 x 28	8.10

D. C. AMMETERS

0-1	50	50MV	A82 x 19	$7.50	A72 x 29	$7.50	A73 x 29	$7.50	A75 x 29	$8.10
0-3	30	50MV	A82 x 20	7.50	A72 x 84	7.50	A73 x 84	7.50	A75 x 84	8.10
0-5	50	50MV	A82 x 21	7.50	A72 x 30	7.50	A73 x 30	7.50	A75 x 30	8.10
0-10	50	50MV	A82 x 22	7.50	A72 x 33	7.50	A73 x 33	7.50	A75 x 33	8.10
0-15	30	50MV	A82 x 48	7.50	A72 x 34	7.50	A73 x 34	7.50	A75 x 34	8.10
0-25	50	50MV	A82 x 23	7.50	A72 x 36	7.50	A73 x 36	7.50	A75 x 36	8.10
0-30	30	50MV	A82 x 24	7.50	A72 x 37	7.50	A73 x 37	7.50	A75 x 37	8.10
0-50	50	50MV	A82 x 25	7.50	A72 x 40	7.50	A73 x 40	7.50	A75 x 40	8.10
0-60	30	50MV	A82 x 26	7.50	A72 x 41	7.50	A73 x 41	7.50	A75 x 41	8.10
0-75	75	50MV	A82 x 27	7.50	A72 x 44	7.50	A73 x 44	7.50	A75 x 44	8.10

Ranges above 60 amp. are supplied as 50MV movements for use with 50MV external shunts.

D. C. MICROAMMETERS

0-50	50	1150 ohms	A82 x 1	$11.85	A72 x 1	$11.85	A73 x 1	$11.85	A75 x 1	$12.45
0-100	50	1150 ohms	A82 x 2	10.50	A72 x 2	10.50	A73 x 2	10.50	A75 x 2	11.25
0-200	40	330 ohms	A82 x 3	8.55	A72 x 4	8.55	A73 x 4	8.55	A75 x 4	9.30
0-500	50	225 ohms	A82 x 4	7.95	A72 x 9	7.95	A73 x 9	7.95	A75 x 9	8.70

D. C. VOLTMETERS—200 Ohms Per Volt

0-3	30	....	A82 x 36	$7.50	A72 x 59	$7.50	A73 x 59	$7.50	A75 x 59	$8.10
0-5	50	....	A82 x 37	7.50	A72 x 60	7.50	A73 x 60	7.50	A75 x 60	8.10
0-10	50	....	A82 x 38	7.50	A72 x 61	7.50	A73 x 61	7.50	A75 x 61	8.10
0-15	30	....	A82 x 39	7.50	A72 x 62	7.50	A73 x 62	7.50	A75 x 62	8.10
0-25	50	....	A82 x 40	7.50	A72 x 64	7.50	A73 x 64	7.50	A75 x 64	8.10
0-50	50	....	A82 x 41	7.50	A72 x 67	7.50	A73 x 67	7.50	A75 x 67	8.10
0-100	50	....	A82 x 42	7.50	A72 x 70	7.50	A73 x 70	7.50	A75 x 70	8.10
0-150	30	....	A82 x 43	7.50	A72 x 71	7.50	A73 x 71	7.50	A75 x 71	8.10
0-300	30	—	—	—	—	—	—	—	A75 x 74	9.15

D. C. VOLTMETERS—1000 Ohms Per Volt

0-50	50	....	A82 x 44	$8.55	A72 x 70	$8.55	A73 x 70	$8.55	A75 x 75	$9.30
0-100	50	....	A82 x 45	8.85	A72 x 72	8.85	A73 x 72	8.85	A75 x 77	9.75
0-150	30	....	A82 x 46	9.30	A72 x 73	9.30	A73 x 73	9.30	A75 x 78	10.05
0-300	30	....	A82 x 47	9.60	A72 x 76	9.60	A73 x 76	9.60	A75 x 81	10.35
0-500	50	....	—	—	A72 x 78	9.90	A73 x 78	9.90	A75 x 82	10.65
0-1000	50	—	—	—	—	—	—	—	A75 x 83	10.95

Ranges above those listed are supplied for use with external resistors.

ALTERNATING

A. C. MILLIAMMETERS

			MODEL 222		MODEL 422		MODEL 522		MODEL 532	
0-10	50	2020 ohms	A100 x 2	$7.50	A90 x 1	$7.50	A91 x 1	$7.50	A93 x 1	$8.10
0-15	30	1120 ohms	A100 x 3	7.50	A90 x 33	7.50	A91 x 33	7.50	A93 x 25	8.10
0-25	50	370 ohms	A100 x 4	7.50	A90 x 2	7.50	A91 x 2	7.50	A93 x 2	8.10
0-50	50	83 ohms	A100 x 5	7.50	A90 x 3	7.50	A91 x 3	7.50	A93 x 3	8.10
0-100	50	20 ohms	A100 x 6	7.50	A90 x 4	7.50	A91 x 4	7.50	A93 x 4	8.10
0-250	50	4 ohms	A100 x 7	7.50	A90 x 34	7.50	A91 x 34	7.50	A93 x 26	8.10
0-500	50	.8 ohms	A100 x 8	7.50	A90 x 5	7.50	A91 x 5	7.50	A93 x 5	8.10

A. C. AMMETERS

0-1.5	30	.072 ohms	A100 x 9	$7.50	A90 x 27	$7.50	A91 x 27	$7.50	A93 x 27	$8.10
0-5	50	.0108 ohms	A100 x 10	7.50	A90 x 7	7.50	A91 x 7	7.50	A93 x 7	8.10
0-10	50	.0038 ohms	A100 x 11	7.50	A90 x 8	7.50	A91 x 8	7.50	A93 x 8	8.10
0-15	30	.0018 ohms	A100 x 12	7.50	A90 x 28	7.50	A91 x 28	7.50	A93 x 28	8.10
0-25	50	.0008 ohms	A100 x 13	7.50	A90 x 29	7.50	A91 x 29	7.50	A93 x 29	8.10
0-30	30	.00079 ohms	A100 x 14	7.50	A90 x 9	7.50	A91 x 9	7.50	A93 x 9	8.10
0-50	50	.00048 ohms	A100 x 15	7.50	A90 x 10	7.50	A91 x 10	7.50	A93 x 10	8.10
0-75	75	.00035 ohms	A100 x 16	*7.50	A90 x 11	*7.50	A91 x 11	7.50	A93 x 11	9.30

*** These and higher ranges are supplied as 5 amp. movement for use with current transformers.**

A. C. VOLTMETERS

0-1.5	30	3.3	A100 x 23	$7.50	A90 x 24	$7.50	A91 x 24	$7.50	A93 x 33	$8.10
0-3	30	10	A100 x 24	7.50	A90 x 25	7.50	A91 x 25	7.50	A93 x 34	8.10
0-5	50	10	A100 x 25	7.50	A90 x 16	7.50	A91 x 16	7.50	A93 x 16	8.10
0-10	50	13	A100 x 26	7.50	A90 x 17	7.50	A91 x 17	7.50	A93 x 17	8.10
0-15	30	13	A100 x 27	7.50	A90 x 18	7.50	A91 x 18	7.50	A93 x 18	8.10
0-25	50	26	A100 x 28	7.50	A90 x 26	7.50	A91 x 26	7.50	A93 x 35	8.10
0-50	50	50	A100 x 29	7.50	A90 x 20	7.50	A91 x 20	7.50	A93 x 20	8.10
0-100	50	110	A100 x 30	7.50	A90 x 21	7.50	A91 x 21	7.50	A93 x 21	8.10
0-150	30	110	A100 x 1	8.25	A90 x 22	8.25	A91 x 22	8.25	A93 x 22	8.85
0-300	30	165	A100 x 31	10.05	A90 x 23	10.05	A91 x 23	10.05	A93 x 23	10.65
0-500	50	165	—	—	—	—	—	—	A93 x 24	13.05
0-600	30	165	—	—	—	—	—	—	A93 x 36	15.60

Ranges above those shown require external resistors.

PANEL INSTRUMENTS

CURRENT

D. C. MILLIAMMETERS

MODEL 731		MODEL 431		MODEL 741		MODEL 141		** MODEL 441		MODEL 841	
Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A76 x 11	$8.40	A74 x 11	$8.10	A79 x 11	$9.15	A78 x 11	$9.15	A77 x 11	$8.70	A80 x 11	$8.70
A76 x 14	8.40	A74 x 14	8.10	A79 x 14	9.15	A78 x 14	9.15	A77 x 14	8.70	A80 x 14	8.70
A76 x 15	8.40	A74 x 15	8.10	A79 x 15	9.15	A78 x 15	9.15	A77 x 15	8.70	A80 x 15	8.70
A76 x 16	8.40	A74 x 16	8.10	A79 x 16	9.15	A78 x 16	9.15	A77 x 16	8.70	A80 x 16	8.70
A76 x 17	8.40	A74 x 17	8.10	A79 x 17	9.15	A78 x 17	9.15	A77 x 17	8.70	A80 x 17	8.70
A76 x 19	8.40	A74 x 19	8.10	A79 x 19	9.15	A78 x 19	9.15	A77 x 19	8.70	A80 x 19	8.70
A76 x 20	8.40	A74 x 20	8.10	A79 x 20	9.15	A78 x 20	9.15	A77 x 20	8.70	A80 x 20	8.70
A76 x 21	8.40	A74 x 21	8.10	A79 x 21	9.15	A78 x 21	9.15	A77 x 21	8.70	A80 x 21	8.70
A76 x 22	8.40	A74 x 22	8.10	A79 x 22	9.15	A78 x 22	9.15	A77 x 22	8.70	A80 x 22	8.70
A76 x 23	8.40	A74 x 23	8.10	A79 x 23	9.15	A78 x 23	9.15	A77 x 23	8.70	A80 x 23	8.70
A76 x 24	8.40	A74 x 24	8.10	A79 x 24	9.15	A78 x 24	9.15	A77 x 24	8.70	A80 x 24	8.70
A76 x 25	8.40	A74 x 25	8.10	A79 x 25	9.15	A78 x 25	9.15	A77 x 25	8.70	A80 x 25	8.70
A76 x 26	8.40	A74 x 26	8.10	A79 x 26	9.15	A78 x 26	9.15	A77 x 26	8.70	A80 x 26	8.70
A76 x 28	8.40	A74 x 28	8.10	A79 x 28	9.15	A78 x 28	9.15	A77 x 28	8.70	A80 x 28	8.70

D. C. AMMETERS

A76 x 29	$8.40	A74 x 29	$8.10	A79 x 29	$9.15	A78 x 29	$9.15	A77 x 29	$8.70	A80 x 29	$8.70
A76 x 84	8.40	A74 x 84	8.10	A79 x 84	9.15	A78 x 84	9.15	A77 x 84	8.70	A80 x 84	8.70
A76 x 30	8.40	A74 x 30	8.10	A79 x 30	9.15	A78 x 30	9.15	A77 x 30	8.70	A80 x 30	8.70
A76 x 33	8.40	A74 x 33	8.10	A79 x 33	9.15	A78 x 33	9.15	A77 x 33	8.70	A80 x 33	8.70
A76 x 34	8.40	A74 x 34	8.10	A79 x 34	9.15	A78 x 34	9.15	A77 x 34	8.70	A80 x 34	8.70
A76 x 36	8.40	A74 x 36	8.10	A79 x 36	9.15	A78 x 36	9.15	A77 x 36	8.70	A80 x 36	8.70
A76 x 37	8.40	A74 x 37	8.10	A79 x 37	9.15	A78 x 37	9.15	A77 x 37	8.70	A80 x 37	8.70
A76 x 40	8.40	A74 x 40	8.10	A79 x 40	9.15	A78 x 40	9.15	A77 x 40	8.70	A80 x 40	8.70
A76 x 41	8.40	A74 x 41	8.10	A79 x 41	9.15	A78 x 41	9.15	A77 x 41	8.70	A80 x 41	8.70
A76 x 44	8.40	A74 x 44	8.10	A79 x 44	9.15	A78 x 44	9.15	A77 x 44	8.70	A80 x 44	8.70

D. C. MICROAMMETERS

A76 x 1	$12.75	A74 x 1	$12.45	A79 x 1	$13.95	A78 x 1	$13.95	A77 x 1	$13.50	A80 x 1	$13.50
A76 x 2	11.55	A74 x 2	11.25	A79 x 2	12.60	A78 x 2	12.60	A77 x 2	12.30	A80 x 2	12.30
A76 x 4	9.75	A74 x 4	9.30	A79 x 4	10.80	A78 x 4	10.80	A77 x 4	10.35	A80 x 4	10.35
A76 x 9	9.00	A74 x 9	8.70	A79 x 9	10.20	A78 x 9	10.20	A77 x 9	9.75	A80 x 9	9.75

D. C. VOLTMETERS 200 Ohms Per Volt

A76 x 59	$8.40	A74 x 59	$8.10	A79 x 59	$9.15	A78 x 59	$9.15	A77 x 59	$8.70	A80 x 59	$8.70
A76 x 60	8.40	A74 x 60	8.10	A79 x 60	9.15	A78 x 60	9.15	A77 x 60	8.70	A80 x 60	8.70
A76 x 61	8.40	A74 x 61	8.10	A79 x 61	9.15	A78 x 61	9.15	A77 x 61	8.70	A80 x 61	8.70
A76 x 62	8.40	A74 x 62	8.10	A79 x 62	9.15	A78 x 62	9.15	A77 x 62	8.70	A80 x 62	8.70
A76 x 64	8.40	A74 x 64	8.10	A79 x 64	9.15	A78 x 64	9.15	A77 x 64	8.70	A80 x 64	8.70
A76 x 67	8.40	A74 x 67	8.10	A79 x 67	9.15	A78 x 67	9.15	A77 x 67	8.70	A80 x 67	8.70
A76 x 70	8.40	A74 x 70	8.10	A79 x 70	9.15	A78 x 70	9.15	A77 x 70	8.70	A80 x 70	8.70
A76 x 71	8.40	A74 x 71	8.10	A79 x 71	9.15	A78 x 71	9.15	A77 x 71	8.70	A80 x 71	8.70
		A74 x 74	9.15	A79 x 74	10 20	A78 x 74	10.20	A77 x 74	9.75	A80 x 74	9.75

D. C. VOLTMETERS 1000 Ohms Per Volt

A76 x 75	$9.75	A74 x 75	$9.30	A79 x 75	$10.50	A78 x 75	$10.50	A77 x 75	$10.05	A80 x 75	$10.05
A76 x 77	10.05	A74 x 77	9.75	A79 x 77	10.80	A78 x 77	10.80	A77 x 77	10.35	A80 x 77	10.35
A76 x 78	10.35	A74 x 78	10.05	A79 x 78	11.10	A78 x 78	11.10	A77 x 78	10.65	A80 x 78	10.65
A76 x 81	10.65	A74 x 81	10.35	A79 x 81	11.40	A78 x 81	11.40	A77 x 81	10.95	A80 x 81	10.95
A76 x 82	10.95	A74 x 82	10.65	A79 x 82	11.70	A78 x 82	11.70	A77 x 82	11.25	A80 x 82	11.25
		A74 x 83	10.95	A79 x 83	12.00	A78 x 83	12.00	A77 x 83	11.55	A80 x 83	11.55

CURRENT

A. C. MILLIAMMETERS

MODEL 732		MODEL 432		MODEL 742		MODEL 142	
A94 x 1	$8.40	A92 x 1	$8.10	A97 x 1	$9.15	A96 x 1	$9.15
A94 x 25	8.40	A92 x 25	8.10	A97 x 25	9.15	A96 x 25	9.15
A94 x 2	8.40	A92 x 2	8.10	A97 x 2	9.15	A96 x 2	9.15
A94 x 3	8.40	A92 x 3	8.10	A97 x 3	9.15	A96 x 3	9.15
A94 x 4	8.40	A92 x 4	8.10	A97 x 4	9.15	A96 x 4	9.15
A94 x 26	8.40	A92 x 26	8.10	A97 x 26	9.15	A96 x 26	9.15
A94 x 5	8.40	A92 x 5	8.10	A97 x 5	9.15	A96 x 5	9.15

A. C. AMMETERS

A94 x 27	$8.40	A92 x 27	$8.10	A97 x 27	$9.15	A96 x 27	$9.15
A94 x 7	8.40	A92 x 7	8.10	A97 x 7	9.15	A96 x 7	9.15
A94 x 8	8.40	A92 x 8	8.10	A97 x 8	9.15	A96 x 8	9.15
A94 x 28	8.40	A92 x 28	8.10	A97 x 28	9.15	A96 x 28	9.15
A94 x 29	8.40	A92 x 29	8.10	A97 x 29	9.15	A96 x 29	9.15
A94 x 9	8.40	A92 x 9	8.10	A97 x 9	9.15	A96 x 9	9.15
A94 x 10	8.40	A92 x 10	8.10	A97 x 10	9.15	A96 x 10	9.15
A94 x 11	8.40	A92 x 11	9.30	A97 x 11	10.50	A96 x 11	10.50

A. C. VOLTMETERS

A94 x 33	$8.40	A92 x 33	$8.10	A97 x 33	$9.15	A96 x 33	$9.15
A94 x 34	8.40	A92 x 34	8.10	A97 x 34	9.15	A96 x 34	9.15
A94 x 16	8.40	A92 x 16	8.10	A97 x 16	9.15	A96 x 16	9.15
A94 x 17	8.40	A92 x 17	8.10	A97 x 17	9.15	A96 x 17	9.15
A94 x 18	8.40	A92 x 18	8.10	A97 x 18	9.15	A96 x 18	9.15
A94 x 35	8.40	A92 x 35	8.10	A97 x 35	9.15	A96 x 35	9.15
A94 x 20	8.40	A92 x 20	8.10	A97 x 20	9.15	A96 x 20	9.15
A94 x 21	8.40	A92 x 21	8.10	A97 x 21	9.15	A96 x 21	9.15
A94 x 22	9.15	A92 x 22	8.85	A97 x 22	9.90	A96 x 22	9.90
A94 x 23	10.95	A92 x 23	10.65	A97 x 23	11.55	A96 x 23	11.55
——	——	A92 x 24	13.05	A97 x 24	14.10	A96 x 24	14.10
——	——	A92 x 45	15.60	A97 x 38	16.50	A96 x 36	16.50

Burlington Improved PANEL INSTRUMENTS

RUNNING TIME METERS

Model 538 3" Square Flush 0-9999.9 Hours	**$16.50**
Model 438 3½" Round Flush 0-9999.9 Hours	**16.50**

120 or 240 volt (specify when ordering)

POWER LEVEL INDICATORS

VU METERS

Model 745 4¼" Rectangular Semi-flush	**$19.50**
Model 535 3" Square Flush	**18.00**
Model 435 3½" Round Flush	**18.00**

Supplied with "A" or "B" Scale (specify)
Illumination for Model 745 add **$3.00** extra. Complete with bulbs.

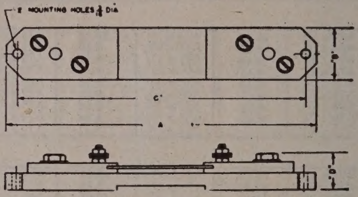
DB METERS

Model 425 2½" Round Flush	**$14.40**
Model 525 2½" Square Flush	**14.40**
Model 435 3½" Round Flush	**15.00**
Model 535 3" Square Flush	**15.00**
Model 735 3½" Rectangular Semi-flush	**15.15**
Model 745 4¼" Rectangular Semi-flush	**16.50**

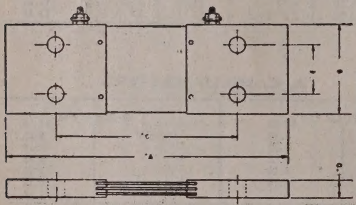
Illumination for Models 735-745 Add **$3.00** extra.
All other Models Add **$1.50** extra. Complete with bulbs.

EXTERNAL SHUNTS

Range	Part No.	"A"	"B"	"C"	"D"	Price
25 amp.	**A31 x 152**	7½"	1¼"	7"	61/64"	**$6.60**
30 amp.	**A31 x 153**	7½"	1¼"	7"	61/64"	**6.60**
50 amp.	**A31 x 156**	7½"	1¼"	7"	61/64"	**6.60**
60 amp.	**A31 x 157**	7½"	1¼"	7"	61/64"	**6.60**
75 amp.	**A31 x 158**	7½"	1¼"	7"	61/64"	**6.60**
100 amp.	**A31 x 160**	7½"	1¼"	7"	61/64"	**6.60**



25 to 100 Amp. Inclusive



150 to 1500 Amp. Inclusive

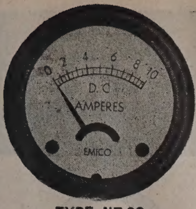
Range	Part No.	"A"	"B"	"C"	"D"	"E"	Mounting	Price
150 amp.	**A31 x 163**	5½"	1½"	4¼"	¼"	On CL	1-Hole Each End ⅜" Dia.	**$ 7.65**
200 amp.	**A31 x 164**	5½"	2"	4¼"	¼"	On CL		**7.65**
300 amp.	**A31 x 167**	5½"	1½"	4¼"	⅜"	On CL		**7.65**
400 amp.	**A31 x 169**	7"	2¼"	4½"	⅜"	1¼"	2-Holes Each End ⅜" Dia.	**11.55**
500 amp.	**A31 x 170**	7"	2¼"	4½"	⅜"	1¼"		**9.60**
600 amp.	**A31 x 171**	8"	3"	5"	½"	2"		**13.80**
1000 amp.	**A31 x 174**	8¼"	3"	6¾"	1½"	1½"		**22.50**
1200 amp.	**A31 x 175**	8¼"	3"	6¾"	1½"	1½"		**27.30**
1500 amp.	**A31 x 176**	8¼"	3"	6¾"	1½"	1½"		**33.60**

Shunts or other than 50MV drop or ranges not listed quoted on request. 4 foot leads are supplied.

CURRENT TRANSFORMERS DONUT TYPE

RATIO	PART No.	PRIMARY TURNS	PRICE
50/5	**A70 x 7**	1	**$10.50**
100/5	**A70 x 21**	1	**7.80**
150/5	**A70 x 25**	1	**7.80**
200/5	**A70 x 27**	1	**7.80**
250/5	**A70 x 29**	1	**7.80**
300/5	**A70 x 31**	1	**10.50**
400/5	**A70 x 35**	1	**10.50**
500/5	**A70 x 36**	1	**10.50**
600/5	**A70 x 37**	1	**14.50**
750/5	**A70 x 38**	1	**14.50**
1000/5	**A70 x 40**	1	**14.50**

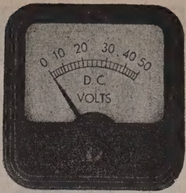
If ranges or ratios other than those listed above are required, give full details as to range or ratio, length of leads, size etc., when ordering. 2 foot leads are standard.



TYPE NF-2C

EMICO PRECISION INSTRUMENTS
FOR
PANELS AND TEST SETS

Electro Mechanical Instrument Co.
813 Chestnut Street, Perkasie, Pa.



TYPE RF-2C

EMICO panel and test meters are rugged and reliable instruments. Cases are of steel and finished in durable black. DC meters have the new HI-TORK magnetic movements and are accurate to well within 5%. AC meters are of the moving iron type and are also accurate to within 5%.

MOUNTING—All model NF-2C and RF-2C meters will fit into a 2$\frac{1}{16}$" diameter hole and are mounted by means of a U. clamp.

DESIGN—EMICO meters are designed to give satisfactory service under the most severe conditions. They are styled to add to the prestige and appearance of electrical equipment.

CALIBRATION—Since the instruments are calibrated in steel cases, their accuracy is not affected by panels made of magnetic materials of nominal thickness.

GUARANTEED—All EMICO instruments are guaranteed against defective material and workmanship for a period of one year after date of purchase, and will be repaired or replaced if sent to the factory postpaid with a 50c handling charge.

EMICO instruments are available in quantities to jobbers or manufacturers in the following sizes: NF-2", RF-2", RF-2½", and RF-4½" at 3% accuracy. We invite your inquiries on instruments for special application.

PRICES—Prices listed are net and include all hardware and individual boxing.

DEALERS' PRICE LIST

DC AMMETERS

Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-1	2101	$1.40	2201	$1.50
0-5	2102	1.40	2202	1.50
0-10	2103	1.40	2203	1.50
0-20	2104	1.40	2204	1.50
0-30	2105	1.40	2205	1.50
1-0-1	2109	1.40	2209	1.50
3-0-3	2110	1.40	2210	1.50
6-0-6	2111	1.40	2211	1.50
10-0-10	2112	1.40	2212	1.50
15-0-15	2113	1.40	2213	1.50
20-0-20	2114	1.40	2214	1.50
30-0-30	2215	1.40	2215	1.50

DC MILLIAMMETERS

Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-1	2120	$3.20	2220	$3.22
0-3	2121	2.00	2221	2.10
0-5	2125	1.95	2225	2.05
0-10	2126	1.85	2226	1.95
0-20	2127	1.40	2227	1.50
0-30	2128	1.40	2228	1.50
0-50	2129	1.40	2229	1.50
0-100	2130	1.40	2230	1.50
0-150	2130-A	1.40	2230-A	1.50
0-200	2130-B	1.40	2230-B	1.50
0-300	2131	1.40	2231	1.50
0-500	2132	1.40	2232	1.50

DC VOLTMETERS (LOW RESISTANCE)

Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-1	2134	$1.40	2234	$1.50
0-3	2135	1.40	2235	1.50
3-0-3	2136	1.40	2236	1.50
0-5	2136-A	1.40	2236-A	1.50
0-8	2136-B	1.40	2236-B	1.50
0-10	2137	1.40	2237	1.50
0-50	2138	1.40	2238	1.50

DC VOLTMETERS (HIGH RESISTANCE)
(100 ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)

Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-10	2140	$2.10	2240	$2.20
0-30	2141	2.35	2241	2.45
0-50	2142	2.70	2242	2.80
0-150	2143	2.80	2243	2.90
0-300	2144	2.80	2244	2.90

AC AMMETERS

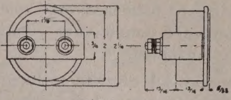
Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-1	6101	$2.40	6201	$2.55
0-3	6102	2.40	6202	2.55
0-5	6103	2.40	6203	2.55
0-10	6104	2.40	6204	2.55
0-25	6105	2.70	6205	2.80
0-50	6106	2.95	6206	3.05

AC MILLIAMMETERS

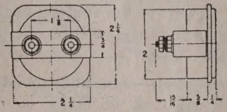
Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-25	6125	$2.40	6225	$2.45
0-50	6126	2.40	6226	2.45
0-100	6127	2.40	6227	2.45
0-250	6128	2.40	6228	2.45
0-500	6129	2.40	6229	2.45

AC VOLTMETERS

Range	MODEL NF-2C Catalog Number	MODEL NF-2C Dealers' Net Price	MODEL RF-2C Catalog Number	MODEL RF-2C Dealers' Net Price
0-5	6135	$2.40	6235	$2.55
0-10	6136	2.40	6236	2.55
0-15	6137	2.40	6237	2.55
0-25	6137-A	2.40	6237-A	2.55
0-50	6138	2.40	6238	2.55
0-150	6139	3.50	6239	3.60
0-300	6140	4.10	6240	4.15



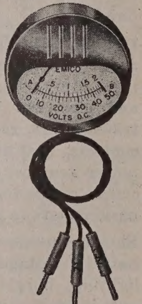
TYPE NF-2C



TYPE RF-2C

EMICO HEARING AID BATTERY TESTER

MODEL 103A



Note These Features:

- **Unbreakable Metal Case**
- **Beautifully Finished Case**
- **Powerful Mechanism**
- **Color-Fast Metal Dial**
- **Easily Read Dial**
- **Reliably Accurate**
- **Will Not Drain Batteries**

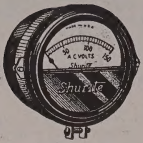
Designed to Test
All Types of
2 Volt "A" Batteries
and 22½, 30 and 45 Volt "B" Batteries

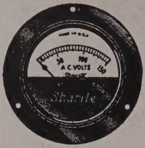
Available also in
0-9 and 0-90 Volt Range —
Specify Model 103B

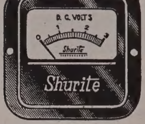
Write to Factory for Prices

Net

Shurite PANEL METERS


Model 550-AC


Model 650-AC


Model 950-DC (or AC)

Model 550-DC with Zero Adjuster

Shurite panel meters are attractive, rugged, dependable instruments with accuracy well within 5%. All models have metal cases, telephone-black front; all require $2\frac{5}{32}''$ hole. DC meters are polarized-vane solenoid type, AC meters are double vane repulsion type. All are guaranteed.

- **Guarantee:** All Shurite meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 40c handling charge within one year after date of purchase.
- **All-metal Dials**—age and moisture resistant, lithographed in black on white for high visibility.
- **Sturdy Design**—with new coil frames and attached insulators for greater rigidity, yet interchangeable in other respects with similar type of instrument formerly available.
- **Modern appearance**—with concealed coils, full view scales, and attractive styling and finish.

TYPICAL USES: Shurite products, with their rugged design, and ability to duplicate readings, enjoy wide acceptance in the electronic and electrical fields. Applications include transmitters, receivers, TV antenna rotator controls, battery indicators, appliances, power sources, battery eliminators, electric fence controllers, and the very popular basic meters in radio test kits.

Shurite products are also specified for battery voltage indicators on emergency lighting, burglar and fire alarm systems, output meters on rectifiers (copper oxide, tungar or selenium types), rate-of-charge indicators, testers for hearing aid and batteries and their chargers, ammeters for plating sets, and polarity indicators for metals analysis.

Other uses range from automotive test equipment to pin-ball circuit testers, and well depth indicators. Shurite has long been the favorite brand for those who take their hobbies and experiments seriously.

DC MILLIAMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Ma.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-3L**	500	5332	$2.75	6332	$2.85	9332	$2.90
0-3	4000	5301	2.15	6301	2.25	9301	2.30
0-5	2470	5302	1.95	6302	2.05	9302	2.10
0-10	470	5303	1.85	6303	1.95	9303	2.00
0-15	296	5504	1.50	6304	1.60	9304	1.65
0-25	87	5305	1.45	6305	1.55	9305	1.60
0-50	24	5306	1.45	6306	1.55	9306	1.60
0-100	6.2	5307	1.45	6307	1.55	9307	1.60
0-150	4.2	5308	1.45	6308	1.55	9308	1.60
0-200	1.9	5309	1.45	6309	1.55	9309	1.60
0-300	.65	5310	1.45	6310	1.55	9310	1.60
0-400	.37	5311	1.40	6311	1.50	9311	1.55
0-500	.26	5312	1.40	6312	1.50	9312	1.55

** Low internal resistance, sensitive type, using steel case. Moving magnet construction, patent pending. Scale arc, 75°.
* For zero adjusters add 35c to price and Z to stock number.
No zero adjuster on Model 950 stock models.

AC MILLIAMMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Ma.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-10	4800	5607	$2.80	6607	$2.90	9607	$2.95
0-25	750	5601	2.50	6601	2.60	9601	2.65
0-50	150	5602	2.50	6602	2.60	9602	2.65
0-100	37	5603	2.50	6603	2.60	9603	2.65
0-250	5.4	5604	2.50	6604	2.60	9604	2.65
0-500	1.34	5605	2.50	6605	2.60	9605	2.65

DC AMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Amps.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.105	5201	$1.45	6201	$1.55	9201	$1.60
0-3	.02 Max	5202	1.45	6202	1.55	9202	1.60
0-5	.02 Max	5203	1.45	6203	1.55	9203	1.60
0-8	.02 Max	5204	1.45	6304	1.55	9204	1.60
0-10	.02 Max	5205	1.45	6205	1.55	9205	1.60
0-15	.02 Max	5206	1.55	6206	1.65	9206	1.70
0-25	.02 Max	5207	1.85	6207	1.95	9207	2.00
0-50	.02 Max	5208	2.15	6208	2.25	9208	2.30
1-0-1	.13	5209	1.55	6209	1.65	9209	1.70
3-0-3	.02 Max	5210	1.55	6210	1.65	9210	1.70
5-0-5	.022	5211	1.55	6211	1.65	9211	1.70
6-0-6	.02 Max	5212	1.55	6212	1.65	9212	1.70
10-0-10	.02 Max	5213	1.70	6213	1.80	9213	1.85
20-0-20	.02 Max	5214	1.75	6214	1.85	9214	1.90
30-0-30	.02 Max	5215	1.85	6215	1.95	9215	2.00
50-0-50	.02 Max	5216	2.00	6216	2.10	9216	2.15

* For zero adjuster, add 35c to price and Z to stock number.
No zero adjuster on Model 950 stock models.

AC AMMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Amps.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.42 Max	5501	$2.50	6501	$2.60	9501	$2.65
0-3	.072 Max	5502	2.50	6502	2.60	9502	2.65
0-5	.041 Max	5503	2.50	6503	2.60	9503	2.65
0-10	.02 Max	5504	2.50	6504	2.60	9504	2.65
0-30	.02 Max	5505	2.80	6505	2.90	9505	2.95
0-50	.02 Max	5506	3.00	6506	3.10	9506	3.15

Resistance may be adjusted to meet government requirements. If this factor is important in your circuit, request factory engineering forecast.

Prices NET, F.O.B. New Haven, Conn., domestic packing, effective January 25, 1951. Subject to change within ceilings.

DC VOLTMETERS

RANGE	RESIST. #	MODEL 550*		MODEL 650*		MODEL 950	
Volts	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
Ma.	Ohms	No.	Each	No.	Each	No.	Each
0-1	17	5101	$1.40	6101	$1.50	9101	$1.55
0-3	205	5102	1.45	6102	1.55	9102	1.60
3-0-3	265	5103	1.45	6103	1.55	9103	1.60
0-5	395	5104	1.45	6104	1.55	9104	1.60
0-6	570	5105	1.45	6105	1.55	9105	1.60
0-8	970	5106	1.45	6106	1.55	9106	1.60
0-10	1920	5107	1.50	6107	1.60	9107	1.65
0-15	4000	5108	1.60	6108	1.70	9108	1.75
0-20	1920	5121	1.65	6121	1.75	9121	1.80
0-25	232	5109	1.60	6109	1.70	9109	1.75
0-25H**	2340	5110	2.30	6110	2.40	9110	2.45
0-50	232	5122	1.75	6122	1.85	9122	1.90
0-50H**	2340	5111	2.45	6111	2.55	9111	2.60
0-75	232	5112	1.80	6112	1.90	9112	1.95
0-100	232	5113	1.90	6113	2.00	9113	2.05
0-100H**	2340	5114	2.60	6114	2.70	9114	2.75
0-150	232	5115	2.00	6115	2.10	9115	2.15
0-150H**	2340	5116	2.70	6116	2.80	9116	2.85
0-300H**†	2340	5117	2.95	6117	3.05	9117	3.10
0-500H**†	2340	5118	3.90	6118	4.00	9118	4.05
0-750H**†	2340	5119	4.65	6119	4.75	9119	4.80
0-8-160	††	5120	2.40	6120	2.50	9120	2.55

*For zero adjuster, add 35c to price and Z to stock number. No zero adjuster on No. 950 stock models.
**H denotes high resistance.
†Supplied with external resistors.
††Approx. resistance 840 ohms at 8 volts. 17,340 ohms at 160 volts.

AC VOLTMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Volts	Approx. Ohms/Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-4	11	5401	$2.50	6401	$2.60	9401	$2.65
0-6	15.8	5402	2.50	6402	2.60	9402	2.65
0-10	27	5403	2.50	6403	2.60	9403	2.65
0-15	32.3	5404	2.50	6404	2.60	9404	2.65
0-50	96	5405	3.00	6405	3.10	9405	3.15
0-150	135	5406	3.25	6406	3.35	9406	3.40
0-300*	100	5407	3.65	6407	3.75	9407	3.80
0-600*	100	5408	4.65	6408	4.75	9408	4.80
0-750*	100	5409	5.25	6409	5.35	9409	5.40

*Supplied with external resistors.

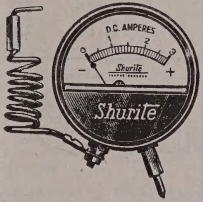
RESISTANCE METERS

RANGE		MODEL 550		MODEL 650		MODEL 950	
Ohms	Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
10,000	4.5*	5701	$2.00	6701	$2.10	9701	$2.15

*Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.
Resistance may be adjusted to meet government requirements. If this factor is important in your circuit, request factory engineering forecast.

POCKET TYPE METERS

Various Shurite pocket meters using the Model 450 case are in production. Model 450 has bright plated case, with two or three terminals, depending on ranges. Ranges suitable for pre-war and post-war batteries, portable radio batteries and many other electrical applications, including polarity indication types have been made, although they are not regularly stocked.



Model 450

Stock numbers begin with 4 as the first digit. For example, the 0-3 DC. Ammeter, as illustrated, is Stock No. 4202.
The bulletin, "Shurite Pocket Types", available on request, is periodically revised to indicate pocket meters which are authorized for production. Dealer net price is obtained by adding $0.40 to the price of 550 Model meters as shown in this catalog at $1.70 or less, or by adding $0.30 for meters at $1.75 or above.

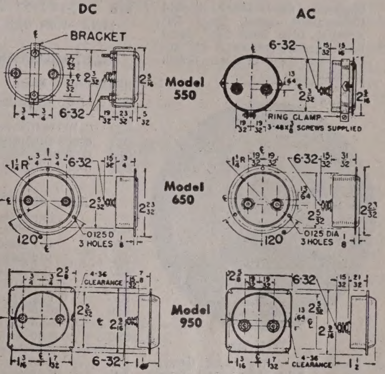
FLANGE ADAPTER RING

A sturdy flange ring for use with any Model 550 (round) Shurite meter where a flange mount is preferred. Makes appearance similar to Model 650. Wide flange, 2¾″ dia. Telephone black finish. Screws, lockwashers and nuts included.

Model 5-A, Net **$0.18**

MOUNTING DETAILS

All Shurite Panel Meters have flush cases and require $2\frac{5}{32}''$ hole. Most standard ranges have 6-32 studs, and are mounted as follows:



IMPORTANT—HOW TO ORDER:

For all standard models, give: (1) Model Number, (2) Range, (3) Stock Number. If Model number and stock number are not stated, Model 550 will be supplied.

ZERO ADJUSTERS (Z)

Zero Adjusters are available only on Models 550-DC and 650-DC. No zero adjuster on models using 950 case. When ordering, add Z to stock number. Example: Stock number for Model 550-DC voltmeter, 0-1 volt range — without zero adjuster is 5101. With zero adjuster, it is 5101-Z.

PANEL CALIBRATION (S)

Meters are calibrated for non-magnetic panels. If for magnetic (steel) panel mounting, specify thickness and overall size of panel, and add -S to stock number when ordering, as 5101-S. If thickness of steel panel is not specified, meter will be supplied for .040 panel.

SEE YOUR DISTRIBUTOR

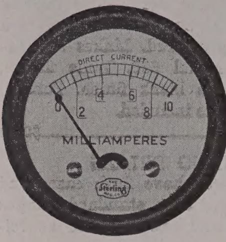
Besides stocking the most wanted types and being able to obtain your other needs on reasonable notice, your authorized Shurite distributor of electronic parts is qualified to help you find the right meter for your need.

(PRICES SHOWN ARE U.S.A. DEALER NET FOR INDIVIDUALLY BOXED METERS)

SHURITE METERS NEW HAVEN 8, CONNECTICUT

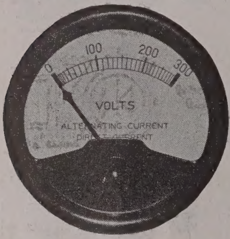
Prices NET, F.O.B. New Haven, Conn., domestic packing, effective January 25, 1951. Subject to change within ceilings.

STERLING PANEL METERS



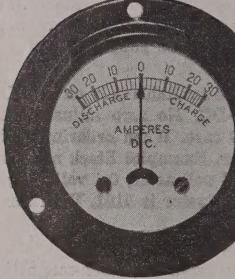
TYPE 80

Flush case, narrow flange, standard finish black enamel. Speed Nut Mounting. Diam. flange $2\frac{5}{32}$″. Speed Diam. case 2″. Depth case $\frac{31}{32}$″ Requires hole $2\frac{1}{32}$″ in diam. Length terminals $\frac{7}{16}$″.



TYPE 88

Flush case, narrow apron flange. Standard finish black enamel. Same dimensions as Type 80. Speed Nut Mounting.



TYPE 70

Flush case, wide flange, standard finish black enamel. Screw holes in flange for mounting. Diam. flange 2⅝″. Diam. case 2″. Depth case ⅞″. Requires hole $2\frac{1}{32}$″ in diam.

STERLING'S NEW SPEED NUT CLAMP

REGULAR BACK CLAMP

ALTERNATING CURRENT METERS

A.C. VOLTMETERS

Number	Range	List Price
870	0-4 Volts	$3.50
871	0-6 Volts	3.50
872	0-10 Volts	3.50
873	0-15 Volts	3.50
910	0-30 Volts	3.50
879	0-50 Volts	4.00
911	0-75 Volts	4.00
874	0-150 VHR†	5.25
912	0-250 Volts	5.75
875	0-300 Volts	6.00
913	0-500 Volts	7.00
876	0-600 Volts	7.00
877	0-750 Volts	8.50
878	0-10-140 Volts	5.25

†VHR—Volts High Resistance

A.C. MILLIAMMETERS

Number	Range	List Price
880	0-25 Milliamperes	$3.50
881	0-50 Milliamperes	3.50
882	0-100 Milliamperes	3.50
883	0-250 Milliamperes	3.50
914	0-300 Milliamperes	3.50
884	0-500 Milliamperes	3.50

A.C. AMMETERS

Number	Range	List Price
886	0-1 Amperes	$3.50
915	0-2 Amperes	3.50
887	0-3 Amperes	3.50
888	0-5 Amperes	3.50
916	0-7½ Amperes	3.50
889	0-10 Amperes	3.50
917	0-15 Amperes	3.50
890	0-20 Amperes	3.75
918	0-25 Amperes	3.75
892	0-30 Amperes	3.75
891	0-60 Amperes	4.00
893	0-60 Amperes	4.25
894	0-75 Amperes	4.25
895	0-100 Amperes	4.25
919	0-125 Amperes	*

*Special Price on application.

DIRECT CURRENT METERS

D.C. VOLTMETERS

Number	Range	List Price
801	0-1 Volts	$2.00
802	0-3 Volts	2.00
803	3-0-3 Volts	2.00
804	0-5 Volts	2.00
805	0-6 Volts	2.00
806	0-8 Volts	2.00
807	0-10 Volts	2.00
808	0-15 Volts	2.00
809	0-25 Volts	2.00
810	0-25 Volts High Res.	3.50
811	0-50 Volts	2.00
812	0-50 Volts High Res.	4.00
823	0-75 Volts	2.25
813	0-100 Volts	2.25
814	0-100 Volts High Res.	4.00
815	0-150 Volts	2.50
816	0-150 Volts High Res.	4.00
817	0-300 Volts	4.00
818	0-500 Volts	5.50
819	0-750 Volts	6.50
820	0-8-160 Volts	3.50

RESISTANCE METERS

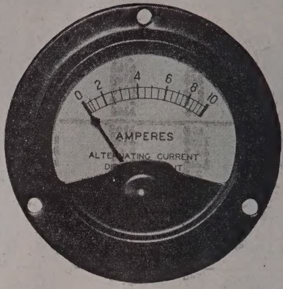
Direct Reading

901......4.5 Volts, 10,000 Ohms
3 Flashlight cells required
List Price $3.50

902....2 M.A., 9 Volts, 100,000 Ohms, 6 Flashlight cells required
List Price $5.00

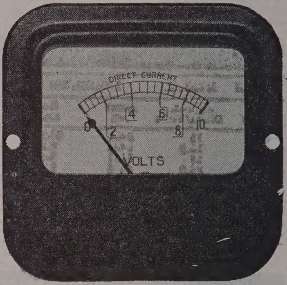
D.C. MILLIAMMETERS

Number	Range	List Price
835	0-2 Milliamps.	$4.50
836	0-5 Milliamps.	3.00
837	0-10 Milliamps.	2.50
838	0-15 Milliamps.	2.00
839	0-25 Milliamps.	2.00
840	0-50 Milliamps.	2.00
841	0-100 Milliamps.	2.00
842	0-150 Milliamps.	2.00
843	0-200 Milliamps.	2.00
844	0-300 Milliamps.	2.00
845	0-400 Milliamps.	2.00
846	0-20-100 Milliamps.	2.75
847	0-15-150 Milliamps.	2.75
848	0-500 Milliamps.	2.00



TYPE 78

Flush case, wide flange with apron. Standard finish black, screw holes in flange for mounting. Same dimensions as Type 70.

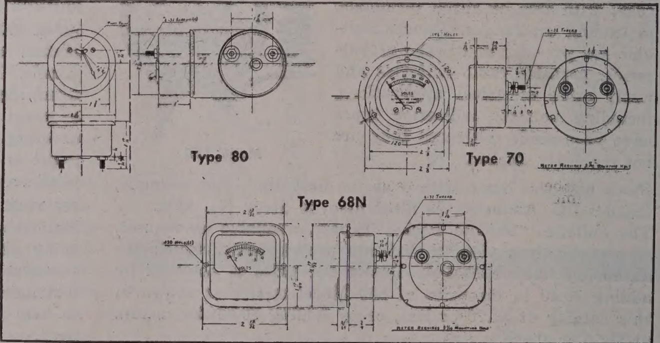


TYPE 68N

Flush case, square flange, standard finish black enamel. Screw holes in flange for mounting. Width flange 2⅝″. Diam. case $2\frac{1}{32}$″. Depth case ¾″.

D.C. AMMETERS

Number	Range	List Price	Number	Range	List Price
855	0-1 Amperes	$2.00	868	0-20 Amperes	$2.25
859	1-0-1 Amperes	2.00	863	20-0-20 Amperes	2.00
856	0-3 Amperes	2.00	865	0-30 Amperes	2.50
860	3-0-3 Amperes	2.00	867	30-0-30 Amperes	2.50
857	0-5 Amperes	2.00	869	0-40 Amperes	3.25
861	6-0-6 Amperes	2.00	866	0-50 Amperes	3.25
858	0-10 Amperes	2.00	925	50-0-50 Amperes	3.50
862	10-0-10 Amperes	2.00	926	60-0-60 Amperes	3.50
864	0-15 Amperes	2.00	927	75-0-75 Amperes	3.75

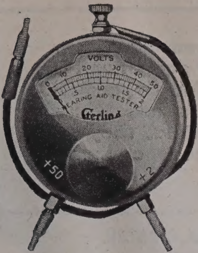


TYPE 70 PRICES LISTED

Note: Specify if for magnetic steel panel mounting.

Type 80, 88, 78, and 68N square flange case furnished for any range of meter at an additional list price of 25¢ each.

Sterling Hearing Aid Battery Testers

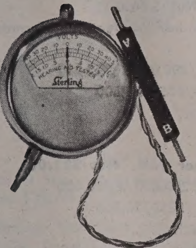


No. 31A

NO. 31A DOUBLE VOLTMETER—for special 30 or 45 v. "B" batteries and 1½ v. "A" batteries, scale 0-50 v. 1 v. div., scale 0-2 v., 1/10 v. divisions. Carefully engineered to impose the correct loads on the small delicate batteries used to operate vacuum tube hearing aids. Equipped with new STERLING flexible plugs................**Price $4.00**

NO. 32A DOUBLE VOLTMETER—for special 30 v. "B" batteries and 1½ v. "A" batteries, scale 0-35 v. 1 v. div. scale 0-2 v. 1/10 v. divisions. Equipped with new STERLING flexible plugs................**Price $4.00**

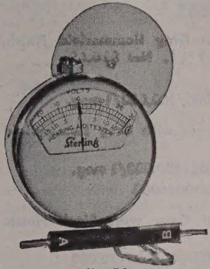
NO. 10 DUAL CONTACT PROD METER in pocket or desk model. Marked "A" at one contact and "B" at the other, the prod is simply inserted into the corresponding battery for quick and easy reading. No. 10 is for earlier type hearing aid batteries. Scale 50-0-50 v., 2 v. div. and 2-0-2 v., 1/10 v. div. No. 10 has one cord and one plug. **Price $4.75**



No. 10

NO. 11 Formerly called the 10S this tester is used on 22½ v. and 30 v. "B" batteries. The load requirement is proportionately less than 1 mil. No. 11 has one cord and one plug................**Price $7.50**

NO. 12 This new meter has no spur and a new voltage scale 30-0-30 v., 1 v. div. and 2-0-2 v., 1/10 v. div. Made extra sensitive for the latest type miniature batteries. Load: on 22½ v. batteries approx. 565 micro-amperes, on 15 v. batteries approx. 375 micro-amperes, on 1½ v. batteries approx. 40 mils................**Price $7.50**



No. 12

Sterling Pocket Meters

Standard Line Direct Current Pocket Ammeters, Voltmeters and Voltammeters.

Ammeters

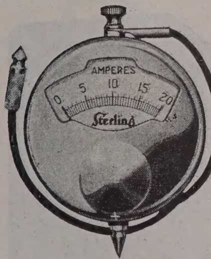
		LIST PRICE
No. 23	for photo-flash dry batteries. 0-20 amp. scale, ½ amp. div.	$2.50
No. 24	for testing No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions	$2.25
No. 24A	for testing dry cells including the heavy-duty Ignition type of cell. 0-50 ampere scale, 1 ampere divisions	$2.30

Voltmeters

No. 33	for ordinary single cells and Flashlight" cells, 0-3 v. scale 1/10 v. div.	$2.30
No. 34	for "Hot Shot" and Radio batteries. 0-10 volt scale, 1/5 volt. div.	$2.30
No. 34A	for 12 volt batteries. 0-16 volt scale, ½ volt divisions	$2.50
No. 34B	for ordinary 22½ v. radio "B" batteries. 0-30 v. scale, 1 v. divisions	$2.50
No. 34C	for testing ordinary 45 v. radio "B" batteries. 0-50 v. scale, 1 v. div.	$3.00

Voltammeters

No. 44	for "Hot Shot" and Radio batteries and No. 6 dry cells, 0-35 ampere scale, 1 ampere divisions; 0-10 volt scale, 1/5 volt divisions	$2.75
No. 44A	for 12 volt batteries and No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions; 0-16 volt scale, ½ volt divisions	$3.00
No. 45	for testing No. 6 dry cells and ordinary 45 volt radio "B" batteries. 0-35 ampere scale, 1 ampere divisions; 0-50 volt scale; 1 volt divisions	$4.00
No. 45A	for testing dry cells including the heavy-duty Ignition type and ordinary 45 v. radio "B" batteries. 0-50 amp. scale, 1 amp. div.; 0-50 v. scale, 1 v. div.	$4.25

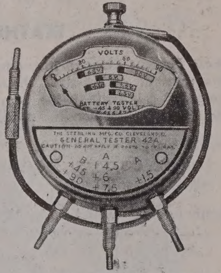


No. 23 AMMETER

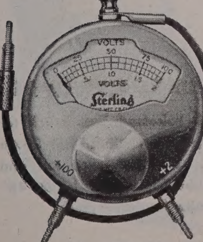
SPECIAL PURPOSE POCKET METERS

Voltmeters

No. 37A	for 45 v. "B" batteries and 1.5 "A" batteries. Scale 0-50 v., 1 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. "B" and 1½ v. "A" batteries	$3.50
No. 38A	for 90 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-100 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. and 90 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 39A	for 90 v. and 135 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 90 v. and 135 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 40A	for 90 v. and 135 v. "B" batteries and 4.5 v., 6 v. and 7.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-10 v., 1/5 v. div. Tests 90 v. and 135 v. "B" batteries and 4½ v., 6 v. and 7½ v. "A" batteries	$4.00
No. 42A	Graphic General Tester. Red and Green color chart for all standard batteries including 45 v. and 90 v. "B" batteries and 1.5 v., 4.5 v., 6 v., and 7.5 v. "A" batteries. 0-100 v. scale for special sizes of "B" batteries, 5 v. div. Tests all Portable Radio batteries	$6.00

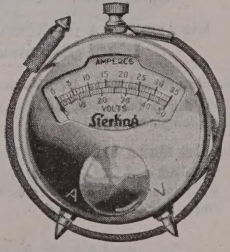


No. 42A GENERAL TESTER



No. 38A VOLTMETER

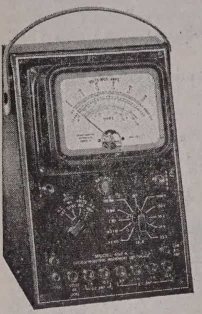
STANDARD LINE—Sterling's direct current pocket ammeters, voltmeters and voltammeters may be used in all kinds of battery testing, in railroad signal work, for photo flash purposes and in telephone and low-voltage electrical work generally. **They are polarity indicators.** Meters 2½" in diameter and ⅝" thick. Nickel finish. Standard package, ten instruments. Shipping Weight 4 lbs.



No. 45 VOLTAMMETER

Chicago INSTRUMENTS

Since 1933 we have been manufacturing a quality line of test equipment. For high accuracy and rugged dependability, Chicago Instruments are without compare in the service field. They represent the greatest test equipment values on the market!



PORTABLE BENCH-TYPE VOLT-OHM-MILLIAMMETER

Exclusive Design Slanted Case for Better Visibility

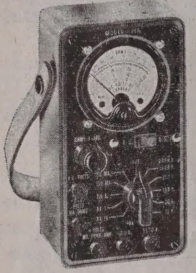
Multiplex Model 458A. Volt-Ohm-Mils-Ammeter. Net $26.00

Modernized brown hammerloid finished case with flexible leather strap handle, featuring broader coverage. 1000 ohms per volt.

Volts AC-DC: O-2.5/10/50/250/1000/5000
Milliamperes AC-DC: 0-1/10/100
Amperes: AC: 0-05/1/5/10
Amperes: DC: 0-1/10
Ohms Full Scale: 1000/200,000/2,000,000
Ohms Center Scale: 50/2250/22,500
Size: 10⅛" x 6¾" x 5½"

Multiplex Model 458. Volt-Ohm-Miliammeter. 1000 Ohms per volt. Net $21.00

Volts DC: 0-5/10/50/100/500/2000
Volts AC: 0-12.5/25/125/250/1250
Milliamperes DC: 0-1/10/100
Milliamperes AC: 0-2.5/25/250
Ohms Full Scale: 1000/200,000/2,000,000
Ohms Center Scale: 50/2250/22,500
Output: —5 to +55 Decibels
Size: 10⅛" x 6¾" x 5½"



PORTABLE VOLT-OHM-MILLIAMMETERS

Portaplex Model 431A. 1000 Ohms per Volt. Aluminum Case with Grey Hammerloid Finish. Leather Strap Handle. Complete with Test Leads. Size: 6⅛" x 3¼" x 2¾". Net $16.60

Volts AC-DC: 0-15/30-150/300/1500/3000
Ohms Center Scale: 60/600/6000
Amperes DC: 0-7.5
Ohms Full Scale: 0-10,000/100,000/1 meg.

Portaplex Model 421D. 5000 Ohms per Volt. Aluminum Case and Cover with Grey Hammerloid Finish. Size: 6⅛" x 3¼" x 3¼". Net $20.00

Volts AC-DC: 0-4/10/40/100/400/1000
Milliamperes DC: 0-4/40/100/400
Ohms Full Scale: 0-10,000/100,000/1 meg.
Ohms Center Scale: 60/600/6000

Portaplex Model 433. High sensitivity 20,000 Ohm per Volt. Steel Case with Black Finish. Size: 5-7/16" x 3-9/16" x 3". Net $20.00

Volts DC: 0-3/30/300/600
Ohms Full Scale: 5000/50,000/500,000/5,000,000
Ohms Center Scale: 70/700/7000/70,000

FEATHERWEIGHT MINIATURE MODELS

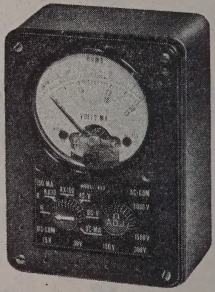
These Famous Chicago Instruments are the most useful multitesters made. We are the pioneers of this type of pocket-size. Thousands are in daily use all over the world. Chicago "Featherweights" are built to the same high standard of accuracy as our bench type models. They are ideal for outside service work. All Models Size: 3-15/16" x 2⅞" x 2".

Featherweight Model 450. 1000 Ohms per Volt. Bakelite Case. Net $12.00

Volts DC: 0-5/10/50/500/1000
Milliamperes: 0-1
Ohms Full Scale: 5000/50,000/500,000
Ohms Center Scale: 30/300/3000

Featherweight Model 453. 1000 Ohms per Volt. Bakelite Case. Net $16.00

Volts AC: 0-15/30/150/300/1500/3000
Volts DC: 0-15/30/150/300/1500/3000
Milliamperes DC: 0-150
Ohms Full Scale: 5000/50,000/500,000



LOW COST SIMPLEX VOLT-OHM-MILLIAMMETERS

Inexpensive multitesters for low sensitivity requirements
Ideal instruments for schools and beginners

Simplex Model 371. Iron Vane Type. Net $5.25

Volts DC: 0-3/15/30/300
Milliamperes: 0-25
Ohms Full Scale: 10,000
Size: 1⅞" x 2¾" x 3⅞"

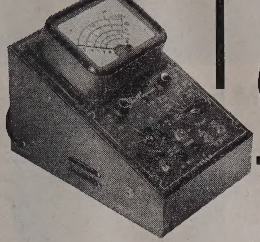
Simplex Model 312 AC-DC. Repulsion Type Movement. Net $6.75

Volts AC and DC: 0-25/50/125/250
Milliamperes AC and DC: 0-50
Ohms Full Scale: 100,000
Ohms Center Scale: 2400
MFD: .05 to 15.
Size: 1⅞" x 2¾" x 3⅞"

POLARIZED TEST LEADS

No. 1048 Polarized Test Leads for all Chicago Instruments. Net $0.66 per pair. Low resistance red and black rubber insulated leads 48" long. Tenite insulated prods.

CHICAGO INDUSTRIAL INSTRUMENT CO.

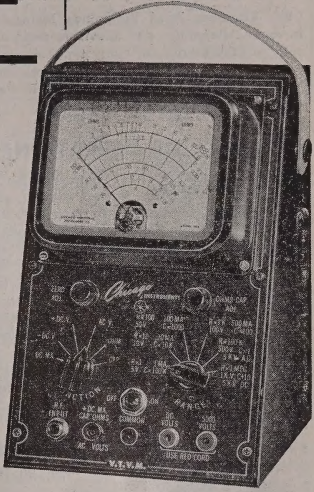


Chicago INSTRUMENTS

ELECTRONIC MULTITESTER

For TV and FM

The new Chicago Vacuum Tube Volt Meter is the Industry's Greatest Value! More Ranges — Greater Accuracy — Laboratory Quality — Exclusive Design.



30 RANGES

- AC & DC Volts
- Output
- Ohms
- DC Milliamperes
- Capacitance

Model 504 VTVM Electronic Multitester. Complete with DC Probe and Test Leads. Net $39.00

Precision calibrated 1% multipliers, Capacitance and Milliampere ranges add versatility found only in instruments costing more than twice as much. Rotary Switching and one Zero adjustment for all ranges are designed for convenience. Exclusive slanted case front and big 5½" meter offer new scale reading ease. Zero Center for TV and FM discriminator alignment. Size: 10" x 7" x 6". Shipping Weight: 10 lbs.

RANGES

DC VOLTS: (7 ranges)
0-5/10/50/100/500/1000/5000
AC VOLTS: (7 ranges)
0-5/10/50/100/500/1000/5000
DECIBELS: —20 to +16
OHMS: (6 ranges)
0-1000/10K/100K/1 Meg/100 Meg/1000 Meg
Ohms readings at center scale
10/100/1000/10K/1 Meg/10 Meg

CAPACITANCE: (6 ranges)
50 mmf to 5000 mmf
.0005 mf to .05 mf
.05 mf to 5 mf
.5 mf to 50 mf
5 mf to 500 mf
50 mf to 5000 mf
DC MILLIAMPERES: (4 ranges)
0-1/10/100/500

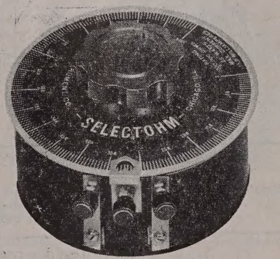
MODEL 501 V.T.V.M. ACCESSORIES

Model P505 R.F. Probe: Extends AC range to 100 megacycles. Net $5.00

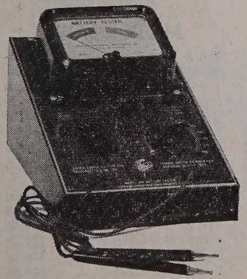
Model P506 High Voltage Probe: Extends the DC Voltage range to 30,000 VDC. Net. $9.00

SELECTOHM CALIBRATED POTENTIOMETER

Model 501 Selectohm. Net $7.50



100,000 Ohm 25 watt precision wire-wound, Linear scale potentiometer is designed for a resistance substitute or for accurately calibrating resistance in a circuit. The Selectohm may be used as a decade box or in groups for quick set-ups as a divider network. It has many service and laboratory applications. Wire wound. Molded Bakelite. Protected windings. Precision laboratory construction throughout.



DRY BATTERY TESTER

A counter type merchandising tester that indicates the condition of dry cells at a glance. The customer can see for himself. Boosts battery sales.

Model 471. Dry Battery Tester. Complete with Test Leads. Net $16.00.

Tests 1½ Volt-10 Volt and 10 Volt to 150 Volt batteries under specified load. Big easy-to-read 5½" rectangular meter.

CHICAGO INDUSTRIAL INSTRUMENT CO.

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

VIBRATING REED FREQUENCY METERS (PATENTED)

J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards in central stations and industrial plants—wherever constant or known frequency is important to efficient operation of equipment.

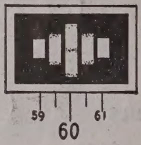
PRINCIPLE OF OPERATION:

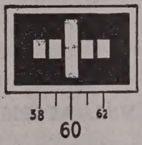
Simple in design, the J-B-T Meter consists of a case, base, dial and central mounting frame, with a series of spring steel reeds screwed to a reed mounting bar, individual driving coil surrounding each bank of reeds, permanent magnet, series resistor and terminal studs.

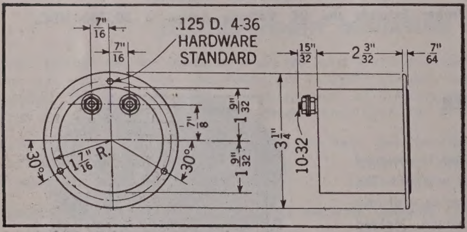
Each reed is adjusted to respond by resonance to but one frequency. As the alternating current (or interrupted direct current) excites the driving coil, the one reed "in tune" with the frequency in the coils will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. Frequency of the current is read on the graduated face of the instrument.

ADVANTAGES:

Some standard models are available in either half cycle or full cycle steps, as shown below on two meters indicating a frequency of 60 cycles.

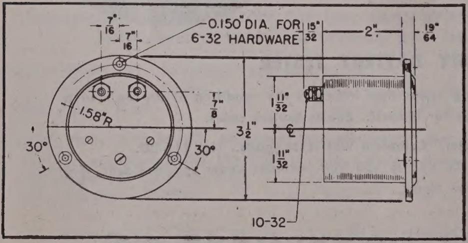





7"/16
7"/16
.125 D. 4-36 HARDWARE STANDARD
15"/32
2 3"/32
7"/64
1 9"/32
7"/8
1 9"/32
3¼"
10-32
30°
1 7"/16 R.
30°

Above: Models 30-F, 31-F, 33-F, 34-F; 3¼" Metal Case

Below: Models 30-FX, 31-FX, 33-FX, and 34-FX; Molded Case Meets Mounting Dimensions of JAN-I-6 and ASA C39.1-1951 and MIL-M-6A.

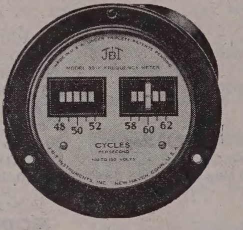

7"/16
7"/16
0.150" DIA. FOR 6-32 HARDWARE
15"/32
2"
19"/64
7"/8
1 11"/32
3½"
℄
1 11"/32
1.58"R
30°
30°
10-32

Guaranteed accuracy at normal operating temperatures is ±0.3% or better of the frequency being measured, depending on the model. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

All meters are permanently calibrated at the factory and do not require subsequent adjustment. Accuracy is not affected by wave form or external magnetic fields. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

CAUTION:

If a meter plugged in on a 60 cycle AC power line does not indicate a frequency of exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions beyond the control of the Utility. All J-B-T Vibrating Reed Frequency Meters are accurately calibrated at the factory, entirely independent of frequency of power supply.


JBT
MODEL 30-F FREQUENCY METER
48 50 52
58 60 62
CYCLES PER SECOND
100 TO 130 VOLTS
J-B-T INSTRUMENTS, INC. NEW HAVEN, CONN.

MODEL 30-F

MODEL 30-F

Range: 48-52 and 58-62 cycles. Double window for ease of reading frequency in either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Accuracy ±0.3% at reference temperature. Flush panel mounting. For details, Bulletin VF-43.

30-F, 48-52 and 58-62 cy., 3¼" Metal Case **$27.50**

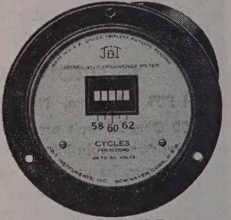
30-FX, 48-52 and 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$27.50**

MODEL 31-F

Used in standby power equipment. Handy for accurately measuring frequency of power source. Five reeds, 58-62 cycles 100-130 volts. Other characteristics same as Model 30-F. For details, Bulletin VF-43.

31-F, 58-62 cy., 3¼" Metal Case **$23.65**

31-FX, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$23.65**


JBT
MODEL 31-F FREQUENCY METER
58 60 62
CYCLES PER SECOND
100 TO 130 VOLTS
J-B-T INSTRUMENTS, INC. NEW HAVEN, CONN.

MODEL 31-F

MODEL 34-FX

Used where a broader frequency band is desirable. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy ±0.2%) 58-62 cycles. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Flush panel mounting. For details, Bulletin VF-43.

34-F, 56-64 cy., 3¼" Metal Case **$27.25**

34-FX, 56-64 cy., 3½" Molded Case, JAN-I-6 mtg. **$27.25**

34-F, 58-62 cy., 3¼" Metal Case **$28.90**

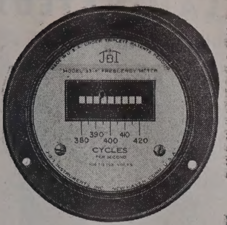
34-FX, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$28.90**

JBT
MODEL 34-FX FREQUENCY METER
56 58 60 62 64
CYCLES PER SECOND
100 TO 130 VOLTS
J-B-T INSTRUMENTS, INC. NEW HAVEN, CONN.

MODEL 34-FX

Instruments J-B-T Testers

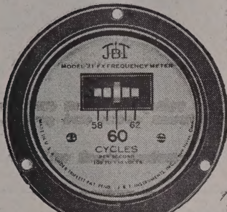
J-B-T INSTRUMENTS, INC.



MODEL 33-F

400-cycle. Used for measuring frequency of high-cycle power sources, including new heavy aircraft. Accuracy ±0.3%. Nine reeds, 380 to 420-cycle range. 100-130 volts; 70 ohms per volt; 1.75 watts power consumption. Flush panel mounting. For details, see Bulletin VF-43-1A.

33-F, 380-420 cy., 3¼" Metal Case	**$34.10**
33-FX, 380-420 cy., 3½" Molded Case, JAN-I-6 mtg.	**$34.10**



MODEL 21-FX

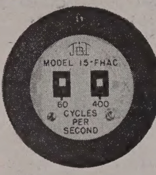
Matches other 2½" panel instruments. Meets ASA C39.1-1951 in depth of case as well as mounting dimensions and mounting hardware. Weighs only 4½ oz. 100-130 volts; 5 reeds; 58-62 cycles; 190 ohms per volt; 0.6 watt power consumption. Also 116 to 124 cy.; 160 ohms per volt; 0.7 watt power consumption. 390 to 410 cy.; 85 ohms per volt; 1.3 watts power consumption. Flush panel mounting. For details, see Bulletin VF-43-1B and Mounting Diagram MD-20.

21-FX, 58-62 cy., 2-11/16" Molded Case	**$22.55**
21-FX, 116-124 cy., 2-11/16" Molded Case	**$25.30**
21-FX, 390-410 cy., 2-11/16" Molded Case	**$27.50**

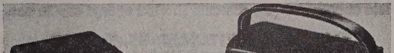
1½" SEALED METER

MODEL 15-FHAC, now used extensively on audio-oscillators as the frequency standard, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts for cathode follower circuit. Other 1½" sealed meters having one bank of 5 or 6 reeds and operating at 100-130 volts are made on special order, but not stocked. Barrel is 1½" diameter; detachable flange 2.094" diameter; overall depth behind flange 1$\frac{15}{16}$"; three holes on 0.875" radius; solder terminals (see Print SK-39).

15-FHAC	**$20.30**



PORTABLE FREQUENCY TESTERS



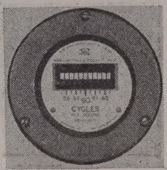
MODEL 33-FP-9L. Handy, compact, portable instrument of exceptional accuracy even under poor wave-form conditions, fluctuating voltage or external magnetic disturbances. Meets exacting test requirements of aviation, signal and communication equipment. Housed in sturdy molded case 5⅞" x 3$\frac{1}{16}$" x 2⅝" with leather carrying case 6$\frac{3}{32}$" x 4¼" x 2¾". 4' leads are supplied complete with sharp 5" insulated test picks and banana plugs. Electrical characteristics identical with 400 cycle 33-F. Model 34-FP-9L electrical characteristics are identical with 60-cycle 34-FX.

33-FP-9L, 380-420 cy., 100-130 volts	**$47.60**
34-FP-9L, 56-64 cy., 100-130 volts	**$40.70**

NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made only for the purpose of reading two or more voltages, not additional phases.

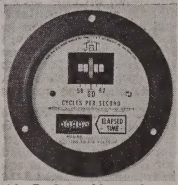
3½" SEALED METER



FHXX TYPE METERS, sealed instrument, glass-to-metal construction, with solder terminals now supersede the FHX sealed meters (Print SK-24). While JAN-I-6 does not refer to frequency indicators, the FHXX series uses the front mounting dimensions, and meets or exceeds the sealing and electrical requirements including the 3000 volt breakdown. Maximum barrel diameter 2-11/16" (2¾" panel mounting hole recommended); 2⅞" overall depth behind flange, mounted by 3 flange holes for 6-32 screws on 1.58" radius; detachable flange. See Print SK-51. Standard voltage is 100-130. While not regularly stocked, these meters are in production.

31-FHXX, 5 reeds, 58-62 cy.	**$30.45**
33-FHXX, 9 reeds, 380-420 cy.	**40.90**
34-FHXX, 9 reeds, 58-64 cy.	**34.05**
34-FHXX-11, 11 reeds, 55-65 cy.	**36.25**
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy.	**37.90**

ELAPSED TIME AND FREQUENCY METER



This unique panel instrument combines the elapsed time or running time meter with frequency reeds. It is widely used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. Reads 9,999.9 hours; 58-62 cycles at 110-130 volts. Self-starting. Tenths shown in red numerals, all others black. Meter panel 2-9/16" (2⅝" panel mounting hole recommended); Depth behind flange, 4-11/32". Front mounting same as Model 31-F. For variations with 7, 9 or 11 reeds on special order only, see Print SK-45.

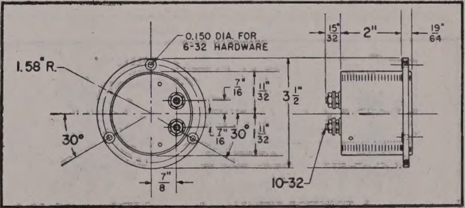
31-FE, 3¼" metal case	**$33.00**
31-FEX-1 (not stocked), 3½" meter flange permanently attached	**$34.10**

ELAPSED TIME METER

JBT
ELAPSED TIME METER
HOURS

MODEL 31-EX. To record operating time of AC electrical and electronic equipment, this instrument registers in 1/10th hour steps to 9,999.9 hours, then automatically re-sets. Shows tenths in red numerals, all others in black. Molded case per diagram below and matching "X" 3½" frequency meters fully encloses all parts. Popular for tube life, TV equipment, punch presses, conveyors, oil burners, maintenance schedules, etc.

31-EX, 60 cy., 110-130 volt	**$15.95**
31-EX, 60 cy., 220-240 volt	**17.05**



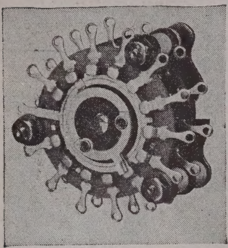
Model 31-EX Molded Case; meets flange dimensions of JAN-I-6 and ASA C39.1-1951 and MIL-M-6A.

Instruments J·B·T Testers

J-B-T INSTRUMENTS, INC.

INSTRUMENT AND TESTER SWITCHES (LAMINATED)

Rotary Selector — Single and Multi-Gang — Non-Shorting and Shorting*



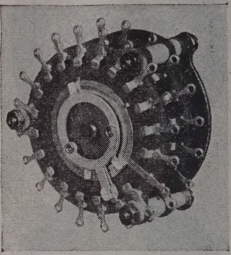
SS-14-2

JBT Instrument-type Rotary Selector Switches are used widely in quality test equipment, portable instruments, inspection setups and avionics where trouble-free, dependable performance is of major importance. Available in two basic types—14 and 20 position—the design gives extra contacts in minimum space. One to six decks.

FEATURES:

Reliability—Rigid, 3-post deck suspension, instead of the usual 2; all current carrying parts are brass or phosphor bronze, nickel coated and then heavily plated with pure silver to meet 200 hour salt spray test; ball bearing action, beryllium-copper spring on SS-14; phosphor bronze on SS-20, and sharp detent assure positive indexing. Laminated plastic decks and rotors selected for maximum mechanical and dielectric strength. On special order, material of grade LTS-E-3 or better, per Government Specs. MIL-P-3114, vacuum impregnated with approved fungicide can be supplied at extra cost.

Exceptional Compactness—14-position switch takes 13 circuits and "off" in 2" circle; 20-position switch handles 19 circuits and "off" in 2-23/32" circle. Extra decks add only 5/16".



SS-20-2

Low Contact Loss—Double-grip collector arms, and large-area contacts, silver to silver, result in on average contact resistance of .007 ohms or less during the useful life of the switch.

Ample Dielectric—AC or DC; normal carrying capacity (not make-and-break), 1 amp.; maximum momentary capacity (not make-and-break), 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S.

★ Standard items, but not regularly stocked; check with your distributor.

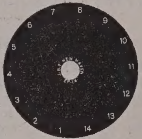
BASIC 14-POSITION: Knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown, 13 contacts per deck. **One to six decks;** for each additional deck (or gang) add 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Adjustable Stop** normally is supplied on standard cataloged switches. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

BASIC 20-POSITION: Knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat on shaft, unless otherwise specified. **Contact lugs** and common lug positioned as shown, 19 contacts per deck, continuous rotation types. **One to six decks;** for each additional deck, add 5/16" to depth. Continuous rotation type supplied unless otherwise specified. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

ETCHED DIAL PLATES

For SS-14 or MS-14 Series; and for SS-20 or MS-20 Series. Dull black finish—with raised bright metal numerals.

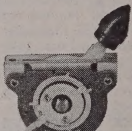
EP-13	off thru 13	**$0.21**
EP-14	1 thru 14	**.21**
EP-19	off thru 19	**.21**
EP-20	1 thru 20	**.21**



LEVER ACTION SWITCHES

Excellent for test equipment and communications systems, these switches use the same high quality parts as the SS-14 series. Bracket mounting holes 1⅝" apart; may be mounted in groups ⅝" between centers. Individually boxed with knobs. Positive indexing type.

SS-14-1L3,	3 pos., no off; N-S	**$0.75**
SS-14-1L3S,	3 pos., no off; Sh	**.75**
SS-14-1L4,	3 pos., & off; N-S, Illus.	**.85**
SS-14-1L4S,	3 pos., & off; Sh	**.85**



LAMINATED SWITCHES, SS-14 TYPE

(14 positions; angular indexing 25° 43′)

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Net Price, Individually Boxed, Including Knob
SS-14-1	14	1	1	N-S	**$1.50**
SS-14-1A*	5†	2	1	N-S	**1.55**
SS-14-1S*	14	1	1	S	**1.50**
SS-14-1CS‡	14	1	1	CS	**1.85**
SS-14-2	14	1	2	N-S	**1.80**
SS-14-2A*	5†	2	2	N-S	**1.95**
SS-14-2S	14	1	2	S	**1.80**
SS-14-2CS‡	14	1	2	CS	**2.55**
SS-14-3	14	1	3	N-S	**2.25**
SS-14-3S*	14	1	3	S	**2.25**
SS-14-4	14	1	4	N-S	**2.90**
SS-14-6	14	1	6	N-S	**4.25**

*Standard items, but not regularly stocked; check with your distributor.

†Denotes correction in former catalogs; 5 positions include 4 "live" and 1 "off".

‡Complete shorting — all contacts shorted except one in use.

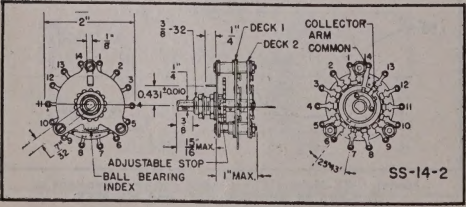
LAMINATED SWITCHES, SS-20 TYPE

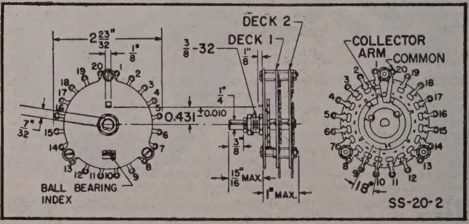
(20-positions; angular indexing, 18°)

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Net Price, Individually Boxed, Including Knob
SS-20-1	20	1	1	N-S	**$1.95**
SS-20-1A*	6§	2	1	N-S	**2.00**
SS-20-1S*	20	1	1	S	**1.95**
SS-20-2	20	1	2	N-S	**2.40**
SS-20-2S*	20	1	2	S	**2.40**
SS-20-3	20	1	3	N-S	**3.25**
SS-20-4	20	1	4	N-S	**3.95**
SS-20-6	20	1	6	N-S	**5.60**

*Standard items, but not regularly stocked; check with your distributor.

§Denotes correction in former catalogs; 6 positions include 5 "live" and 1 "off".



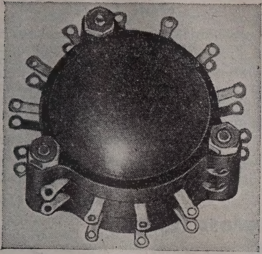


Instruments J-B-T Testers

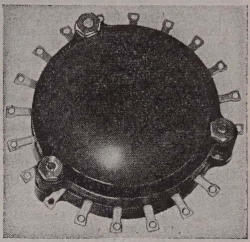
J-B-T INSTRUMENTS, INC.

NEW–BUT PROVED–MOLDED ROTARY SELECTOR SWITCHES

Fully Enclosed — Single and Multi-Gang — Shorting and Non-Shorting


MS-14-2

- **All moving contacts enclosed — minimizes dirt and corrosion.**
- **Contact lugs permanently integrated into switch assembly.**
- **Sturdy construction with 3-post deck suspension, double grip collector arms, and rectangular drive shaft through decks for precision indexing.**
- **Interchangeable, electrically and mechanically, with J-B-T 14- and 20-position laminated switches, widely used by industry and Armed Services.**


MS-20-1

FEATURES:

For description of rigid 3-post construction; heavy pure silver plating to meet 200-hour salt-spray test; exceptional compactness; .007 ohm average contact resistance; current-carrying capacity and voltage breakdown, see adjoining page on SS-14 and SS-20 laminated switches. Besides fully enclosing all the moving contact parts, the molded switches differ from the laminated construction in the design of the detent mechanism, but both types provide the positive indexing which quickly identifies the superior quality of J-B-T switches.

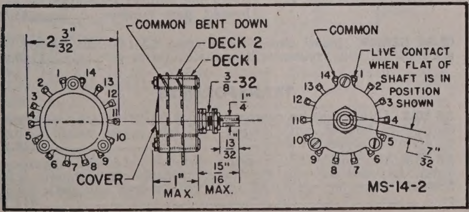
BASIC 14-POSITION MOLDED (MS-14): 13 circuits and "off" per deck in 2" circle for compactness. **Molded end cover** regularly supplied on MS-14 series. **Knob** included with individually boxed units — not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms hold contact lug on upper and lower surfaces; collector ring is self-wiping. **One to six decks** add $\frac{5}{16}$" per deck (or gang) to depth; for seven decks and over, add ½" to depth for double indexing mechanism; add $\frac{5}{32}$" to depth for adjustable stop mechanism. **Continuous rotation type** supplied unless adjustable stop (type MAS) is ordered or, on quantity orders, pre-set fixed stops are specified. **Panel locator** is available on quantity orders when specified; on MS-14-4 and MS-14-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

BASIC 20-POSITION MOLDED (MS-20): 19 circuits and "off" per deck in 2$\frac{23}{32}$" circle for compactness. **Molded end cover** regularly supplied. **Knob** included with individually boxed units — not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms and self-wiping collector ring are standard construction. **One to six decks;** add $\frac{5}{16}$" per deck (or gang) to depth. **Continuous rotation type** supplied; on quantity orders, pre-set fixed stops are available. **Panel locator** available on quantity orders when specified; on MS-20-4 and MS-20-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

MOLDED SWITCHES, MS-14 TYPE

(14 positions; angular indexing 25° 43')
Continuous rotation, no stops

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Net Price, Individually Boxed Including Knob
MS-14-1	14	1	1	N-S	$\frac{13}{16}$"	$1.50
MS-14-1S	14	1	1	S	$\frac{13}{16}$"	1.50
MS-14-2	14	1	2	N-S	1⅛"	1.80
MS-14-2S	14	1	2	S	1⅛"	1.80
MS-14-3	14	1	3	N-S	1$\frac{7}{16}$"	2.25
MS-14-4	14	1	4	N-S	1¾"	2.90
MS-14-6	14	1	6	N-S	2⅜"	4.25



MOLDED SWITCHES, MS-20 TYPE

(20 positions; angular indexing 18°)

Continuous rotation, no stops

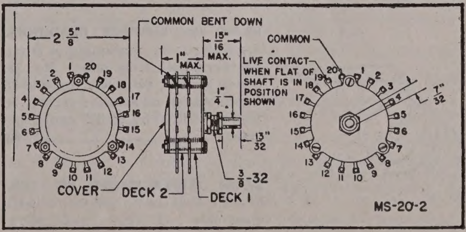
Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Net Price, Individually Boxed Including Knob
MS-20-1	20	1	1	N-S	$\frac{13}{16}$"	$1.95
MS-20-1S	20	1	1	S	$\frac{13}{16}$"	1.95
MS-20-2	20	1	2	N-S	1⅛"	2.40
MS-20-2S	20	1	2	S	1⅛"	2.40
MS-20-3	20	1	3	N-S	1$\frac{7}{16}$"	3.25
MS-20-4	20	1	4	N-S	1¾"	3.95
MS-20-6	20	1	6	N-S	2⅜"	5.60

ADJUSTABLE STOP MOLDED SWITCHES, MAS-14 TYPE

(14 positions; angular indexing 25° 43')

IMPORTANT: Enclosed adjustable stop mechanism located on panel side of switch increases switch length $\frac{5}{32}$" behind panel; decreases effective bushing length by $\frac{3}{32}$"; and shortens shaft extending from bushing by $\frac{1}{16}$".

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Net Price, Individually Boxed Including Knob
MAS-14-1	14	1	1	N-S	$\frac{31}{32}$"	$1.95
MAS-14-1S	14	1	1	S	$\frac{31}{32}$"	1.95
MAS-14-2	14	1	2	N-S	1$\frac{9}{32}$"	2.25
MAS-14-2S	14	1	2	S	1$\frac{9}{32}$"	2.25
MAS-14-3	14	1	3	N-S	1$\frac{19}{32}$"	2.70
MAS-14-4	14	1	4	N-S	1$\frac{29}{32}$"	3.35
MAS-14-6	14	1	6	N-S	2$\frac{17}{32}$"	4.70

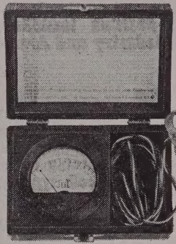


Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

APPLIANCE TEMPERATURE TESTERS

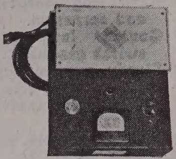
A NEW IDEA IN TESTERS — The need for scientific but sturdy portable test equipment in the appliance service field is met by this exclusive line. Here the user profits from J-B-T's wide experience in building field test sets for many well-known manufacturers of ranges, irons, refrigerators, deep freeze units, and similar equipment. All J-B-T testers include the principle of remote reading of temperature,—and temperature measures the real usefulness of the appliance.



MODEL 32-JP-3. A very popular oven tester with all the features of Model 32-JP-4 except that no carrying strap is included, and the thermocouple supplied is attached permanently instead of to binding posts. This model is extensively used for service work, sales demonstrations and inspection. Range 0-650° Fahrenheit; 10° divisions readable to 2½°; automatically compensated for ambient temperature. For more details, see Bulletin JP-103. Complete with attached SA-116 5½' calibrated thermocouple, clip and shield. **$25.05**

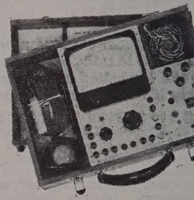
MODEL 32-JP-4. Checks oven temperature of gas and electric ranges and other appliances. Ideal for testing and setting thermostats. Has binding posts for quick attachment of thermocouples listed below to check irons, washers, waffle-bakers, roasters, clothes dryers, etc. Exceptionally fast, continuous response; automatically compensates for ambient temperature. For full details see Bulletin JP-104. Range 0—650° F; black leatherette case 6" x 3⅞" x 3¾". Complete with SA-116 5½' calibrated thermocouple, clip for attaching to grill, and convection shield for steady readings........**$26.15**

IRON TESTER



MODEL 32-JIT. Self-contained bench type tester; checks all makes of irons; measures thermostat temperatures; and shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal case; overall size 10" x 12" x 5½", scale 0—650°F, 15 amp. fuse, 6' cord, 110-volt, 50-60 cycles........**$31.65**

ALL-PURPOSE TESTER



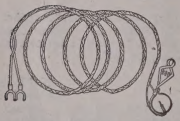
MODEL 61-JRT. This 9 - in - 1 tester speeds accurate temperature adjustment and current analysis of ranges, refrigerators, etc. Rapidly reads four cold zones, —100° F. to +80° F. up to 14' distant; two heat zones 0-600° F. up to 5½' distant; one voltage range 0-300 AC; and with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case 15½" x 10 3/16" x 4¾" with handle and slip hinges. Two-color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flash-light cell, replaceable in the field. Temperature scale accuracy ±2% of full scale. AC readings ±5% with rectifier. Accessories listed below may be added for testing irons, grills, roasters, washers, etc. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, necessary electrical leads, and AS-TR-2 built-in transformer........**$107.25**

For more details, see Bulletin JRT-349.

MODEL 61-JRT (LESS TRANSFORMER). Same unit, same scales, except does not read in amperes; AS-TR-2 transformer assembly omitted **$93.50**

ATTACHMENTS AND SPARE PARTS

THERMOCOUPLES

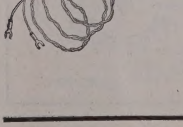


SA-116 with SHIELD and CLIP. Standard flexible No. 22 gauge iron constantan, asbestos insulated, 5½', with attachment clip and convection shield as normally supplied with 23-JP-1, 32-JP-1, 32-JP-2, 32-JP-3, 32-JP-4, 60-JRT and 61-JRT Testers. (See SA-199 for extra quality, glass insulated type). **SA-116**........**$1.80**

SA-175 (PLAIN TIP). For roasters, waffle irons, etc., 5½' iron constantan flexible No. 22 gauge, asbestos insulated, with small ball tip; used where clip and shield of SA-116 not suitable; for Models 32-JP-2, 32-JP-4, 60-JRT, and 61-JRT........**$1.45**

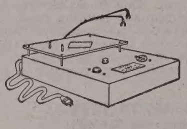
SA-188 (for AUTOMATIC WASHER TEMPERATURES, etc.) 3/16" diameter copper tube, 4" long, encloses thermocouple for insertion in pipe or sample of water. Has 6' leads for attachment to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT........**$3.85**

SA-199 with SHIELD and CLIP. Same as SA-116 above, except duplex, non-fraying glass braid construction; diameter .115"; recommended for frequent use with these testers at temperatures above 400°F. **$2.25**



SA-300 (for SURFACE READINGS). Spring-type iron constantan in Transite tip with handle and 5' No. 22 gauge lead for extremely rapid heat readings; for attachment to 32-JP-2, 32-JP-4, 60-JRT and 61-JRT appliance testers **$5.50**

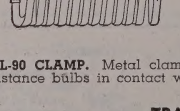
SA-301 (REPLACEMENT TIP FOR SA-300). Transite tip and thermal element only **$2.75**



IRON TESTER THERMOCOUPLE, MODEL IT-1. This attachment is identical with the 32-JIT, except there is no meter. It is easily connected to Models 32-JP-2, 32-JP-4, 60-JRT and 61-JRT. Shows open circuits and shorts, checks sole plate temperatures and thermostats on all types of irons **$16.25**

SA-170 (REPLACEMENT THERMOCOUPLE for IRON TESTERS 32-JIT and IT-1). Thermocouple and lead, including aluminum plate and special tip, quickly installed in the field........**$2.10**

RESISTANCE BULBS (FOR COLD TESTING)



SA-142. For use only with Model 60-JRT; calibration is not interchangeable with SA-162; has no embossed number **$5.50**

SA-162. For use only with Models 50-50 and 61-JRT; identified by embossed part number........**$5.50**

CL-90 CLAMP. Metal clamp for holding SA-142 and SA-162 resistance bulbs in contact with surfaces up to ¼"........**$0.28**

TRANSFORMERS

AS-TR-2. Attachment for compartment of 61-JRT all-purpose tester, completely housed, with jumper lead and panel; reads 30 and 60 AC amp. scales on tester........**$16.50**

AS-TR-3. Attachment for increasing usefulness of 60-JRT all-purpose tester. Includes side rails for attaching inside compartment; fully housed. Reads 30 and 60 AC amp. by dividing volt scale by 10 or 5 ....**$18.15**

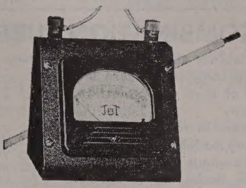
Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

TEMPERATURE INDICATORS

WHERE TO USE: To check heat rise of motors, transformers and coils; for laboratory furnaces, inspection set-ups, for remote indication of infra-red and other oven temperatures; and to maintain controlled industrial processes such as heat treating and annealing. When used with selector switch, permits centralized reading of one to ten thermocouples, as in Diesel exhaust manifold applications.

MODEL 32-J



MODEL 32-J PYROMETER IN SN-3 STAND. Mounted in sloping front black metal stand, 4¼" high x 4⅜" deep x 4⅛" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2⅜" scale, assures ruggedness and pointer stability. To retain the ±2% accuracy of the installation: use only the type and resistance of thermocouple and lead which are provided; do not cut extra lead—coil it — change in length changes calibration. A protection tube is not generally required. Many users find it convenient to keep an extra couple and lead on hand.

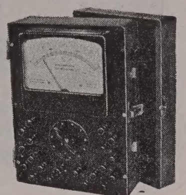
MODEL 32-J IN SN-3 STAND

0°— 650° F— 350° C, includes SA-91 thermocouple, SA-84 lead, and CB-1 connector block	$30.25
0°—1200° F— 650° C, includes SA-87, SA-82, and CB-1	30.25
0°—2000° F—1100° C, includes SA-87, SA-82, and CB-1	30.25

MODEL 32-J IN SN-5 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations.

0°—650° F with SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible lead and thermocouple	$34.10

MODEL 60-JPS



MODEL 60-JPS. This portable makes it easy to **know** temperatures at **one to ten** locations. Excellent for study of heat in various parts of the same equipment, or in a battery of units. Knife-edge pointer, 5.6" scale. Heavy-duty thermocouple switch has average contact resistance of .00075 ohms or less. Automatically compensated for ambient temperature, indoors or outdoors. To retain accuracy of 1% full scale, use leads and thermocouples equal to resistance and e.m.f.vs-temperature characteristics for which instrument is calibrated. Medium resistance system assures portability. Housed in natural-finish wood case 11⅜" x 8⅝" x 4⅝" over rubber feet. A "must" for inspection, maintenance, and engineering.

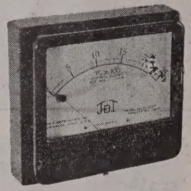
60-JPS—0°—600° F with SA-86, 7' thermocouple and lead for small apertures	$101.85
60-JPS—0°—1200° F with SA-88, SA-82, and CB-1	104.50
60-JPS—0°—2000° F with SA-88, SA-82, and CB-1	104.50

60-JP—For one thermocouple only; furnished with thermocouple and lead same as 60-JPS, but without selector switch.

0°— 600° F, with SA-86	$74.35
60-JP—0°—1200° F, with SA-88, SA-82, and CB-1	77.00
60-JP—0°—2000° F, with SA-88, SA-82, and CB-1	77.00

Note: When ordering additional thermocouples, specify couples and leads as above. Centigrade equivalent scales available on order.

Model 70-J



MODEL 70-J PYROMETER, for accurate reading at a distance, has full 6" scale and spade pointer, with accuracy of 1% of total scale deflection. Automatically compensated for ambient temperature. Molded case mounted in metal protecting shell 7⅜" x 8⅛" x 1½". Connections through bottom of case for wall or front-of-board mounting. When ordering, specify which standard scale range: 0°—600° F for 1938 std. I-C; 0°—1200° F for C-A; 0°—2000° F for C-A thermocouples.

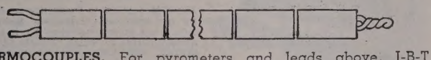
PRICE, including 24" thermocouple and 26' lead **$66.00**

Note: Centigrade equivalent scales available on order.

TEMPERATURE ACCESSORIES

LEAD WIRES. To bring the reference junction within the pyrometer, compensating or extension lead wires should always be used. See the instrument dial for (1) the kind of lead and (2) combined resistance of lead and thermocouple. Standard leads include:

SA-82 6' compensating lead for chromel-alumel couples; duplex, stranded; asbestos-insulated, cotton-braid impregnated with moisture-proof and flame-proof compound; terminals at instrument end; other end tinned for connector block	**$1.55**
SA-83 26' compensating lead for chromel-alumel as above	**$4.85**
SA-84 6' extension lead for iron-constantan, 1938 calibration; duplex; moisture-proof and flame-proof; prepared as above	**$1.55**
SA-85 26' extension lead for iron-constantan, 1938 calibration; similar to above	**$4.85**
SA-86 7' iron-constantan thermocouple and lead combined; twisted pair No. 20 Ga., asbestos-insulated—for intermittent use on 600° F scales; terminals at instrument end; other end welded; (resistance is not interchangeable with SA-84 nor with SA-85)	**$1.85**

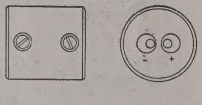


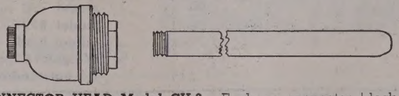
THERMOCOUPLES. For pyrometers and leads above, J-B-T thermocouples are carefully selected, standardized, and tested.

SA-87 12" No. 14 Ga. chromel-alumel, 2-hole ceramic beads, fits 5/16" hole; welded tip	**$3.10**
SA-88 same except 24" No. 14 Ga.	**$3.85**
SA-89 12" No. 8 Ga. chromel-alumel, 2-hole ceramic beads, fits 7/16" hole; welded tip	**$3.10**
SA-90 same except 24" No. 8 Ga.	**$3.85**
SA-91 12" No. 14 Ga. iron-constantan, 1938 calibration; 2-hole ceramic beads, fits 5/16" hole; welded tip	**$2.60**

Flexible Thermocouple, 7' length, see SA-86 lead wire.

CONNECTOR BLOCK Model CB-1. Lava connector block, withstands high temperatures, accommodates all thermocouples up to No. 6 Ga. Heavy brass connectors keep contact resistance low. Can be used independent of connector head. **$1.65**





CONNECTOR HEAD Model CH-6. Encloses connector block and rigidly supports protection tube around thermocouple. Opens for thermocouple inspection without disconnecting circuit. Reducing bushing for ½" i.p.s. Composition bushing at top removable for ½" conduit installation. Including block **$2.75**

PROTECTION TUBES enclose and support "base metal" thermocouples such as above. For installations at higher temperatures or in damaging atmospheres. Normally threaded for ½" i.p.s. **Note:** Acceptable alloys will be substituted when required by Government Order. Standard protection tubes are:

No. 1 Wrought Iron—For temperatures to 1200° F in oil baths, brazing, and general intermittent duty.
TU-11 No. 1—12 inches **$1.65** **TU-12** No. 1—24 inches **$2.20**

No. 7 Alloy—27% chromium, iron; seamless drawn tube; for cyanide pots, salt baths with cyanide, open fire with sulphurous content; to 2300° F.
TU-5 No. 7—12 inches **$6.90** **TU-6** No. 7—24 inches **$10.85**

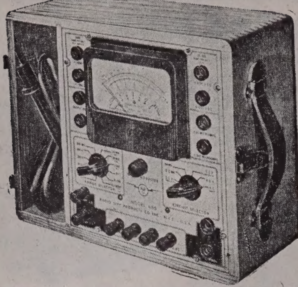
No. 9 Alloy—62% nickel, 13% chromium; seamless drawn; for salt baths without cyanide; for gas and oil open fire furnaces and general use, except sulphurous atmospheres; to 2300° F.
TU-2 No. 9—12 inches **$5.25** **TU-3** No. 9—24 inches **$9.10**

Note: Above 2300° F., "noble metal" couples are available.

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT



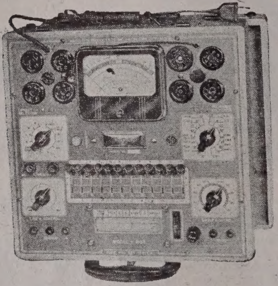
MODEL 488A DL *All Coverage* DE LUXE MULTITESTER

The one best multitester covering all requirements (41 ranges) in the TV - FM - AM and general radio and electrical service fields.

HIGH VOLTAGE—30,000 volts.
LOWEST VOLTAGE SCALE DIVISION—0.05 v.
HIGH FREQUENCY—300 megacycles.
DUAL SENSITIVITY—20,000 ohms per volt—8 voltage ranges; 1,000 ohms per volt—7 voltage ranges.
A.C. Measurements of CURRENT—by current transformer method—very low impedance so as not to change normal circuit current.
Shunts and multipliers are matched for an accuracy within 1%.
OHMMETER—completely self-contained—no soldering for battery replacement. Ranges—0-3,000-300,000 ohms 0-30 megohms.
DC VOLTMETER—20,000 ohms per volt—0-3-12-60-300-600-1200-6000-30,000 volts.
DC VOLTMETER—1000 ohms per volt—0-3-12-60-300-600-1200-6000 volts.
AC VOLTMETER—0-3-12-60-300-600-1200-6000.
DC MICROAMMETER—0-60-300.
DC MILLIAMMETER—0-3-20-120-600.
DC AMMETER—0-12.
AC AMMETER—0-3-6-12.
OUTPUT VOLTMETER—0-3-12-60-300-600-1200.

Complete with High Voltage Multiplier Probe and High Frequency Probe—natural finish oak carrying case ready to use. Size 11 5/8 x 9 3/4 x 6 1/8 inches. Weight 10 1/4 lbs. Only..........

$69 50 NET



MODEL 807 COMBINATION TUBE AND SET TESTER

This advance design combines all of the features of new Model 323 Free Point Dynoptimum Tube Tester with a complete modern multitester set and condenser tester.

Has unique advantage of burn out protection. Power Supply has fuse protection and meter has fuse protection.

RCP's reputation for value in combination tube and set testers is not only nation wide but world wide. Thousands and thousands of the 800 series testers are in use. New Model 807 is the best of all in performance and value.

Tube Tester—identical to Model 323.

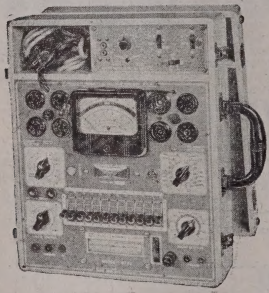
Condenser tester tests paper-mica and electrolytic condensers for leakage.

MULTITESTER RANGES:

DC VOLTMETER—0-10-50-500-1000-2500.
AC VOLTMETER—0-10-50-500-1000-2500.
DC MILLIAMMETER—0-10-100-1000.
DC AMMETER—0-10.
DECIBEL METER—8 to + 15, 15 to 29, 29 to 49, 32 to 55.
OHMMETER—0-500-5000 ohms, 0-0.1-1-10 megohms.

Housed in handsome hand-rubbed carrying case with test leads — batteries, etc. — complete, ready to operate. Size 12 1/2 x 12 3/4 x 4 3/4 inches. Weight 12 1/4 lbs. Net Price..................

$76 95 NET



MODEL 8773 - SERVISHOP

EQUIVALENT TO A COMPLETE SERVICE SHOP

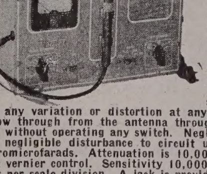
- ★ **Tube Tester**
- ★ **Condenser Tester**
- ★ **Set Tester**
- ★ **AM Generator**
- ★ **FM Generator**
- ★ **AF Generator**
- ★ **Fuse Protected Meter**

Never before has there been available an up-to-date tube tester for testing modern, miniature, novel base and sub-miniature tubes with the new, speedy Rollindex Roll Chart —combined with a complete multitester measuring AC and DC volts—DC milliamperes and amperes—ohms and megohms, decibels and output volts and also a condenser tester, AM signal generator, FM signal generator and audio oscillator.

The amazing fine performance of this equipment is the result of the latest engineering design in the 807 combination tube and set tester combined with the all purpose Model 730 signal generator.

Model 8773—Complete with tubes, batteries and test leads, output leads, etc.—housed in beautiful natural finish oak case. Weight 18 lbs. Overall size 16 1/2" x 12 3/4" x 5 1/4". An outstanding value at all times at..........................

$99 95 NET



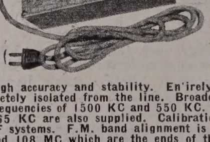
MODEL 777A

DYNATRACER

Signal Tracer

Provides exceptionally high amplification so that gain measuremnts may be made for receivers. Accurate meter gives calibrated indications. Speediest type of trouble shooting for tracing any type of disturbance or circuit defect from antenna to speaker. Indicates noise pickup at the aerial—checks AVC-AFC, link and filter circuits. Reads signal strength and you actually hear the signal and any variation or distortion at any point in the circuit. Permits you to follow through from the antenna through each stage of r-f—i-f—a-f step by step without operating any switch. Negligible outside pickup of noise and hum and negligible disturbance to circuit under test as input capacity is only 3 micromicrofarads. Attenuation is 10,000 to 1 by means of a ladder attenuator with vernier control. Sensitivity 10,000 microvolts for full scale or 200 microvolts per scale division. A jack is provided for testing microphones and pickups. Automatic control switch permits either speaker or meter to be used alone or together or standby. Tube Complement: 6AU6, 6AT6, 6AQ5 and 6X4. Crystal Rectifier 1N34. Beautiful hammertone grey steel panel and case with new slenderized probe. Supplied complete, ready for operation on 105-130 volts, 50-60 cycles. Size 6 5/8"x8 1/8"x11". Weight 9 1/2 lbs. Net Price..................................

$49.95



MODEL 730

Universal SIGNALIGNER

AF-AM (RF)-FM Signal Generator

The FM section is frequency modulated for use with ratio detectors. Simplicity and speed is accomplished by fixed frequency points at which circuits are calibrated. Attenuator provides smooth control from high signal level to a high degree of attenuation. Perfect operation from either AC or DC lines with equally high accuracy and stability. Entirely safe as the chassis and case are completely isolated from the line. Broadcast band alignment is provided by fixed frequencies of 1500 KC and 550 KC. Intermediate frequencies of 456 KC and 465 KC are also supplied. Calibration provides for alignment of 460 KC—IF systems. F.M. band alignment is provided by fixed frequencies at 88 MC and 108 MC which are the ends of the band. Fixed frequencies of 10.7 MC and 9.1 MC provide for I.F. alignment. R.F. frequency deviation is plus and minus 500 KC. Audio frequency modulation is provided for AM at 400 C.P.S. A separate audio output of 400 cycles is also provided. Calibrated to be accurate within 1%. Suitable trimmers permit recalibrating. Complete with tubes, shielded output cables, line cord and plug ready to use — attractive panel and case. Size 7" x 2 1/4" x 2 3/4". Weight 2 lbs. Net Price..................................

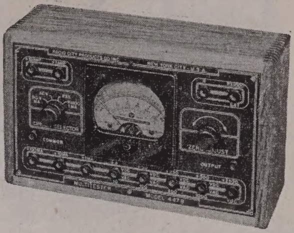
$32.95

RADIO CITY PRODUCTS CO., Inc.
NEW YORK 1, N. Y.
TEST EQUIPMENT

MODELS 447B AND 447BP - AC-DC MULTITESTER

The exceptional value in the 447B Model is made possible by the tremendous quantities produced. The resulting very low price is responsible for its great popularity. These units are in a class with other makes of testers that sell for considerably more.

A 3'' square D'Arsonval meter is used, having an accuracy of 2%. Accuracy of AC voltage measurements are improved by use of a new gold plated copper oxide rectifier.



RANGES

DC VOLTMETER: 0-5-50-250-500-2500 Volts.
AC VOLTMETER: 0-10-100-500-1000 Volts.
OUTPUT VOLTMETER: 0-10-100-500-1000 Volts.
DC MILLIAMMETER: 0-1-10-100-1000 MA.
DC AMMETER: 0-1-10 Amperes.
OHMMETER: 0-10,000 Ohms—1 Megohm—10 Megohms Ext.
DECIBEL METER: —8 to +55 decibels.

MODEL 447B—Open face instruments supplied in hardwood case. Size 5"x8½"x3". Weight 21 oz. Complete with batteries, ready to operate. Net Price........... $17.95

MODEL 447BP—Portable type supplied in hardwood case with carrying handle, cover and test leads. Size 6½" x 8½" x 4½" Weight 24 oz. Complete with batteries, ready to operate. Net Price........... $21.95

MODEL 453 - NEW MASTER MULTITESTER

20,000 OHMS PER VOLT MULTITESTER
25,000 VOLTS WITH SAFETY—ON HIGH VOLTAGE
400 MEGACYCLES ON HIGH FREQUENCY WITH H.F. PROBE INCLUDED

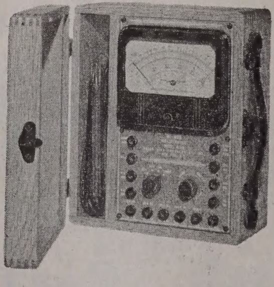
To simplify measurements for Television, FM and AM, Model 453 was designed for direct metering—eliminating warm up time—grounding, etc. Included are regular probes, high voltage multiplier probe and high frequency probes. They are housed in a handsome sturdy hinged cover oak case with compartment for leads.

Multipliers and Shunts selected accurate within 1%.

DC VOLTS: 0-2.5-10-50-250-500-1000-5000-25,000 at 20,000 ohms per volt.
AC VOLTS: 0-2.5-10-50-250-500-1000.
DC MICROAMPS: 0-100.
DC MILLIAMPS: 0-10-100-500.
OHMS: 0-2000-200,000.
MEGOHMS: 0-2 Meg.—20 Meg.
DECIBELS: —12 to +3 to 15, 14 to 29, 28 to 43, 34 to 49, 40 to 55.

Size 10¼" x 11" x 4¾". Weight 6¼ lbs. Net Price........ $47.95 NET

450 SERIES HI-MEGOHM MULTITESTER



OUTSTANDING FEATURES of these Multitesters are the desirable extremely high megohm range of 50 megohms available that can not be obtained with other direct reading meter instruments. No batteries nor tubes are used in these circuits. Long scale 4½" meters accurate within 2%. Output ranges correspond to the AC voltage ranges.

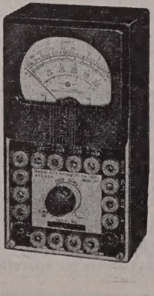
Bench type or open face models have dimensions 8⅞" x 5½" x 3¾". Weight 3 lbs. Portable models designated "P" are in attractive natural finish oak cases with leads. Case has hinged cover with latch and leather handle. Dimensions, 8⅞" x 7½" x 4¾". Weight 4½ lbs.

MODEL 450A—1000 OHMS Per Volt Meter Sensitivity.
OHMMETER: 0-5000-500,000 Ohms, 0-50 Meg.
DC VOLTS: 0-5-50-125-500-2500.
AC VOLTS: 0-10-100-250-1000.
DC MILLIAMPS: 0-2.5-10-100-1000.
DECIBELS: —9 to +55 DB.
Net Price......................... $23.95

MODEL 450AP—(Portable) Net Price.......... $27.95

MODEL 449A - POCKET MULTITESTER

5000 OHMS PER VOLT



Versatile multitester remarkably accurate. It's tops for general circuit testing and for speed in trouble-shooting. Uses a 3'' square meter at 5000 ohms per volt with a basic movement of 200 microamperes. Batteries are mounted in special spring clips readily accessible for replacement — no wires to solder. Combines 6 instruments in one small unit.

RANGES

DC VOLTS: 0-5-50-250-1000 Volts.
AC VOLTS: 0-5-50-250-1000 Volts.
DC MA: 5-10-100-1000 MA.
OHMS: 0-2000-20,000-.0-.2-2 Megohms.
DECIBELS: —6 to +52 DB in four ranges.
OUTPUT METER: 0-5-50-250-1000.

Black metal case complete with self-contained batteries. Ready to operate. Size 5⅞''x3$\frac{1}{16}$''x2⅛''. Weight 1¾ lbs. Net Price (New Low Price) **$24.95**

NEW MODEL 654 V.T. VOLTMETER

A 17 range instrument—employs an electronic balanced bridge type push pull circuit and draws negligible current from any circuit because of high impedance of 25 megohms. It is a V.T. voltmeter for A.C. measurements, as well as D.C.

A discriminator alignment scale with zero center permits operation in both directions. Ohmmeter measurements—0.2 ohm to 1000 megohms in 5 ranges.

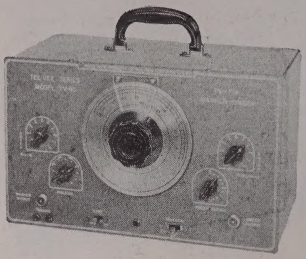
DC VOLTS: 0-5-25-100-250-1000.

AC VOLTS: 0-5-25-100-250-1000.

DB: —20 to 16, —6 to 30, 6 to 42, 14 to 50, 26 to 62.

Complete with isolation probe and leads for operation on 105-130 volts, 50-60 cycles. Attractive grey and white finish in steel panel and case. Size 10''x6''x5''. Weight 8½ lbs. net. Net Price............ **$57.50**

RADIO CITY PRODUCTS CO., Inc.
NEW YORK 1, N. Y.
TEST EQUIPMENT



MODEL TV-80 - SWEEP GENERATOR AND MARKER

Outstanding Unit of this type giving Top Performance and Quality at an economical price. The answer to TV and FM requirements in a high quality Sweep Generator combined with a TV marker. Sharp, clean-cut patterns with stability and sharp legible marking.

COMPREHENSIVE RANGE—Continuously variable 5-240 megacycles.
SWEEP WIDTH—Variable 400 KC to 10 MC.
LINEARITY—As required for band pass checking with an oscilloscope.
High "Q" absorption marker 17 to 48 MC.
Future IFs of higher frequencies provided by direct calibration of marker dial.
MARKER CALIBRATION—Accurate to within 1 per cent.

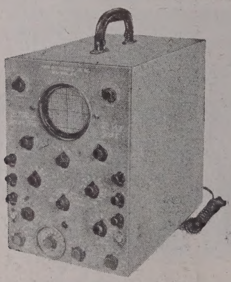
PLANETARY DRIVE.

Provision for use of external marker.

Special design permits retrace to be blanked out independently, regardless of type of oscilloscope used.

Controls for regulating sweep width—sweep amplitude—phasing—marker tuning—pilot light—power switch.

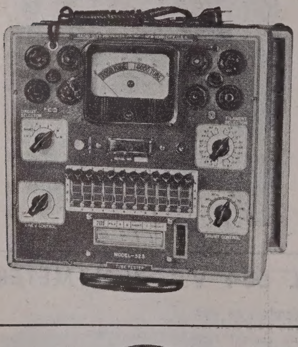
Handsomely finished steel panel, cabinet and chassis, ready to use—105-125 volts, 60 cycle. Size 15 x 9 x 7 inches. Weight 14 lbs. Price—Net.......... **$\$89^{50}$ NET**



MODEL TV-90 - OSCILLOSCOPE & SWEEP GENERATOR

• COMPLETE OSCILLOSCOPE • COMPLETE SWEEP GENERATOR

Variable linear sweep 10 to 45,000 CPS, sensitivity 285 millivolts RMS per inch vertical and 320 millivolts RMS per inch for horizontal deflection. Input resistance one megohm shunted by 20 mmfd. Sine wave response, uniform from 5 cycles to 200 KC. within ±2 db. Sinusoidal sweep with phasing control of 150 degree range is provided for use in conjunction with the internal RF sweep generator when testing band pass characteristics. Absolute locking of pattern with linear time base control (left to right) from 10 cycles to 45,000 cycles in six ranges with vernier control. Synchronization provision for either internal positive or line frequency or external. External jack provided for trace blanking. Requires 10 volts of negative pulse to blank a normal intensity level trace. Independent sweep generator has center frequency range of 1.5 to 45 megacycles giving choice of any IF frequency desired. Band width can be varied continuously from 0.5 KC to 7 MC. Attenuation of RF is continuously variable from 0 to 500 millivolts and output is applied through low loss coaxial cable. Traveling detector probe is included for observing signal at any point of the RF circuit under test. Supplied complete with tubes, probe, coaxial output cable and operating instructions ready to operate. 105-130 volts, 50-60 cycles—power consumption 40 watts. Weight 25 lbs. Size 14x8x$12\frac{1}{2}$ inches. Finished in attractive hammertone grey. Two instruments combined at actually the price of only one. Light and compact to easily take right out on the job—almost impossible with 2 separate units. Tube Complement — 1 - 3BP1, 2 - 6X5, 1 - 6SA7GT/G, 1 - 7A4, 2 - 7G7, 1 - 884.
Net Price .... **$\$147^{50}$ NET**



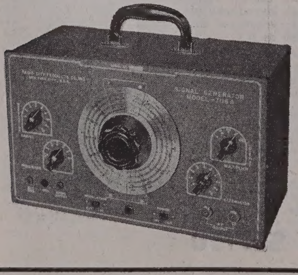
MODEL 323 - New Dynoptimum Free Point TUBE TESTER

Very latest design in an accurate, speedy tube tester that protects against obsolescence in the event of new tubes with more elements or different positioning of elements, etc.; includes new 8 prong subminiature socket. Extreme free point flexibility permits any socket terminal to be used for any tube element and allows detailed open short-leakage tests of each element as well as filament-heater continuity tests. Ten active lever switches take care of every receiving tube now on the market. Two more spare lever switches are provided (12 in all) for ample capacity for all future additions. Two extra socket blanks provide spares for possible future additions for tube base designs. TESTS modern tubes, miniatures, subminiature—mobile transmitting—hearing aid—ballasts —pilot lights—gaseous rectifiers—tuning indicators. New Rollindex—fast operating, smooth running, roll chart with approximately 1000 tube listings. Neon lamp indicator—quick checking of short-leakage on each individual tube element. Famous Dynoptimum Test for accuracy on $4\frac{1}{2}$ inch meter, 1 milliampere sensitivity. A beautiful instrument that will enhance any test bench or store counter.

MODEL 323C—Open style metal case, easily portable. Size $12\frac{1}{8}$x$11\frac{7}{8}$x4". Weight $9\frac{1}{2}$ lbs. Net Price.......... **$54.95**

MODEL 323 P-C — Combination portable — counter model—in beautiful oak carrying case with slip hinge cover. Size $12\frac{1}{2}$x$12\frac{3}{4}$x$4\frac{3}{4}$". Weight 11 lbs. Net Price **$58.95**

MODEL 323M — Tube merchandiser in large counter handsome steel case. Net Price **$87.95**



MODEL 706A - SIGNAL GENERATOR
NEW! "WIDE RANGE" SIGNAL GENERATOR

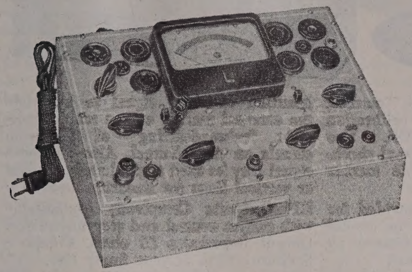
This new signal generator provides highly satisfactory performance in continuous coverage of 150 KC to 220 M.C. in 8 ranges. Six fundamental ranges cover up through 55 Megacycles. ACCURACY maintained within 1% of calibration adjustment and recalibration is readily available by air trimmers. STABILITY and Constancy of calibration is assured by special electron-coupled circuit design, permeability, adjusted coils and air trimmer capacitors. SHIELDING—Thorough shielding of all critical circuits and components either individually or in compartment or both. This includes oscillator tube, coil assembly, attenuator, switching circuit. Transformer is electrostatically shielded. UNMODULATED SIGNAL—Available if desired. MODULATION—400 cycle sine wave audio oscillator with per cent modulation continuously variable from 0% to 80%. Above 80% modulation has no practical application because tremendous distortion occurs in all signal generators. External modulation can be used through input jack provided for same. AUDIO OSCILLATOR output at 400 cycles available for external use—terminals on panel—at 50 ohms output impedance. OUTPUT—High and low level. ATTENUATION—Ladder type step attenuator consisting of a multiplier and fine attenuator control. DIAL—Eight Scales distinctly calibrated—continuity of easy reading from 150 Kilocycles to 220 Megacycles. Planetary drive gives vernier tuning with no backlash. Tube Complement—6BA6 — 6SJ7 — 6X4. A high quality instrument in performance—construction and appearance—size 15" x 9" x 7" — weight 14 lbs.
Complete with tubes and accessories for operation on 105-130 volts 60 cycles. Net Price .... **$\$67^{50}$**

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

INSTRUMENT KITS

NOW! you can get in kit form the best professional test equipment! Made by Radio City Products, one of the outstanding manufacturers of test instruments for 18 years. You get kits that are complete with all necessary parts and easy-to-follow assembly instructions. There is nothing else to buy! Yes, an RCP kit provides an enjoyable few hours in instruction and construction plus a finished test instrument at a tremendous saving!



MODEL 322AK - TUBE TESTER KIT

CHECK THESE FEATURES

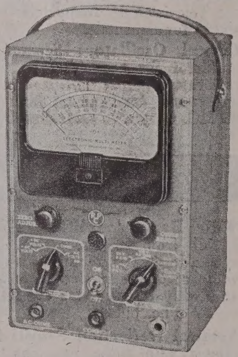
- Fully engineered to test all recently developed tubes and Television types. This tube tester has provisions for checking individual sections of multi-purpose tubes as well as miniature and subminiature receiving tubes.
- Convenient jack is provided for head-phone noise test to check noisy swinging, or high resistance internal tube connections.
- Neon lamp for rapid short and leakage tests between elements.
- Compact, sturdy construction.
- Operates on 100-130 volt, 50/60 cycle A.C. power supply.

Open-face in new hammertone grey finish steel cabinet with sloping panel. Size 5¼"x12$\frac{3}{16}$"x8"; Weight 11 lbs.

MODEL 322AK Net Price.................... **$28.95**

MODEL 322APK (Portable).................... **$32.50**

MODEL 345K - SUPER VACUUM TUBE VOLTMETER



Features long scale 4½" meter in burn out proof meter circuit—electronic balanced bridge type push pull circuit—negligible current drawn due to high input impedance of 25 megohms—Isolation Probe—center of ohm scale 10 ohms—5 ohmmeter ranges reading from 2 ohms to 1 billion ohms (1000 megohms). 20 voltage ranges 0-1000 volts including AC and DC—Complete D.B. meter. Discriminator alignment scale with zero center permitting operation in both directions. Operates on 105-130 volts, 50-60 cycles. Extra heavy panel, case and chassis. Size 10x6x5". Weight 8¼ lbs. Shipping weight 11 lbs.

MODEL 345K KIT COMPLETE.................... **$26.95**

Complete Factory Built and Wired.................... **$52.95**

SUPER HIGH VOLTAGE MODEL HV345K—Includes high voltage multiplier probe and has extra DC voltage ranges — 0-5-25-100-250-500-1000-2500-10,000-25,000 volts with certified safety probe.

COMPLETE KIT.................... **$32.50**

Complete Factory Built and Wired.................... **$62.95**

SUPER MODEL HVHF345K—Both High Voltage multiplier Probe and High Frequency Probe which extends the frequency range of the 345K to 400 megocycles. This covers a complete Television and Citizens band.

COMPLETE KIT HVHF345K.................... **$36.95**

Complete Factory Built and Wired.................... **$70.95**

MODELS 447BK AND 447BPK MULTI-TESTER KIT

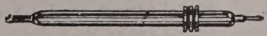
(See Photograph Page F-69)

3" square D'Arsonval meter. DC Voltmeter: 0-5-50-250-2500 Volts at 100 Ohm per Volt. AC Voltmeter: 0-10-100-500-1000 Volts. Output Voltmeter: 0-10-100-500-1000 Volts. DC Milliammeter: 0-1-10-1000 MA. DC Ammeter: 0-1-10 Amperes. Ohmmeter: 0-10,000 Ohms—1 Megohm—10 Megohms Ext. Decibel Meter: —8 to +55 decibels. Complete with batteries.

MODEL 447BK.................... **$13.95**

MODEL 447BPK (Portable).................... **$16.95**

RCP HIGH VOLTAGE MULTIPLIER KIT



Permits multiplying all ranges X100 of Model 345 or any similar impedance V.T. voltmeter. Special ceramic helical high voltage resistor certified safe for all ranges up to 33,000 volts.

KIT MODEL HVMP-1K Only.................... **$6.95**

HVMP-1 Complete Factory Built.................... **$8.95**

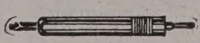
MODEL 777AK DYNATRACER KIT

(See Photograph Page F-68)

New Model Signal Tracer—Ultra Modern-Circuit design provides exceptionally high amplification so that actual gain measurements may be made. Accurate meter gives calibrated indications. Provides the speediest type of trouble shooting tool for tracing any type of disturbance or circuit defect from the antenna to the speaker. Indicates noise pickup at the aerial—checks AVC—AFC, link and filter circuits. Tube Complement 6AU6—6AT6—6AQ5 and 6X4. Crystal Rectifier 1N34. Speaker employs Alnico 5 magnet. Beautiful hammertone grey steel panel and case with new slenderized probe. Kit supplied complete, 105-130 volts, 50-60 cycles. Size 6⅝" x 8⅛" x 11". Weight 9½ lbs.

MODEL 777AK KIT.................... **$35.95**

RCP ULTRA HIGH FREQUENCY PROBE KIT



Uses germanium crystal with low impedance network permitting measurements up to 400 megacycles.

KIT MODEL HFP-1K Only.................... **$4.25**

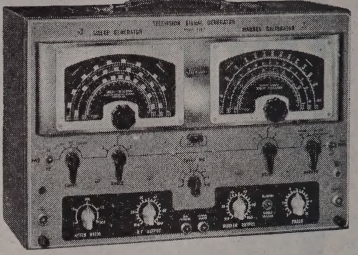
HFP-1 Complete Factory Built.................... **$7.95**

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

TELEVISION SIGNAL GENERATOR

No other instrument has ever equaled the Model TVG-2 for quality, desirable and necessary TV alignment features. Just read these brief specifications and make comparisons.



Model TVG-2

Sweep Oscillator: Three convenient ranges, 2 MC thru 38 MC; 38 MC thru 108 MC; 174 MC thru 216 MC are all on fundamentals. Continuous tuning over all ranges. Large accurately calibrated dial with the TV channels clearly indicated. Reversible direction of sweep.

Sweep Width: Provided by electromechanical sweep. Adjustable from .1 MC thru 18 MC in 7 steps for fast resetability. Provides that extra width for badly detuned circuits.

Marker Oscillator: Accurately calibrated dial gives complete marker coverage from 4 MC thru 216 MC with all the Television IF frequencies on highly stable fundamentals.

Crystal Oscillator: Separate crystal oscillator for use either as marker or calibrator. Stable circuit oscillates on any crystal fundamental from 4 MC to 20 MC. Output is controlled by selector switch to provide variable marker, crystal marker or both for calibration purposes. A BEAT DETECTOR is also incorporated for audible or visual checking of beat between variable marker oscillator and crystal.

400 Cycle Modulation: Provided for use with either the variable or crystal marker so traps can be adjusted by either audible or meter method.

Oscilloscope Timing: A phased 60 cycle sine wave timing voltage is provided with PHASE CONTROL to provide adjustment of double pattern. BLANKING is also available for single pattern trace with reference base line for measurement.

Video Modulation: Provision made for insertion of video signal to modulate the external marker output making possible "rebroadcasting" of television signals on any channel. Also an audio signal may be used to produce horizontal or vertical lines for linearity checks.

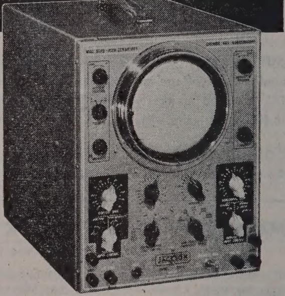
RF Output: Completely controllable with output control and step attenuator. Output impedance 30 ohms. Complete flexibility right at your finger tips.

Size: Same height as other Jackson TV instruments. Dimensions 13" high, 8¼" deep, 19⅛" wide.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 30 pounds.

Dealer Net Price....................$245.00

5-INCH OSCILLOSCOPE Model CRO-2



Wide Band Amplifier: Flat within 1.5 db from 20 cycles thru 4.5 megacycles dropping smoothly to a still useful value at 6 megacycles. This feature is absolutely essential for correct showing of TV sync. pulses.

Vertical Deflection Sensitivity: Two ranges with three positions for each range. Has fully compensated attenuators. Excellent transient response. Each unit completely tested for "tilt" and "overshoot."

Sensitivity Ranges: With a band width of 20 cycles thru 100 KC, the sensitivity ranges are .018, .18, 1.8 RMS volts per inch. The wide band position 20 cycles thru 4.5 MC has sensitivity ranges of .25, 2.5, 25 RMS volts per inch.

Horizontal Deflection Sensitivity: Push-pull horizontal amplifiers have a sensitivity for all applications of .55 RMS volts per inch.

Vertical Input Impedance: 1.5 megohms, shunted by 20 micromicrofarads. Direct to plates balanced 6 megohms, shunted by 11 micromicrofarads.

Horizontal Input Impedance: 1.1 megohms.

Linear Sweep Oscillator: Saw tooth wave 20 cycles thru 50 Kilocycles per second in 5 steps. Sine wave sweep of 60 cycles also available. Provision for external sweep synchronization.

Input Calibration: A standard voltage is provided for use in determining unknown voltages. Permits peak-to-peak measurement of all waveforms.

Vertical Polarity Reversal: By merely flipping a switch you can reverse the polarity of the voltage being supplied to the vertical deflection plates, also provides a means for choosing either positive or negative sync. voltages.

Return Trace Blanking: A new amplifier-timer combination for blanking return traces, providing a clearer, sharper image at all times. Prevents confusion in waveform analysis.

Synchronizing Input Control: Four input control positions, Internal — External — 60 cycle — 120 cycle.

Deflection Plate Connections: Direct connections thru capacitors for AC only to deflection plates of CR tube by means of terminal block at back of instrument.

Intensity Modulation: Either 60 cycle internal intensity modulation or external intensity modulation through binding posts on front panel.

Removable Calibration Screen: Clear plastic screen marked in grids of 1/10 inch per division. Easily removable.

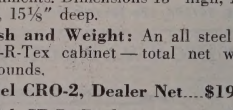
Accessory: Demodulation probe available for using scope as signal tracing instrument.

Size: Same height as other Jackson TV instruments. Dimensions 13" high, 10¼" wide, 15⅛" deep.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 26 pounds.

Model CRO-2, Dealer Net....$197.50

Model CR-P, Probe $9.95

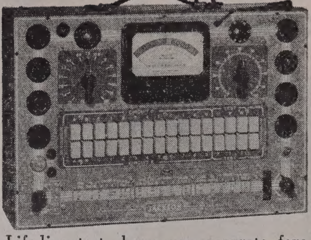


JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

DYNAMIC TUBE TESTER

Model 648



This tester incorporates the most important engineering advancements in 12 years of tube tester research, such as the Dynamic test method and sequence switching. The Jackson Dynamic test circuit applies separate element voltages to each tube element. Separate load circuits are also used. These voltages and loads have been carefully selected for each tube to meet most ideally the normal operating condition of the tube. The current flowing only in the plate circuit of the tube under test is indicated on the 4 inch meter in easy-to-read terms.

Sequence Switching makes possible SIMPLIFIED OPERATION, formerly unattainable in Dynamic test methods. There are actually only three control units to be set according to rotary chart listing for each tube. These are: Heater Voltage (upper left), Plate Control (upper right) and the Sequence Switch (center). The only other adjustments are line voltage control and shorts test.

Fast, Accurate Shorts Test lamp indicates only when tube is shorted. The shorts test control moves only through 4 positions — yet completely tests each tube element for possible shorts or leakage. The tube is tested under a heated cathode condition.

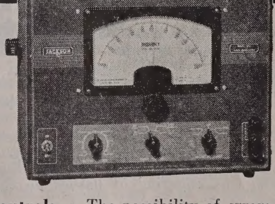
Correct Test Voltage and Load Circuits protect tubes under test against damage by overload. Even low voltage battery types are provided with suitably low operating potentials. The full GOOD-BAD scale of the meter is used for each test. The meter is sufficiently sensitive that special "Low scale" readings are not required (such as for diodes, etc.).

Life-line test shows you accurate forecast of end of tube life. Reduced output caused by over-age gives reduced reading on meter. Lets you catch bad tubes before they actually go bad.

Steel cases and panels finished in gray Ham-R-Tex — approximate net weight of each model 16 pounds.

Counter-Base Only	**$6.00**
Model 648C (With Counter-Base)	**$99.50**
Model 648B (Bench-type steel case)	**$94.50**
Model 648P (Portable Tester in wood case)	**$99.50**

AUDIO OSCILLATOR Model 655



The model 655 provides an audio frequency voltage DEVELOPED AT ITS FUNDAMENTAL FREQUENCY. The basic design of this instrument is entirely different from the "beat frequency" type of Audio Oscillator.

FEATURES

Resistance Capacity Tuned Circuit Design, engineered for improved operating characteristics of audio measurements.

No Zero Adjustment — Tuned Fundamental Frequency method provides permanently locked calibration.

Output Characteristics — A choice of either transformer coupled or resistive output is available. The Model 655 meets the most exacting requirements as to **Waveform-Uniform Frequency Characteristics** and **Output Load Impedance Selection.** A special feature of the output system is the 10 ohm tap for low impedance circuits such as speaker voice coils, etc. **Variable Frequency Selection** throughout the four bands. There are over 33 inches of scale length making **Exact** settings possible.

Complete Stability — The stability of frequency calibration is constant throughout the entire range. The stabilized circuit permits large changes in line voltage to occur without affecting frequency or waveform and having negligible effect on output voltage.

Simplified Operation — It is only necessary to select desired **Frequency** and **Output. There Are No Other Controls** — The possibility of errors in operation is therefore eliminated.

High Output Power — More than **Three Times** the output usually available from ordinary audio oscillators.

Construction — Frequency dial is glass enclosed so that calibrations cannot become disfigured. Rugged mechanical features assure trouble free operation under service conditions.

SPECIFICATIONS

Frequency Range — 20 cycles to 200,000 cycles in 4 ranges: 20-200 cycles/200-2000 cycles/2000 to 20,000 cycles/20,000 cycles to 200,000 cycles.

Calibration — Logarithmic variation of frequency over the scale provides constant percentage accuracy at all frequencies.

Scale Length — Over 33 inches.

Output Impedance — Five values of output impedance: 10 ohms/250 ohms/500 ohms/5000 ohms/RESISTIVE. Controlled by selector switch.

Output Power — 500 Milliwatts (20 to 20,000 cycles transformer coupled).

Output Control — Continuously variable from zero to maximum.

Waveform — Less than 5% distortion at all frequencies between 30 and 15,000 cycles.

Frequency Characteristics — Plus or minus 1 DB 30-15,000 cycles using transformer coupled output.

Hum Level — Down more than 60 DB of maximum.

Accuracy — 3% or 1 cycle whichever is greater.

Tubes — 1-6G6G, 1-6SL7GT, 2-6V6GT, 1-5Y3GT furnished installed.

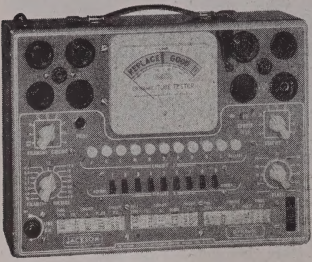
Dimensions — 13″ wide x 9½″ high x 9½″ deep.

Dealer Net Price **$135.00**

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS
THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

CHALLENGER DYNAMIC TUBE TESTER

Model 115



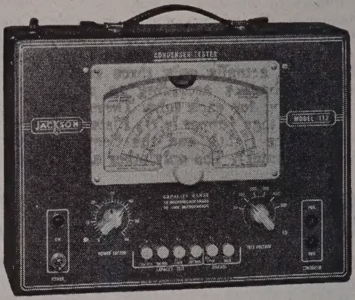
Uses famous Jackson Dynamic Test Principle. Applies separate element voltages to each tube element, making tests under actual use conditions. High Voltage Power Supply is a feature of this tester. By testing tubes at higher plate voltages (over 200 volts for some types) more accurate results are obtained. The improved switching system provides spare circuits, switch and socket positions for future use. Simplified operation, uses push-button and selector switch controls. Large 4" square meter for better readability. Complete shorts test. Tests all tubes (over 700 types) including television amplifiers and rectifiers. Built-in roll chart. Finished in attractive Challenger Green, with harmonizing Ivory knobs, meter cover and push-buttons. Free one year chart service on new tube types. Net weight 11 lbs.

Dealer Net Price....................$67.50

JACKSON

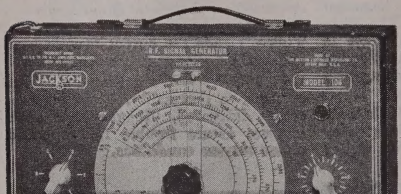
CHALLENGER CONDENSER TESTER

Model 112



This new instrument is push-button controlled, providing fast positive range selection for capacity and leakage tests. Checks all type faulty condensers — Electrolytic, Paper, Mica, etc. Using a new method for leakage tests and eliminating the counting of flashes on the electron ray tube indicator. Six test voltages from 20 volts to 500 volts. Dial is glass-enclosed and equipped with the Jackson "Scale Expander" pointer which doubles effective scale length. Measures power factor on Direct Reading Scale calibrated from 0 to 60%. Ranges from .00001 to 1000 mfd. in four steps. Finished in beautiful Challenger Green Ham-R-Tex with ivory knobs and dial cover. Net weight 11 lbs.

Dealer Net Price....................$59.50



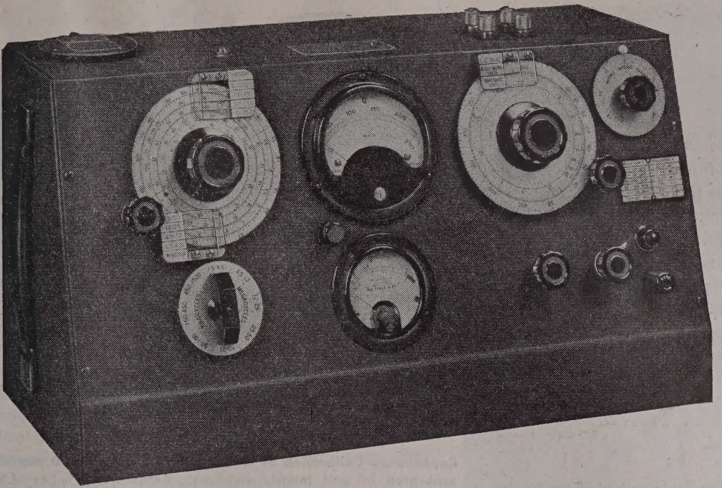
JACKSON

CHALLENGER TEST OSCILLATOR

Model 106

Standard AM Oscillator for testing AM and FM radios and using as auxiliary TV marker generator. Fundamental frequencies from 100 KC to 54 MC. Harmonics 54 MC to 216 MC. Two-circuit attenuator for controlling signal strength. Has 400 cycle audio modulation, or may be used for straight RF unmodulated signal. Accuracy is ½ of 1% on all ranges. Compare this popular priced factory calibrated Signal Generator with any competitive make or so-called "kits." Attractive Challenger Green Finish. Net weight 10 lbs.

Dealer Net Price....................$59.50



Q-METER

TYPE 160-A

Radio frequency circuit design often requires the accurate measurement of Q, inductance, and capacitance values. For this application, the 160-A Q-Meter has become the universal choice of radio and electronic engineers throughout the country.

Each component part and assembly used in the manufacture of this instrument is designed with the utmost care and exactness. Circuit tolerances are held to values attainable only in custom built instruments.

The 160-A Q-Meter is designed specifically for the accurate and rapid measurement of Q, inductance, and capacitance. The basic method of measurement consists of measuring the voltage developed across a variable air capacitor connected as an element in a series resonant circuit. Essentially the Q-Meter is comprised of an 8 range RF oscillator, a Q measuring circuit with a main and vernier section tuning condenser, a vacuum tube voltmeter of special design which reads the voltage across the tuning condenser, and a voltage injection circuit which applies an accurately known voltage to the terminals of the series resonant circuit. In operation the Q circuit is resonated by means of the variable Q tuning capacitor and the voltage developed across this capacitor is indicated by means of the vacuum tube voltmeter which is calibrated directly in terms of Q. This method of measuring Q is simple, accurate, and requires only a single operation—resonating the circuit—to measure Q. Variations of this basic method of measurement are employed to determine effective inductance and capacitance as well as the dielectric properties of insulating materials.

SPECIFICATIONS

Oscillator Frequency Range: Continuously variable from 50 kc. to 75 mc. in eight self-contained ranges. (In conjunction with an external oscillator the frequency range of the Type 160-A Q-Meter may be extended from 50 kc. to 1 kc. for coil measurements).

Oscillator Frequency Accuracy: Generally better than ± 1%, except the 50-75 mc. range which is approximately ± 3%.

Range of Q Measurements: The Q voltmeter is calibrated directly in Q, 20-250. The "Multiply-Q-By" meter, which measures the oscillator voltage injected in the Q measuring circuit, is calibrated from x1 to x2 and also at x2.5. The reading of the Q voltmeter scale is multiplied by the setting of the "Multiply-Q-By" meter. Hence, the total range of circuit Q measurements is from 20 to 625. Condensers, dielectrics, etc., which are measured by placing these in parallel with the measuring circuit, may have Q's as high as 5,000.

Accuracy of Q Measurements: The accuracy of the direct reading measurement of circuit Q (for Q voltmeter readings between Q=50 and Q=250) is approximately 5% for all frequencies up to the region of 30 mc. and decreases with increasing frequency. Correction may be made for the error above 30 mc. as it is principally a frequency effect. The accuracy of the measurement of condensers, dielectrics, etc. is generally better than 10% for Q's below 5,000 and up to 30 mc.

Capacitance Calibration Range: Main Tuning condenser 30-450 mmf. calibrated in 1 mmf. divisions from 30 to 100 mmf. and in 5 mmf. divisions from 100 to 450 mmf. Vernier condenser, plus 3 mmf., zero, minus 3 mmf., calibrated in 0.1 mmf. divisions.

Accuracy of Capacitance Calibration: Main tuning condenser, generally better than 1% or 1 mmf., whichever is the greater. Vernier tuning condenser, ± 0.1 mmf. The internal inductance of the tuning condenser at the binding posts is approximately .015 microhenry.

Voltmeter: The Q voltmeter is also calibrated in volts. A specially calibrated tube, Type BRC 105-A tube, is used. Replacements may be made without recalibration.

Power Supply: 105-120 volts, 50-60 cycles. Also 210-240 volts, 50-60 cycles. Power consumption 50 watts.

Dimensions: Height 12.5", length 20", depth 8.5".

Weight: 25 lbs.

Price: $625.00, F.O.B. Boonton, N. J., U.S.A.

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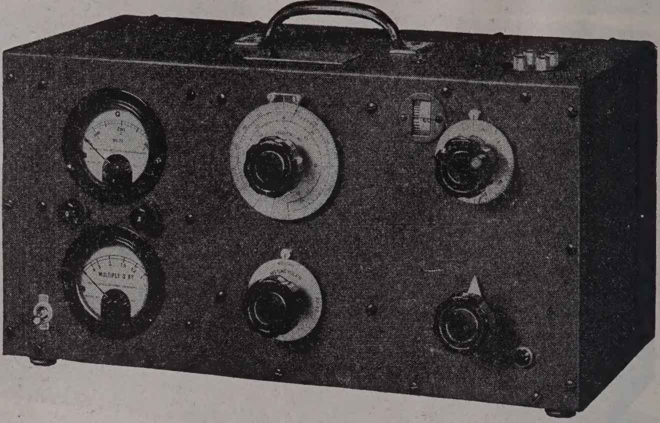
PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

Q-METER

TYPE 170-A



The Type 170-A Q-Meter utilizes the same general operating principles and characteristics as the Type 160-A Q-Meter, but incorporates such structural modifications and design refinements as are required for accurate performance at the higher frequencies. This instrument is intended to supplement the low frequency Q-Meter by extending the range of measurement up to 200 mc.

SPECIFICATIONS

Oscillator Frequency Range: Continuously variable from 30 mc. to 200 mc. in three ranges—Calibration accuracy ± 1%.

Range of Q Measurements: The Q voltmeter is calibrated directly in circuit Q, from 80 to 300. The "Multiply-Q-By" meter is calibrated from x1 to x4, hence the range of circuit Q measurements is from 80 to 1200.

Accuracy of Q Measurements: The accuracy of the direct reading measurement of circuit Q is ± 10% up to 100 megacycles and decreases with increasing frequency.

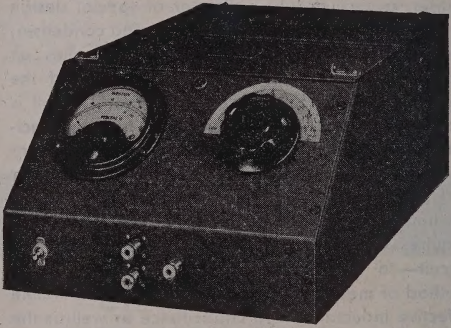
Capacitance Calibration of Q Capacitor: Range 11-60 mmfd. calibrated in unit mmfd. divisions. Accuracy: 1% or 0.5 mmfd., whichever is greater. Micrometer dial divided into 100 divisions.

Power Supply: 110-120 volts, 50-60 cycles. Also 220-240 volts, 50-60 cycles. Power consumption 50 watts.
Dimensions: 17" x 10½" x 8¾".

Weight: 21 lbs.

Price: $550.00, F.O.B. Boonton, N. J., U.S.A.

QX CHECKER TYPE 110-A



The QX-Checker is a production type test instrument specifically designed to compare reactance and relative Q of RF components with approved standards. The two factors, reactance and relative Q, are separately indicated, one on a meter and the other on a condenser dial, so that the deviation of either from established tolerances is immediately shown. Built to laboratory standards, the QX-Checker is a sturdy, fool-proof instrument for use in production work by factory personnel.

SPECIFICATIONS

Oscillator Frequency Range: 100 kc. to 25 mc. in 6 ranges using accessory plug-in coils (two coils furnished with each instrument).

Accuracy of Coil Checks: Coils may be checked against a standard to within about 0.2% with inductance values of 10 microhenries to 10 millihenries and Q of 100 or greater.

Capacitance Range: Capacitance values ranging between approximately 2-1000 mmf. may be checked against a standard to an accuracy of a few tenths of one mmf. if the Q of the capacitor is high.

Power Supply: 110-125 volts, 50-60 cycles, also 200-250 volts, 50 cycles.

Dimensions: Width 12¼", Depth 18", Height 8".

Weight: 26 lbs.

Price: $340.00, F.O.B. Boonton, N. J., U.S.A.

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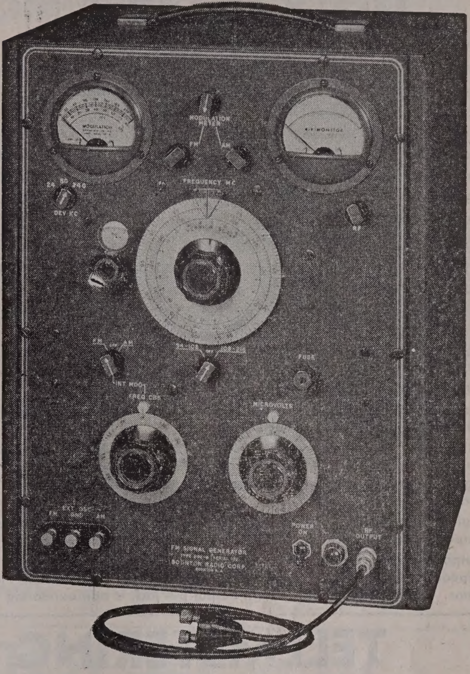
FM SIGNAL GENERATOR

TYPE 202-B



The type 202-B FM Signal Generator has been developed to meet the needs of engineers engaged in the design of FM and television receivers for operation within the frequency range of from 54 megacycles to 216 megacycles.

This instrument has been proportioned for maximum conservation of laboratory bench space, with frequency dial, modulation and output meters positioned at eyelevel for maximum readability. The unit is finished in grey wrinkle enamel with engraved panel and is supplied complete with tubes and standard output cable.

SPECIFICATIONS

RF Range: Frequencies from 54 mc. to 216 mc. are covered in two ranges, 54-108 mc. and 108-216 mc.

Main Frequency Dial: The two RF ranges are calibrated directly in megacycles to an accuracy of within ± 0.5%. The dial is also divided in 24 equal divisions for use with the vernier frequency dial.

Vernier Frequency Dial: The vernier frequency dial is divided in 100 divisions and is geared to the main dial through a gear train having a 24:1 ratio. The approximate frequency change per vernier division is 26 kc. on the low range and 52 kc. on the high range.

Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges (1) zero to 24 kc., (2) zero to 80 kc. and (3) zero to 240 kc. deviation.

Amplitude Modulation: The modulation meter is calibrated at 30% and 50% amplitude modulation. AM is continuously variable from zero to 50%.

Modulation Controls: Separate potentiometers are provided for continuous control of FM and AM levels.

Modulating Oscillator: The internal AF oscillator may be switched to provide either frequency or amplitude modulation; it may also be switched off. External binding posts permit the use of an external AF oscillator for either FM or AM. Both internal and external AF oscillators may be used simultaneously, thus providing either FM or AM at two modulation frequencies simultaneously or simultaneous FM and AM. The internal AF oscillator provides eight fixed frequencies which may be selected by a rotary type switch—50, 100, 400 cycles and 1, 5, 7.5, 10 and 15 kilocycles, accurate to within 5%. The output voltage of the internal AF oscillator is available at the external binding posts for synchronizing or other purposes.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volts at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive. The output cable has a 53 ohm resistance termination at the terminal end hence the output impedance of the unit with cable attached is 26.5 ohms.

Distortion: FM distortion at 75 kc. deviation is less than 2% when modulated with the internal AF oscillator or an external AF oscillator having 0.5% distortion or less. At 50% amplitude modulation the distortion is about 5% using the internal AF oscillator and decreases as the modulation percentage is reduced. An external AF oscillator may be employed for amplitude modulation if desired.

Spurious RF Output: All spurious RF output voltages are at least 30 db. below the desired fundamental. The RF leakage is very low.

Fidelity Characteristics: The deviation sensitivity of the FM modulation system as a function of frequency is constant from dc. to over 10 kc. At 15 kc. the deviation as indicated on the modulation meter is 0.5 db. higher than the true value. The amplitude modulation system is also flat from dc. to 10 kc., and departs from nominal by 1.0 db. at 15 kilocycles.

Power Supply: The power supply is self-contained in the instrument for use on 60 cycles, 110 volts.

Accessories: 203-A Frequency Converter (Frequency range 0.4 mc. to 25 mc.).

Dimensions: Height: 17"; Width: 13½"; Depth: 11½".

Weight: 35 lbs.

Price: $975.00, F.O.B. Boonton, N. J., U.S.A.

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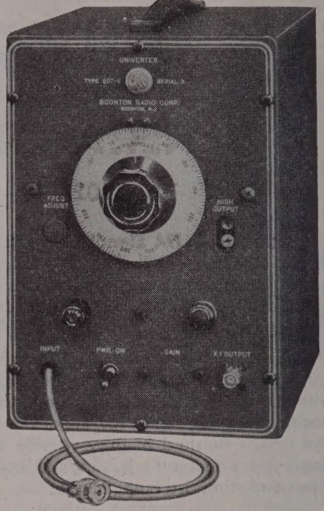
PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

UNIVERTER TYPE 207-A



The Type 207-A Univerter, a frequency converter accessory having unity gain, was designed for use with the Type 202-B FM-AM Signal Generator to provide frequency coverage from 0.1 mc. to 55 mc. Thus the Type 207-A Univerter when used with the Type 202-B Signal Generator will provide complete FM-AM Signal Generator coverage from 100 kc. to 216 mc. This instrument also enables the frequency and amplitude modulation features of the 202-B instrument, as well as the attenuator calibration, to be utilized at these lower frequencies without causing any appreciable distortion.

The 207-A Univerter matches the 202-B FM Signal Generator in styling and finish, and is supplied complete with tubes and instruction book.

SPECIFICATIONS

RF Range: The Univerter, in combination with the 202-B FM Signal Generator, covers a frequency spectrum from 0.1 mc. to 55 mc. (0.3 mc. to 55 mc. with 200 kc. carrier deviation.)

Frequency Increment Dial: This dial is calibrated in increments of 5 kc. from plus 300 kc. through zero to minus 300 kc.

X1 Output: The RF output voltage at the X1 output jack is continuously variable from 0.1 microvolt to 0.1 volt across a 53 ohm load by means of the 202-B Signal Generator attenuator. The gain is constant within ±1 db over the frequency range of the instrument.

High Output: A front panel pin jack makes available an uncalibrated high voltage output. The voltage gain at this jack is approximately 7.5.

Output Impedance: The output impedance at the X1 jack is about 53 ohms, the impedance looking into a terminated 53 ohm cable connected to the jack is 26.5 ohms. The impedance at the high output pin jack is approximately 330 ohms.

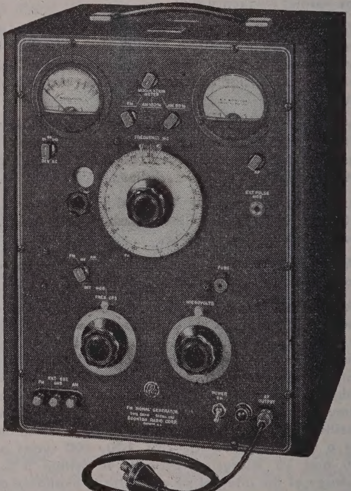
Power Supply: The 207-A Univerter is designed for use on 50-60 cycles, 95-130 volts, 45 watts.

Dimensions: H: 11½" W: 7⅜" D: 10½"

Weight: 20 lbs.

Price: $345.00 F.O.B. Boonton, New Jersey

TELEMETERING
SIGNAL GENERATOR TYPE 202-D



The Type 202-D Signal Generator is a precise and reliable instrument well suited to the specialized requirements of telemetering engineers for rapidly analyzing and evaluating over-all system performance.

SPECIFICATIONS

RF Range: 175-250 megacycles in one range, accurate to ± 0.5%. Main frequency dial also calibrated in 24 equal divisions for use with vernier frequency dial.

Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges: (1) 0-24 kc., (2) 0-80 kc., and (3) 0-240 kc. deviation.

Amplitude Modulation: Utilizing the internal audio oscillator amplitude modulation at any one of eight audio frequencies between 50 c. and 15 kc. may be obtained over the range of 0-50%, with meter calibration points at 30% and 50%. By means of an external audio oscillator the RF carrier may be amplitude modulated to substantially 100%. A front panel jack is provided which permits direct connection of an external modulating voltage source to the final stage for pulse and square wave modulation.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volt at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive.

Distortion: FM: The over-all distortion at 75 kc. is less than 2% and at 240 kc. less than 10%. AM: The distortion present at the RF output for 30% amplitude modulation is less than 3% and for 50% AM less than 6.5. At 100% the distortion is 12% to 15% depending upon the modulating frequency.

Outside Cabinet Dimensions: 17" H, 13½" W, 11½" D.

Weight: 35 lbs.

Price: $980.00, F.O.B. Boonton, N. J., U.S.A.

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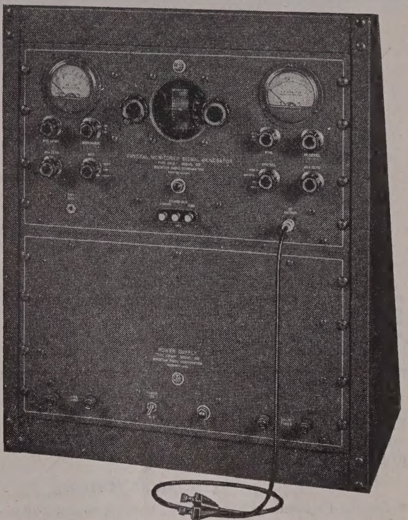
PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY

OMNI RANGE SIGNAL GENERATOR

TYPE 211-A



The Type 211-A Signal Generator is specifically designed for the testing and calibrating of omni-range radio receiving equipment. It is also well suited for laboratory and development work where a precision type amplitude modulated R.F. signal source is required.

SPECIFICATIONS

Frequency Range: Master Oscillator: 88-140 megacycles in one range. Vernier frequency dial has 100 divisions and is coupled to the main tuning capacitor through a 120:1 gear drive. Each vernier division is equivalent to a 10 kc. change in frequency.

Crystal Controlled Frequencies: Either of two crystals 110.100 mc. and 114.900 mc., accurate to ± 0.0035%, may be selected by a switch for use individually or in combination with the master oscillator to standardize its output frequency.

Amplitude Modulation Characteristics: Two amplitude modulation ranges, 0-30% and 0-100%, are provided for use with the internal oscillator or a low distortion external oscillator. Distortion is 5% or less at 95% amplitude modulation.

Internal Audio Oscillator: Two modulating frequencies, 400 and 1000 cycles.

Modulation Amplifier: The internal modulating amplifier has the following characteristics:

Uniform response within ± 0.5 db.	30 cycles to 11 kc.
Uniform response within ± 0.1 db.	90 cycles to 150 cycles.
Uniform response within ± 0.1 db.	9500 cycles to 10.5 kc.

Phase Distortion: (up to 60% amplitude modulation.)
Less than 0.25 degrees at 30 cycles.
Less than 10 degrees at 11 kc.

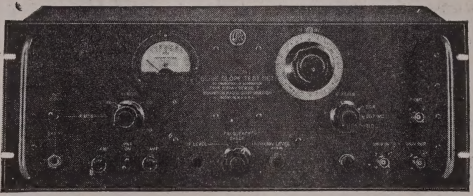
Audio Test Voltage: This instrument contains a demodulator or detector which supplies to front panel terminals a portion of the demodulated carrier.

Spurious FM: Less than 1 kc. at 60% AM.

Output Attenuator: Single ended piston type, adjustable from 0.2 volt to 0.1 microvolt. Output impedance as seen looking in at terminals of output cable is 26.5 ohms. (Relay Rack not included.)

Price: $1800.00, F.O.B. Boonton, N. J., U.S.A.

GLIDE SLOPE TEST SET TYPE 212-A



The Type 212-A Glide Slope Test Set has been developed for use with the Type 211-A VHF Signal Generator to provide additional frequency coverage from 329 mc. to 335 mc. for testing glide slope receivers. Three crystal spot frequencies are also provided for checking the intermediate frequency sections of these receivers.

Basically, the Type 212-A Test Set may be considered as having two separate systems, (A) a unity gain radio frequency converter (or Univerter) which adds 200 megacycles to the input frequency from the 211-A Signal Generator and (B) a crystal controlled I.F. Signal Generator.

SPECIFICATIONS

A—*Univerter:*

Frequency Range: 329 mc. to 335 mc.

Maximum Input Signal: 0.1 volt (0.05 volt modulated to 100%).

Input Impedance: 53 ohms, unbalanced.

Output Frequency: Input Frequency plus (200.000 mc. ± 0.005%).

Amplitude: The output into a 53 ohm load can be set equal to the input signal (± 1 db) in the frequency range 329 to 335 mc.

RF Monitor Meter: A center scale type front panel meter indicates the RF output voltage variations when the input is held constant at 0.1 volt.

Envelope Distortion: Less than 5% for an 0.05 volt signal modulated 95%.

Output Impedance: 53 ohms unbalanced.

B—*IF Generator:*

Output Frequencies: 20.700 mc. ± .0035%; 20.400 mc. ± .005%; 21.000 mc. ± .005%.

RF Output: Continuously variable from 1 microvolt to 1 volt across a 53 ohm unbalanced load by means of a piston type attenuator.

RF Monitor: Continuous monitoring with the same set-to-line type meter used with the Univerter.

Amplitude Modulation Capabilities: A maximum of 30% modulation can be obtained by means of an external signal source capable of developing 2 volts across a 250.000-ohm load, or by means of the self-contained 1000 cycle source.

Power Requirement: 105-125 volts, 50-60 cycles, 40 watts.

Weight 27½ lbs.

Dimensions: Panel, 19" Wide x 7" High. Depth, 10½" over-all. Unit designed for rack mounting and supplied with dust cover.

Price: $875.00, F.O.B. Boonton, N. J., U.S.A.

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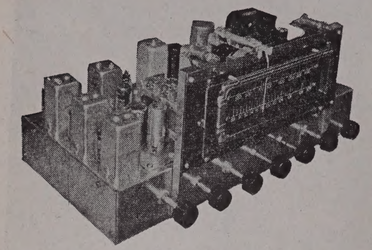
BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING FM-AM TUNER — MODEL RJ-20A



Designed for high-fidelity receiving application in the AM broadcast and FM bands.

ELECTRICAL FEATURES

- For FM—88 to 108 MC, and AM—530 to 1650 KC. Armstrong FM circuit.
- 20 db quieting with 6½ microvolts on FM; 5 microvolts sensitivity on AM.
- Separate RF and IF on both bands; no coil switching.
- Variable bandwidth AM IF gives full 9 KC band on broad and 4 KC on narrow position.
- Selective AFC on FM.
- Drift-compensated.
- FM audio response flat from 15 to 15,000 cycles ± 1½ db.
- 100,000-ohm output impedance: 300 or 72 ohms input for FM provided.
- Tubes: five 6AU6; one 12AT7; two 6AL5; one 6SN7; one 6SK7; one 6SA7; one 6J6; one 6SG7; one 6AL7 tuning eye; one 5Y3 rectifier.

MECHANICAL FEATURES

- Edgelighted slide-rule dial with large tuning ratio.
- Height 7½"; width, 17"; depth, 9".
- Weight: RJ-20A, 18½ lbs. shipping 26 lbs.
- Model RJ-22A: Rack type with black leatherette panel, 8¾" high, 19" wide and 9¾" deep; shipping 32 lbs.

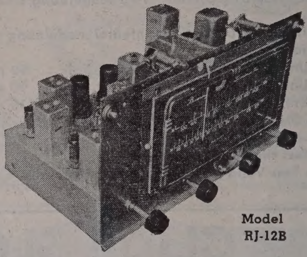
BROWNING FM-AM TUNER — MODEL RJ-12B

Engineered for high-fidelity reception in the FM band. The AM section provides high sensitivity and selectivity as well as quality reception in the broadcast band.

ELECTRICAL FEATURES

- For the FM band—88 to 108 MC, and broadcast band—530 to 1650 KC.
- Less than 10 microvolts needed to produce 30 db noise reduction in the FM band; sensitivity of 5 microvolts in the AM broadcast band.
- Separate RF and IF systems on both bands; no coil switching.
- Drift compensated.
- Selective AFC on FM.
- FM audio response flat from 15 cycles to 15000 cycles within ± 1½ db.
- AM audio response flat from 20 to 6600 cycles ± 3 db; IF's triple tuned.
- Miniature tubes used as FM RF and IF amplifiers assure maximum gain.
- High-impedance output for connection to any high-quality audio amplifier.
- Phono-TV-Recorder positions on channel selector switch to provide volume control directly on the tuner; input connections in back of tuner.
- FM-AM on one antenna with 300 ohms input with twin lead cables.
- Power supply, optional, requires 250 volts d-c at 65 MA and 6.3 volts a-c at 4 amperes.
- Major Armstrong's circuit on FM.
- 6AL7 tuning eye for accurate tuning on both FM and AM.
- Operates on 115 volts, 60 cycles. 80 volt-amperes input when used with Browning model PF-12 power supply.
- Tubes: three 6AU6; one 12AT7; one 6SK7; one 6SG7; two 6SJ7; one 6J6; one 6H6; one 6SA7; one 6AL7 tuning eye; one 1N54 crystal detector.

Model	Weight	Shipping Weight
RJ-12B—FM-AM Tuner	12 lbs.	18 lbs.
RJ-14B—Rack Panel Model	26 lbs.	34 lbs.
PF-12—Power Supply	8 lbs.	9 lbs.



Model RJ-12B

MECHANICAL FEATURES

- Easily mounted in book-cases, drawers, shelves and cabinets.
- Dial escutcheon supplied with unit. Edge lighted dial—slide rule type.
- Available with black leatherette finished panel for rack mounting (RJ-14B).
- Model PF-12 power supply is small separate unit for mounting in confined spaces.
- Dimensions: height 7⅜"; width 13½"; depth 9". Power supply: height 6"; width 3½"; depth 8". Rack type tuner; height 8¾"; width 19"; depth 9".

BROWNING FM TUNER — MODEL RV-10A

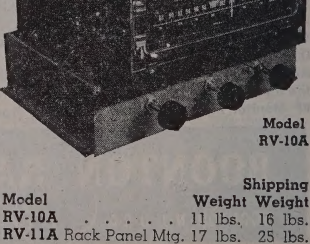
Designed for high-fidelity reception in the FM band.

ELECTRICAL FEATURES

- Receives signals in the FM band extending from 88 to 108 megacycles.
- Less than 10 microvolts needed to produce complete limiting.
- Audio response flat from 15 cycles to 15,000 cycles within ± 1½ db.
- Two-stage cascade limiter used to ensure freedom from noise.
- Tuned RF stage used to increase gain and reduce image interference.
- High impedance output to feed any high-fidelity amplifier.
- Drift-compensated.
- Selective AFC.
- Phono-FM-TV-Recorder switch permits instant transfer of input signals.
- Power supply self contained.
- Employs Armstrong FM circuit.
- Tuning eye indicates correct tuning.
- 115 volt, 60 cycle AC operation. 65 volt-amperes input.
- Tube complement: three Type 6AU6, one 12AT7; two 6SJ7; noe 6H6; one 6J6.
- Tuning eye indicator (6AL7). Type 5Y3 rectifier tube.

MECHANICAL FEATURES

- Physically small. Can be easily mounted in cabinets, shelves, bookcases, drawers, and the like.
- Dial escutcheon, knobs, shielded interconnecting wire and connectors supplied with each unit.
- Attractive edgelighted dial calibrated in megacycles and channel numbers.
- Rugged construction, all components of the highest quality.
- Also available with standard rack panel (Designation Model RV-11A).
- Dimensions: RV-10A—Height 6½", Width 11", Depth 8¾". RV-11A—Height 8¾", Width 19", Depth 8¾".

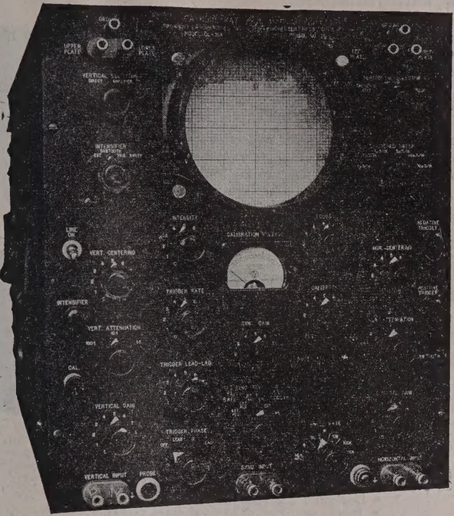


Model RV-10A

Model	Weight	Shipping Weight
RV-10A	11 lbs.	16 lbs.
RV-11A Rack Panel Mtg.	17 lbs.	25 lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING OSCILLOSYNCHROSCOPE — MODEL OL-15B



A laboratory instrument designed for the observation of wave forms and transient phenomena requiring a variety of time bases, triggers, phasing and delay circuits, and extended range amplifiers. It may be used for work on laboratory applications where extremely short pulses or phenomena of irregular occurrence rate must be studied. It is also designed for television, communication, radar, and facsimile work. The special features are combined with the functions of a standard oscilloscope with greater ease and convenience of operation as a result of improved design.

ELECTRICAL FEATURES

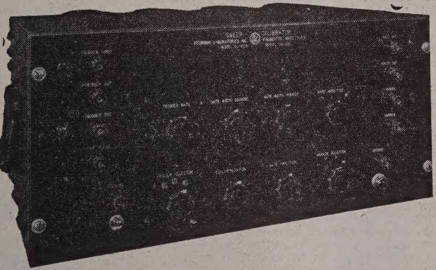
- Five-inch 5JP1A cathode-ray tube with 4000V accelerating potential for improved intensity and definition of images.
- Sawtooth sweep with range of 5 cycles per second to 500 kilocycles per second permitting observation of radio frequency wave forms.
- Single sweep triggered time base for observation of transient phenomena or phenomena of varying repetition rates.
- Internal trigger generator and built-in phasing circuit for use with single sweep time base.
- Extended range amplifiers. The vertical amplifier is flat within 3 db. from 10 cycles per second to 6 megacycles per second. The horizontal amplifier is flat within 1 db. from 5 cycles per second to 1 megacycle per second. Maximum vertical deflection sensitivity is .05 R.M.S. volts per inch.
- Full screen deflection.
- The response curve of the vertical amplifier which is linear and without positive slope from 10 cycles to 6 megacycles has transient response such that a 100 kilocycle square wave with rates of rise and fall in the order of 500 volts per microsecond is faithfully reproduced.
- Low-capacitance, high-impedance probe for use with vertical amplifier. Voltage attenuation of probe is 10:1.
- Provisions for direct connection to all deflection plates.
- Internal or external blanking of beam for timing purposes and for elimination of retrace.
- Voltage regulation of all low-level stages for stability of operation under varying line voltage conditions.
- Built-in voltmeter and calibrating circuit for determining deflection sensitivity at any setting of the gain controls.
- Tube complement: three 6C4, one 6AC7, one 6AG5, five 6AG7, two 807, five 6SN7, two 6SJ7, three 6SH7, three 6V6GT, one 884, two 2X2A, one 5R4GY, one 6X5GT, one VR-105, one 5JP1A.

Net Price $1275.00 F.O.B. Winchester, Mass.

MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle with ⅛" aluminum panel.
- Panel finished in black leatherette with all labels engraved directly on panel.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped according to function for convenience of operation.
- Components arranged for electrical efficiency and ease of servicing.
- Dimension: Height 15¾", Width 12¾", Depth 19¾".
- Weight: 95 lbs. Shipping weight: 150 lbs.

BROWNING SWEEP CALIBRATOR — MODEL GL-22A



Designed for use with oscilloscopes and synchroscopes as a source of timing markers for the measurement of sweep intervals.

ELECTRICAL FEATURES

- Provides markers of 0.1, 1.0, 10, 100 microseconds either positive or negative with variable amplitude to 50 volts.
- Generates variable width, variable amplitude gate for blanking or timing purposes.
- Contains own trigger generator with positive and negative trigger outputs.
- Markers may be initiated from external trigger or from internal generator. May be synchronized with triggers up to 100 KC. repetition rate.
- Voltage regulation to timing circuits.
- 115 volt, 60 cycle operation. 110 volt-amperes input.
- Tube complement: one Type 6BE6, one 6J6, three 6V6GT, one 6SN7, one 5Y3GT, one VR-105, one 6X5GT, two 12AU7, one 6H6, one 6SH7, one 6AG7, and one 2050.

Net Prices, F.O.B. Winchester, Mass.

Cabinet Style	**$295.00**
Rack Panel	**$285.00**

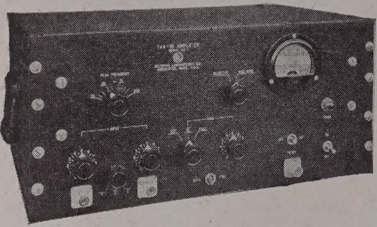
MECHANICAL FEATURES

- Provided with steel cabinet finished in black wrinkle.
- Panel finished in black leatherette with labels engraved into surface.
- All output connections on front panel.
- Insulated universal binding posts used for output connections.
- Dimensions: Height 9", Width 20½", Depth 12".
- Weight: 35 lbs. Shipping weight: 52 lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING
MODEL TAA-16A AMPLIFIER

High gain AC voltmeter for measurement of standing wave ratios with slotted lines.



ELECTRICAL FEATURES

- 500- to 5000-cycle range; **broadband/selective** controls on front panel.
- 15-microvolt sensitivity in **broadband** and 10 microvolts in **selective** position.
- Four-inch meter with illuminated scales calibrated in 0-10 as well as Standing Wave Voltage Ratio.
- Panel switch for bolometer voltage application.
- Master gain control switch provides attenuation factors of 1, 10 and 100.
- Power supply electronically regulated for stability.
- 60 volt-amperes input at 115 volts 60 cycles.
- Tubes: three 6SJ7GT; one VR-105; two 6V6GT; one 6H6GT; one 5Y3GT.

MECHANICAL FEATURES

- Rack panel in black wrinkle steel cabinet, 9" x 20" x 12".
- Panel black leatherette finish with engraved characters.
- Input tube shock mounted for low microphonics.
- Weight 30½ lbs. Shipping weight 45 lbs.

NET PRICE COMPLETE WITH TUBES (FOB Winchester, Mass.) $415.00

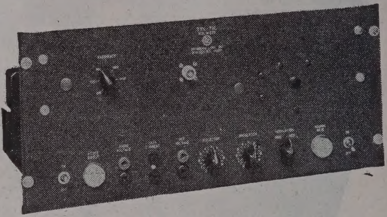
BROWNING MODEL TVN-7
POWER SUPPLY AND SQUARE-WAVE MODULATOR

The basic unit of a signal generator in the super-high-frequency range. Square-wave modulator for low-powered velocity-modulated tubes such as the 417A, 2K28 and 2K25.

ELECTRICAL FEATURES

- Range of cathode voltage is 280 to 480 volts, continuously variable. Provision is made for 180 to 300 volt range.
- Range of reflector voltage is 15 to 150 volts controllable from panel.
- Provision is made for grid pulse modulation or reflector pulse modulation.
- Grid pulse amplitude 60 volts; reflector pulse 100 volts maximum.
- Square-wave modulation frequency is variable from 600 to 2500 cycles.
- Provisions are made for external modulation.
- 110-115-volts, 60-cycle operation with 170 volt-amperes input.
- Tubes: one type 5Y3; two OD3/VR150; one 6SN7; one 6V6; one 6Y6G; one 5R4GY; one 6SJ7.

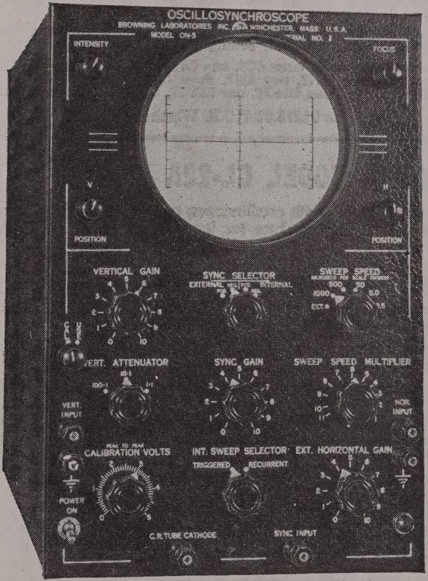
NET PRICE $245.00 FOB Winchester, Mass.



MECHANICAL FEATURES

- Designed for rack mounting; cabinet extra.
- Black wrinkle, engraved-steel panel.
- 8¾" x 19" x 11"; Wt. 33 lbs. Shipping Wt. 50 lbs.

BROWNING OSCILLOSYNCHROSCOPE
MODEL ON-5A — MODEL ON-5X



NET PRICES: FOB WINCHESTER, MASS.

MODEL ON-5A $485.00
MODEL ON-5X (with video delay) $535.00

This new, low-priced instrument is designed to satisfy the requirements for **basic laboratory equipment** to be used in pulse work. It provides exceptional flexibility with sweep writing rate continuously variable over a wide range, broad frequency coverage and high sensitivity; it is self-calibrating on both the X and the Y axis. All these advantages are provided at exceptionally low cost.

ELECTRICAL FEATURES

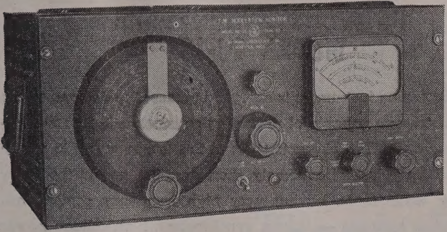
- Five-inch 5UP1 cathode-ray tube operates at accelerating potential of 2600 volts.
- Triggered sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.
- Sweep speed controls directly calibrated, within ± 10%, in terms of microseconds per screen division (horizontal deflection) for both triggered and sawtooth operation.
- Sawtooth recurrence rate: 10 cycles to 100 KC.
- Triggered sweep will operate at any rate from a single sweep up to a frequency determined by the desired sweep time; will also operate from regularly recurrent signals to display up to ten cycles of the phenomena for a single, triggered sweep.
- Sweep may be triggered (or synchronized when operated as recurrent sawtooth) by positive or negative sine-wave or pulse signals of 0.5 volts (external) or 0.75 inches deflection (from vertical amplifier).
- Vertical amplifier has flat frequency response, within 3 db., from 5 cycles to 5 megacycles per second with deflection sensitivity of .15 volts p.p.
- Model ON-5X contains a .45 microsecond vertical amplifier delay line to permit triggering of the sweep by observed pulses for one-inch deflection, at maximum gain. Rise time of .08 microseconds.
- Three-step attenuator for gain control 1:1, 10:1, and 100:1 — plus continuous adjustment over entire range.
- Horizontal amplifier operates from 500 KC down to d.c. thus allowing use of extremely slow sweeps; deflection sensitivity is 2.0 volts RMS per inch.
- Peak-to-peak vertical calibration voltages of 0-2, 0-20, and 0-200 can be switch-selected; accuracy is ± 10%.
- Cathode connection, brought out to front panel, allows external blanking and marker connection.
- Direct connection to all deflection plates at rear terminal board.
- Total power requirement is 180 volt-amperes at 115 volts, 60 cycles.
- Tube complement: one 5UP1; two 6C4; eight 6BC5; two 6AL5; one 12AU7; two 6BG6G; one 5U4G; two 2X2A; two OA2; two 6SN7.
- Operates on 115/230 volts, 50-400 cycles.

MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle.
- Steel panel finished in black leatherette.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped by function for operating convenience.
- Free-view screen has graduated X- and Y-axis scales.
- Dimensions: 10" wide, 14½" high, 16¾" deep.
- Weight: 50 lbs.; shipping weight: 60 lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING UNIVERSAL FM MODULATION MONITOR — MODEL MD-25A



A single instrument for monitoring the modulation of all FM transmitters operating in the communications bands from 30 to 162 mc. Provides simple and inexpensive means for checking fixed or mobile transmitters for compliance with FCC limitations on carrier frequency swing due to modulation. Maintenance of frequency swing within the FCC plus-or-minus 15 Kc limit is equally important for reduction of adjacent-channel interference. Peak flasher indicates excessive modulation.

The Browning Universal Modulation Monitor checks any communications system working on 30-40, 40-50, 72-76, and 152-162 mc., a feature of special importance to engineers responsible for supervision of several systems, since a single instrument can be used to check all transmitters operating within the above bands.

ELECTRICAL FEATURES

• An outstanding feature of Model MD-25A is its extreme simplicity of operation. The multi-range band-selector switch is set to the band to be monitored, and the unmodulated transmitter carrier is tuned in precisely. Then the carrier is modulated by voice or audio oscillator, and the frequency swing is read directly from a 4-inch panel meter calibrated to 20 kc. A calibrated discriminator is used to determine modulation swing. The meter also determines precise tuning by indicating limiter voltage or total discriminator voltage. • The meter can be read to better than 1 kc. The meter indicates peak swings of sustained sinusoidal modulation or voice modulation peaks of 0.3 seconds duration or more. • Aural monitoring is provided by means of an audio output which permits attachment of an audio amplifier or phones. Oscilloscope may be attached at the same point for analysis of demodulated signal. • Measurements may be made on signals generating less than 1 millivolt at the antenna input. If the instrument is mounted at the headquarters station, cars can be checked while they are on the orad. • Tube complement: one 6AK5, four 6AU6, three 6SN7, one each 5Y3, 6C4, 6AL5, 6J6, VR-150.

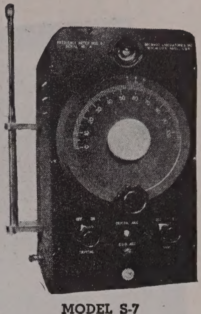
MECHANICAL FEATURES

• Model MD-25A is mounted on a standard 8¾" rack panel. • Supplied with a portable case 20" wide, 9" high, and 12" deep. • Weight: 40 lbs. Shipping weight: 55 lbs. • Case is readily removable for rack mounting use.

Net Price, F.O.B. Winchester, Mass . $345.00

BROWNING FREQUENCY METERS

Browning frequency meters are precision-built instruments designed to check frequencies in various ranges from 100 kilocycles to 500 megacycles. Custom-built and hand-calibrated, each of the meters listed below is equipped with a 100 KC CRYSTAL USED AS SECONDARY STANDARD WHICH IS EASILY COMPARED WITH WWV RADIATIONS ALLOWING EVERY FREQUENCY METER TO BE CHECKED IN THE FIELD. Some of the outstanding electrical features are:



MODEL S-7

MODEL S-4

- From 1 to 5 specified frequencies in 1.5-70 mc. range.
- Accuracy ± .0025% of the specified frequency.
- Stable electron-coupled oscillator used in special circuit.
- Visual detection of zero beat with cathode-ray indicator.
- 110-115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SC7; one 6SA7; one 6J5; one 6SK7; one 6U5; one 25Z6 and one VR90 voltage regulator.

MODEL S-6

- Range: 100 kilocycles to 50 megacycles, in 5 bands.
- Accuracy 0.025% of the frequency measured.
- Harmonic amplifiers permit use of harmonics up to 50 mc.
- Visual and audio detection of zero beat.
- 115 volt ac operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SK7; one 6SL7; one 6SF5; one 6U5; one 5Y3GT; one VR90.

MODEL S-7

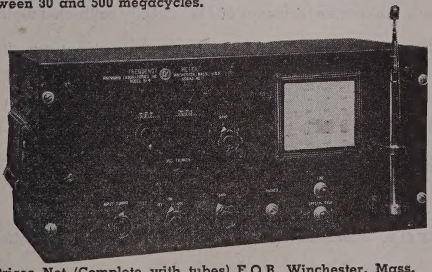
- Calibrated for One or Two frequencies in 72-76 and/or 152-174 mc. bands.
- Accuracy .0025% of the specified frequency.
- Deviation chart supplied for instant determination of deviation from assigned frequency.
- Cathode-ray indicator for accurate setting of ECO calibration.
- 115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SL7; one 6SA7; one 6J5; one 6SK7; one 25Z6; one VR-90; and one 6U5 tuning indicator.

MECHANICAL FEATURES OF ALL MODELS

- Rugged steel cabinet with ⅛" aluminum panel.
- Machined main dial graduated in 100 divisions over 180 degrees. Vernier allows reading of 1/10 of dial division.
- Panel finished in black leatherette.
- All labels engraved in panel surface.
- Dimensions: 13½" high, 7⅝" wide, 6⅞" deep.
- Weight: 15 lbs. Shipping weight 18½ lbs.

BROWNING FREQUENCY METER — MODEL S-5

Designed for checking the frequencies of police, fire department, railroad, marine and other special-service transmitters operating between 30 and 500 megacycles.



Prices Net (Complete with tubes) F.O.B. Winchester, Mass.
1 Band . $340.00 2 Bands . $380.00 3 Bands . $420.00

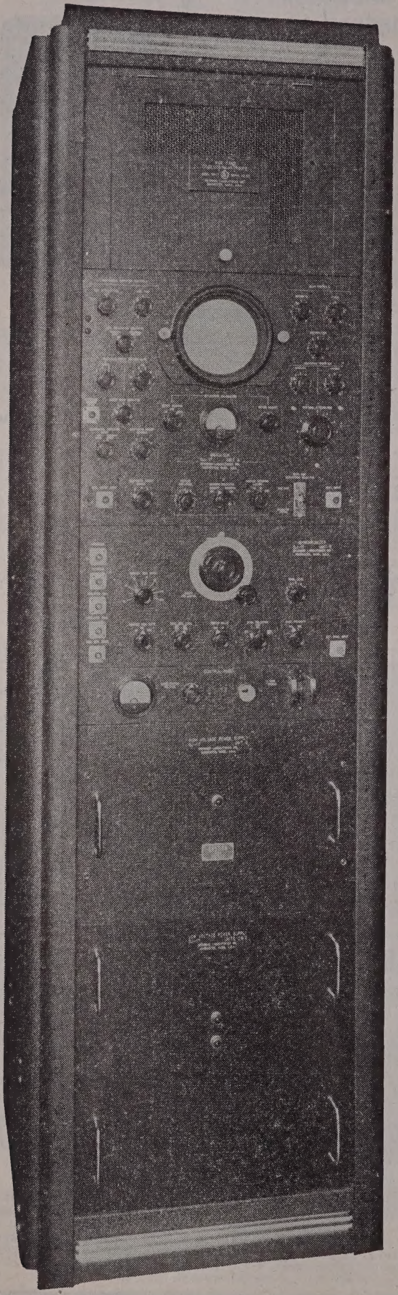
ELECTRICAL FEATURES

• Custom-built and hand-calibrated for one, two, or three frequencies between 30 and 500 megacycles. • Accuracy: .0025% of the specified frequency. • Deviation chart supplied for determination of deviation from assigned frequency. • 100 KC crystal in temperature regulated oven is used as secondary standard with long time frequency stability. • Temperature compensated electron-coupled oscillator uses precision split-stator variable condenser with no moving contacts. • Voltage regulated supply for crystal and electron-coupled oscillators. • 115 volt, 60 cycle AC operation. 65 volt-amperes input. • Telescoping antenna for easy coupling to transmitter. • Tube complement: one Type 6C4, two 9001, two 6SJ7, three 6J5, one 5Y3GT, one VR-90.

MECHANICAL FEATURES

• Rugged steel cabinet and ⅛" steel panel. • Electron-coupled oscillator built on 3/16" aluminum sub-chassis. • Worm drive to tuning condenser with dual indicators provides 5000 dial divisions for tuning range. • Panel finished in black leatherette. • Labels engraved into panel surface. • Standard rack panel used. Unit may be incorporated in a rack with other equipment if desired. • Dimensions: Height 8¾", Width 19", Depth 9". • Weight: 35 lbs. Shipping weight: 50 lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.



BROWNING WIDE-BAND OSCILLOSYNCHROSCOPE MODEL OJ-17

This new Browning instrument is designed to meet the demand for an oscillosynchroscope capable of producing satisfactory traces in high-speed pulse work. The characteristics of this 'scope suit it to use in work involving pulses of extremely short duration and in the study of complex wave forms having very high frequency components. The individual elements — 'scope, synchronizer, high-voltage power supply, low-voltage power supply, and control panel — are mounted in a standard vertical rack cabinet on casters. Space is provided at the top of the cabinet for installation of a Fairchild Oscillorecord camera when photographic records of 'scope traces are desired.

CIRCUIT FEATURES

- Band width of 16 mc. in vertical amplifier; deflection sensitivity of .05 volts/inch at maximum gain, video delay of 0.2 microsecond.
- Horizontal Amplifier: Band width of 2 mc., deflection sensitivity .25 volts/inch at maximum gain.
- Cathode Ray Tube: Type 5RP or 5XP with anode voltage variable from 10 to 20 KV. Supplied in any of the standard phosphors.
- Driven Sweep: Variable from .05 to 500 microseconds per inch, may be triggered from (1) external pulses of 0.1 volt or higher, (2) video amplifier signals, (3) scope trigger generator.
- Sawtooth Recurrent Sweep: 5 to 500,000 cycles per second.
- Trigger Generator: Positive and negative output of 100 volts from 500 ohms, running rate — 20-20,000 cps.
- Markers: Either internal blanking or deflection type: 0.1, 1.0, 10, 100 microsecond ranges.
- Blanking: External connection to grid provided.
- Variable Delay Circuit: Operates from internal trigger generator or external sync. and provides positive and negative delayed output triggers. May be used to delay sweep from external sync. or internal trigger generator. Delay continuously variable to 2000 microseconds. Adjustable by means of 4½" directly calibrated dial.
- Voltage Calibration Circuit: Provides measurement of input signals by means of substitution voltages in the form of 1000 cycle square waves.
- Size: 81⅜" x 23⅝" x 24".
- Weight: 500 lbs.; shipping weight: 750 lbs.

NET PRICE, F.O.B. Winchester, Massachusetts $5000.00

Thank You!

When writing for additional information or when ordering from sources of supply listed in this book, please mention

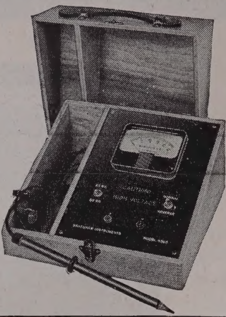
RADIO'S MASTER

PRECISE MEASUREMENTS COMPANY

ONE HUNDRED THOUSAND VOLTS!

At Fifty Thousand Ohms/Volt
KILOVOLTER Model 4000

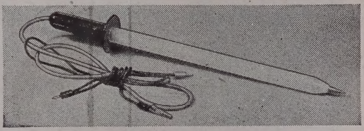
- **Shielded Polystyrene Probe**
- **Choice of Ranges**
- **Simple Foolproof Circuits**



Measures television and X-ray voltages with extra high input impedances. All voltage is dissipated in the shielded polystyrene probe. "Normal-Reverse" key is provided so that probe may be used regardless of polarity of voltage under test. Indicator has large clear scale for easy reading.

Model	Range Kilovolts	Price
4000	0-25/50	$67.50
4000-A	0-100	80.00
4000-B	0-50/100	85.00
4000-C	0-10/50/100	95.00

HIGH VOLTAGE PROBES — Up to 100,000 Volts!

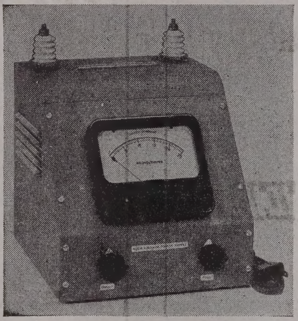


Designed for direct measurements of potentials up to 100 Kv. Special insulation as well as long sparking paths assure long trouble-free operation. Standard pin jack leads and ground clip supplied with each probe. Your choice of several standard resistors for operation in conjunction with VTVM or other high sensitivity instruments.

MODEL 5000 Kilovolter Probe complete with any of the following resistors: 800 megohms, 960 megohms, 1800 megohms, 1982 megohms, 2180 megohms, 2500 megohms. All rated at 6 watts each, 2% accuracy. **Price $37.00**

MODEL 5000-A Kilovolter Probe, less resistor. **Price $27.00**

HIGH VOLTAGE POWER SUPPLIES



A precision, well constructed high voltage supply for television, meter testing and calibration, electrostatic painting, breakdown tests, nuclear physics and wherever high potentials at low currents are needed. Output is well filtered direct current. Adjustable by means of a contol on the front panel. Available with or without meter. Input voltage is 115 volts, 60 cycles.

Model		Maximum Voltage	Price
6000		2,500	$40.00
6000-A	With Meter	2,500	60.00
6005		5,000	45.00
6005-A	With Meter	5,000	65.00
6010		10,000	55.00
6010-A	With Meter	10,000	75.00
6015		15,000	70.00
6015-A	With Meter	15,000	90.00
6025		25,000	85.00
6025-A	With Meter	25,000	105.00

We Invite Your Inquiry for - - -

SNOOPERSCOPES • INFRA RED MATERIALS • KERR CELLS • GOVERNMENT CONTRACT & SUBCONTRACT WORK • HIGH VACUUM AND GASEOUS TUBES MADE TO ORDER

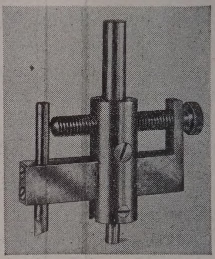
Instruments Built to Specifications

ELECTRO-GRAPHIC RECORDER

Features for the first time a recording instrument of small size and low cost. Built-in motor operates from the standard power lines. In spite of the small size the recording width has been enlarged so that 1 and ¾ inch wide paper is used. All writing is of a permanent nature which is fade-proof and readily permits photostats or blueprint copies to be made if necessary. No ink, chemicals or pens are used and all writing is smearproof. Standard models are of one millampere sensitivity, other ranges available on order. Mounts on panel as any standard meter.

Model 50 RECORDER 0-1 Mill. **Price $85.00**

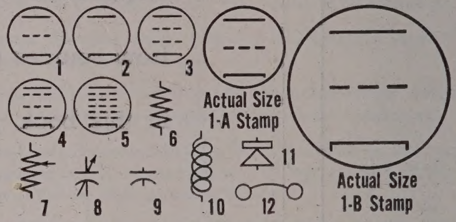
MICRO CIRCLE CUTTER



Cuts holes in all types of metals from stainless steel to magnesium. Perfect for plastics and wood. Built-in micrometer type size control for precise settings. Adjustable in an infinite number of hole sizes within its range. "Quickie" beam locking mechanism for long trouble-free operation. Extra heavy construction of the main beam and body make it useful for production jobs as well as experimental work. All are equipped with a ¼" high speed steel cutting bit.

Model	Type	Size	Price
1	Round Shank (for drill press or hand drill)	4"	$5.00
1-A	Square Tapered (for hand brace)	4"	5.00
5	Round Shank	6"	7.50
10	Round Shank	14"	15.00

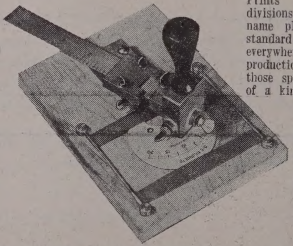
RUBBER CIRCUIT STAMPS



These handy rubber stamps provide clear sharp impressions of all the most widely used radio and electrical circuit symbols. Not only saves considerable drawing and drafting time but provides a neater-looking appearance as well. Available in two popular sizes. Stamps may be purchased separately or in complete sets. When ordering, specify stamp number and size.

SIZE A	CIRCUIT STAMP SET	(12 stamps)	$8.50
SIZE A	Individual Circuit Stamps	each	.85
SIZE B	CIRCUIT STAMP SET	(12 stamps)	10.00
SIZE B	Individual Circuit Stamps	each	.95

SCALE PRINTING MACHINE



Prints lettering, numbers and divisions on meter scales, dials, name plates, labels, etc. Uses standard printers type obtainable everywhere. Not intended for production work but rather for those special jobs which are one of a kind. Does a neat printed job in a jiffy. The Model 1000 Junior machine (illustrated) finds the most use where the divisions are already drawn in and the scale requires numbers and letters. The Model 1500 Standard machine provides in addition, division printing features. Other models are available with rotating number and letter wheels.

Model 1000 JUNIOR SCALE PRINTING MACHINE................**Price $45.00**
Model 1500 STANDARD SCALE PRINTING MACHINE..........**Price 95.00**

Prices do not include printers type.

"PRECISE" Test Equipment is sold through wholesale distributors. See your local distributor or write us for his address. — PRECISE MEASUREMENTS COMPANY

EMC Gives More Measurement Value Per Dollar **TEST EQUIPMENT**

THE E M C MODEL 300 VACUUM TUBE VOLT-OHM-CAPACITY METER

The new Model 300 Vacuum Tube Volt-Ohm-Capacity Meter is an unusually stable, extremely compact instrument, with all of the inherent quality of design and manufacture that is always built into all E M C test instruments.

Its price — amazingly low — was made possible through the development of a new efficient circuit by E M C engineers, which enabled great economies. Its large, accurate meter, mounted on a clearly defined, modern panel, makes operation a pleasure rather than a chore.

Sturdily cased, this instrument will withstand rough usage, and will give complete satisfaction under all conditions. The Model 300 is supplied as an open-face bench model, or as a portable model in oak carrying case with cover.

SPECIFICATIONS

Uses 4½" meter.

DC Volts — 6 ranges: 0-3-10-30-100-300-1000 volts.

Input resistance 1 meg per volt on 0-3 and 0-10 ranges, 30 megohms input resistance on 0-30-100-300 and 1000 volts ranges.

1 megohm isolating resistor in probe.

AC Volts — 5 ranges: 0-10-30-100-300-1000 volts.

Approximately 1000 ohms per volt. Full wave tube rectification used.

Resistance — 6 ranges from 2 ohms to 1000 megohms.

Capacity — 4 ranges, from 25 micromicrofarads to 20 microfarads (.000025 mfd to 20 mfd).

Has zero center position available for lining up the discriminator of an FM radio.

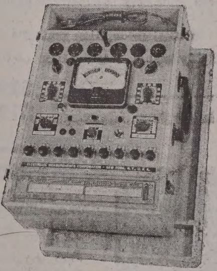
DC volts and ohms pultipliers accurate to 1%.

Open Face Model, complete with leads, **Dealer Price**	**$41.50**
Above in Kit Form	**24.95**
Model 300P, above model, in portable case with cover. **Dealer Price**	**46.50**
High Frequency Probe for above models, **Model HFP**	**6.95**
30,000-Volt lead for above, **Model HVL**	**10.75**

E M C MUTUAL CONDUCTANCE TUBE TESTER — MODEL 201

Check These Features

- √ Checks mutual conductance on a calibrated micromho scale, as well as an a "Reject-Good" scale.
- √ Checks 5 element tubes as pentodes.
- √ Checks tubes for gas content.
- √ Sufficient plate current to check both emission and mutual conductance.
- √ Detects both shorted and open elements.
- √ Complete switching flexibility allows all present and future tubes to be tested regardless of location of elements on tube base.
- √ Tests tubes for radio frequency and other noise.
- √ Tests all tubes from .75 volts to 117 filament volts.
- √ Tests all loctal, octal, and miniature tubes.
- √ Tests cold cathode, magic-eye, voltage regulator tubes, ballast resistors.
- √ Instrument is fused, and fuse is easily replaceable from front of panel.
- √ Individual sockets for each tube base type eliminates possible errors.
- √ Checks individual sections of multi-purpose tubes.
- √ Attractive four-color panel with plenty of eye-appeal. Hard wrinkle finish for durability.
- √ Checks sub-miniature tubes.



E M C Series 201 Mutual Conductance TUBE TESTERS

	Net Prices
Model R201 BC—4½" meter in sloping counter case with built-in chart	$69.50
Model R201 BP—4½" meter in hand-rubbed carrying case with built-in chart	73.50

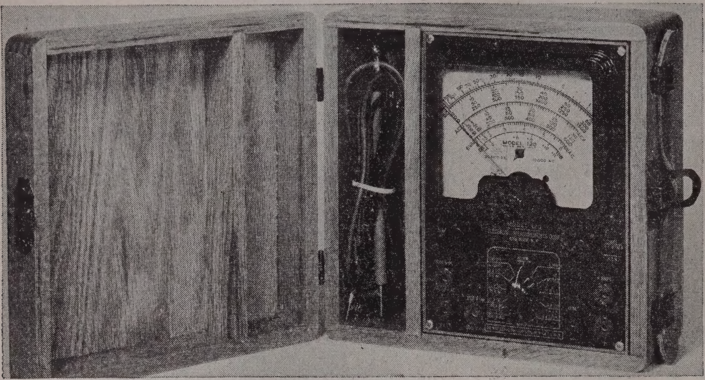
For 220 V. operation add **$8.00** to above prices.

ELECTRONIC MEASUREMENTS CORPORATION

280 LAFAYETTE STREET
NEW YORK 12, N. Y.

Net

EMC Gives More Measurement Value Per Dollar TEST EQUIPMENT



MODEL 120

20,000 ohms per volt

The **ONLY** 20,000 ohms per volt instrument that gives:

1. **WIDEST** resistance range (.2 ohm to 300 megs.).
2. **HIGHEST AC** voltage sensitivity (10,000 ohms per volt).
3. **LOWEST PRICE—$29.95,** open face model; **$34.95** for Model 120-P (portable).

Other Features Include:

1. AC voltage frequency range 30 cycles to 1 megacycle.
2. Rectifier and battery replaceable without soldering iron.
3. No external source of power needed for AC voltage measurements.
4. Special precision voltage multipliers accurate to 1%.

Model 120 (Open Face)......**$31.95**

Model 120-P (Portable Oak Case)......**$36.95**

Specifications:

- DC volts at 20,000 ohms per volt: 0-3v, 0-15v, 0-60v, 0-300v, 0-1500v, 0-6000v.
- AC volts at 10,000 ohms per volt: 0-6v, 0-30v, 0-120v, 0-600v, 0-3000v, 0-6000v.
- DC current: 0-60 microamps, 0-6ma, 0-60ma, 0-600 ma, 0-6 amps.
- Resistance: 0-3000, 0-300,000, 0-3 megs, 0-300 megs.
- Decibles: —4 to +11, +10 to +25, +22 to +37, +36 to +51, +50 to +65, +62 to +77.

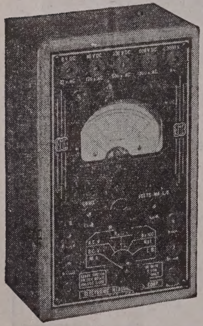
MODEL 500 — R. F. Signal Generator

Note These High Quality Features:

1. Employs electrostatically shielded transformer for 115V 60 cycle operation.
2. ALL coils not in use are automatically shorted out.
3. Provision for external modulation.
4. Covers range from 150KC to 36 megacycles on fundamentals—over 100 megacycles on harmonics.
5. Attractive 2 color gray hammertone panel and case.
6. 400 cycle internal modulation available.
7. Uses a highly stable, Hartley-type oscillator circuit.

Model 500...................... **$29.75**

Model 500K in Kit Form...................... **$19.75**



MODEL 101A — 1000 ohms per volt

An unusually attractive, **Exceptionally Low-Priced** volt-ohm-milliameter. A rugged, flexible instrument, combining features not available in competitive models selling for more than double this price.

Just the instrument whenever the type of measurement does not justify the use of expensive, complicated, highly sensitive equipment.

Model 101A, Open Face, as shown at left. **Size:** 4½" x 7½" x 3¼". **Price**............... **$18.50**

Model 101A, complete with test leads. **Size:** 6¼" x 7½" x 3¼". **In Portable Case. Price** **$22.75**

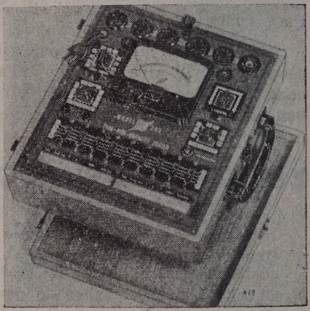
Specifications:

5 **DC Voltage Ranges** (approx. 1000 ohms per v.): 0 to 6-60-300-600-3000 volts.

4 **AC Voltage Ranges:** 0 to 12-120-600-1200 volts.

3 **DC Current Ranges:** 0 to 6-60-600 milliamperes.

4 **Resistance Ranges:** 0 to 200-2000-200,000 ohms; 20 megohms.



MODEL 203

Tube-Ohm-Capacity Tester

Tube Tester Features:

- Tests all tubes including the Noval and subminiatures!
- Standard emission method of testing for all tubes gives easy, direct reading.
- Completely flexible switching arrangement.
- Has panel light indicator.
- Individual sockets for each type of tube base.
- Tests all tubes from .75 volts to 117 filament volts.
- Tests cold cathode, magic eye, voltage regulator and ballast tubes.
- Panel finished in 3 color hammertone.
- Line voltage control compensates for line variations between 105 and 135 volts.
- Built-in roll-chart protected by heavy, non-breakable, transparent plastic.
- Checks for shorts, condenser leakage to 1 meg. ohm., resistance up to 4 meg. ohms, capacity from .01 to 1 mfd.
- Sturdy, hand-rubbed, portable oak case; removable hinged cover with carrying handle...................... **$49.50**

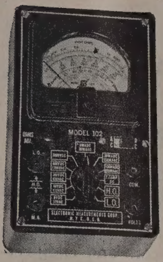
For 220V operation add $8.00 to price.

ELECTRONIC MEASUREMENTS CORPORATION

280 LAFAYETTE STREET
NEW YORK 12, N. Y.

EMC Gives More Measurement — Value Per Dollar **TEST EQUIPMENT**

The EMC ECONOMY LINE!



MODEL 102 POCKET VOLOMETER*

(1000 OHMS PER VOLT METER)

Check these Features:

3" SQUARE METER—1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 1 lb. 5. oz.

Size: 3¾" x 6¼" x 2" deep.

Model 102..**$14.90**

MODEL 103 VOLOMETER*

(1000 OHMS PER VOLT METER)

Check these Features:

4½" SQUARE METER--1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 DB Ranges: —4 to +64 db.

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

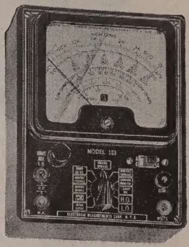
4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 2 lbs. 3 oz.

Size: 5¼" x 6¾" x 2⅞"



Model 103... **$18.75**

Model 103-S, same as above but with plastic carrying case **$19.25**

MODEL 104 VOLOMETER*

(20,000 OHMS PER VOLT METER)

Model 104

$26.95

Check these Features:

4½" SQUARE METER—50 MICROAMPERES; ALNICO MAGNET.

ROUND CORNERED, BAKELITE, MOLDED CASE WITH CARRYING STRAP.

3 AC CURRENT RANGES (to 3 amps.).

3 RESISTANCE RANGES (to 20 megohms).

Specifications:

5 DC Voltage Ranges (20,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

5 AC Voltage Ranges (1,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

3 Resistance Ranges: 0-20 K, 0-200 K, 0-20 megs.

3 AC Current Ranges: 0 to 30-300 ma., 0-3 amps.

3 DC Current Ranges: 0 to 6-60-600 ma.

5 DB Ranges: —4 to +67 db.

Weight: 2 lbs. 5 oz.

Size: 5¼" x 6¾" x 2⅞"

**Reg. Trade Mark for Volt-Ohm-Milliameter*

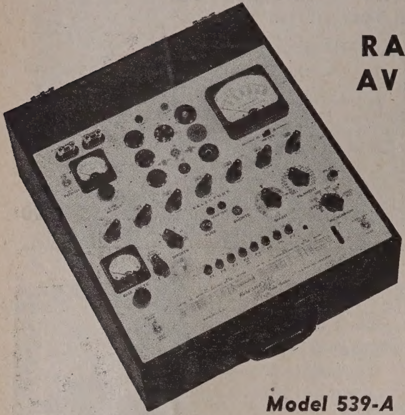
ELECTRONIC MEASUREMENTS CORPORATION

280 LAFAYETTE STREET
NEW YORK 12, N. Y.

HICKOK TEST INSTRUMENTS HICKOK

DYNAMIC MUTUAL CONDUCTANCE *TUBE TESTERS*

Engineer's Laboratory Models



Model 539-A

RADIO, TELEVISION, LABORATORY, AVIATION *and* COMMUNICATION ENGINEERS' MODEL

Model 539-A, laboratory tube tester of highest accuracy. Dynamic Mutual Conductance with tube readings in micromhos. Tests all tubes normally encountered in all phases of electronic work — including miniature and subminiature types.

Designed with professional accuracy for engineers and engineering technicians, in the radio, television, aviation, communication and industrial field.

Model 539-A, illustrated at the left. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the field engineer. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 30 lbs. net, 39 lbs. shipping wgt. 110-130 V.A.C. **Price: $271.50**

Also available at same price, Model 539-D in matched-set, attractive steel bench model case.

SPECIFICATIONS:

Permits choice of 3 A.C. signals; 0.25, 0.5, and 2.5 volts.
Vernier adjustment, with sensitive meter, permits accurate setting of grid voltage.
Built-in, optional self-bias arrangement.
Provision for insertion of plate milliammeter for measuring plate current.
Separate A.C. meter measures line voltage at all times.
D.C. grid bias and D.C. plate and screen voltages.
Provides the HICKOK Tube Life and Tube Gas tests for accurate matching of tubes.
Built with highest accuracy HICKOK meters.
Separate voltmeter measures grid bias.

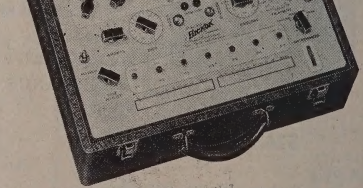
HIGHLY ACCURATE ALL-PURPOSE LABORATORY TUBE *and* SET TESTER

for Radio, Television and Industrial Engineers

Model 538-A, professionals' Dynamic Mutual Conductance tube tester with built-in multimeter panel. Completely built to the highest quality standards. Provides Dynamic Mutual Conductance circuits for the most accurate tube tests. Contains the latest sockets for testing all tubes normally encountered in all phases of electronic work.

- Permits choice of 2 A.C. grid signals in addition to D.C. grid bias and plate voltages.
- Provides the HICKOK Tube Life Test and Tube Gas Test for accurate matching of tubes in electronic work.
- A.C. meter accurately indicates line voltage at all times.
- Has high-low signal to insure highest accuracy.
- Built-in multimeter panel measures:
  Volts: 0-5000 A.C. — D.C.
  20,000 ohms per volt D.C.
  1,000 ohms per volt A.C.
  Resistance: 0.1 ohm to 100 megohms
  Capacitance: .0001 to 150 microfarads
  Current: 0-200 MA D.C.
  Decibels: almost unlimited with use of conversion table.
  Excellent for leakage tests of electrolytics.
  Checks for hum in any stage of receivers.

Model 538-A, illustrated at the right. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the servicing technician in the field. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 26 lbs. net, 35 lbs. shipping weight. 110-130 V.A.C.



Model 538-A Laboratory Model
(All test leads supplied)

Model 538-A: $265.00

Also available as Model 536 in same case, and with all features of Model 538-A excepting multimeter panel — $226.00.

HICKOK . . . Sold By 1000 Jobbers Throughout The World

HICKOK TEST INSTRUMENTS HICKOK

RADIO *and* TELEVISION TECHNICIANS TUBE TESTER

Portable Model 533P

Model 533-P

Model 533-P, radio, television and communication technicians' portable model with true Dynamic Mutual Conductance circuits pioneered by HICKOK. Acclaimed by the experts as the only true test of a tube. **Model 533-P,** illustrated at the left. Strong, portable carrying case with detachable cover. Designed for on-location or shop-bench servicing. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 24 lbs. net, 33 lbs. shipping weight. 110-130 V.A.C.

Price: $156.50

For those who prefer; also available, at same price, Model 533-D in attractive steel bench-model for matched set arrangement with other HICKOK test instruments.

SPECIFICATIONS:

Tube readings in micromhos.
Tests tubes under simulated operating conditions.
Contains the HICKOK Tube Gas Test.
Incorporates the new test feature that forecasts future life of a tube. Most valuable for accurate matching of tubes in television servicing.
Tests all the latest tubes including miniature and subminiature types.
Accurately tests and detects more weak, borderline tubes.
Completely built of highest quality components for lasting accuracy and dependability.

COMPLETE ALL-PURPOSE TUBE *and* SET TESTER *with* BUILT-IN ANALYZER

Model 534-B, radio, television and communication technicians' all purpose tube and set tester with built-in 20,000 ohm per volt D.C. milliammeter. Built to the high HICKOK quality standard throughout. Provides Dynamic Mutual Conductance circuits for highly accurate tube tests. Contains latest sockets for testing the latest tubes including television and subminiature.

Tube readings in micromhos.
Contains the HICKOK Tube Gas Test.
Provides the new Tube Life Test that forecasts future life of a tube.
Checks tubes under simulated operating conditions for greater accuracy of test.
Detects more weak, ordinarily passable tubes.
Built-in multimeter panel measures:
  Volts: 0-5000 A.C. — D.C.
    20,000 ohms per volt D.C.
    1,000 ohms per volt A.C.
  Resistance: 0.1 ohm to 100 megohms.
  Capacitance: .0001 to 150 microfarads.
  Current: 0-200 MA D.C.
  Decibels: almost unlimited with use of conversion table.
  Ideal for leakage tests of electrolytics.
  Checks for hum in any stage of a receiver.

Model 534-B, illustrated at the right. This tester identifies you as a top-grade servicing technician. Strong portable carrying case with detachable cover. Designed for on-location or shop-bench servicing. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 25 lbs. net, 34 lbs. shipping weight. 110-130 V.A.C. For those who prefer; optionally available, at same price. Model 534-BD in attractive steel bench model for matched set arrangement with other HICKOK test instruments. Test leads are supplied.

Model 534B

Also available in display type case at no additional cost.

Price: $195.50

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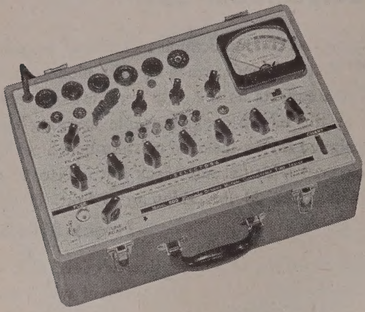
HICKOK TEST INSTRUMENTS HICKOK

RADIO and TELEVISION TECHNICIANS' SMALL SIZE MODELS



Model 600 **Price: $146.95**

DYNAMIC MUTUAL CONDUCTANCE IN A HANDIER, PORTABLE SIZE

Model 600, new lighter weight portable. True Dynamic Mutual Conductance in a radio and TV technicians' popularly priced model. Smaller, handier, but built to the high HICKOK standard for accuracy and dependability. A very popular model for on-location or shop-bench servicing.

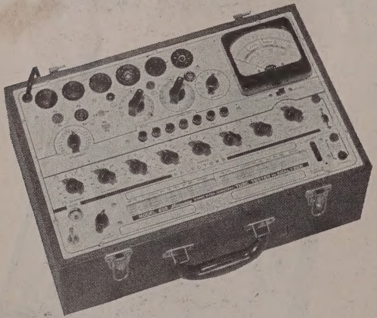
Model 600, illustrated at the left. Strong portable carrying case with detachable cover. Case is attractively covered in durable, dark red leatherette. 16¾" W., 11¾" L., 7½" D. 15 lbs. net, 25 lbs. shipping weight. 110-130 V.A.C.

HICKOK testers remain up to date. . . . Periodically revised roll-charts, covering new tubes, are available to all registered owners of HICKOK Tube Testers.

SPECIFICATIONS:

Scale readings in micromhos for most accurate tube evaluation.
Contains the HICKOK Tube Gas Test.
Acclaimed by the experts as a must for accurate television servicing.
Detects more weak tubes.
Tests tubes under simulated operating conditions.
Tests the latest tubes including miniature and subminiature types.

ALL-PURPOSE TUBE and SET TESTER IN A HANDIER, PORTABLE SIZE



Model 605 **Price: $167.60**

Model 605, new, lighter weight portable. Radio and television technicians' popularly priced, all-purpose tube and set tester with built-in 20,000 ohm per volt D.C. multimeter panel.

Built to the high HICKOK quality standard throughout. Provides Dynamic Mutual Conductance circuits with tube readings in micromhos. A popular technicians model for on-location servicing. Smaller, lighter, but built entirely with highest quality components for accuracy and dependability.

Excellent for leakage tests of electrolytics, and checks for hum in any stage of receivers. Built with a minimum number of jacks. Ranges are selected with a rotary master switch. Test leads supplied.

Model 605, illustrated at the left. Same case as Model 600, above 17 lbs. net, 27 lbs. shipping weight. 110-130 V.A.C.

SPECIFICATIONS:

Contains all features of the Model 600 listed above, including the HICKOK standard built-in roll chart with complete tube information.
Accurate, built-in multimeter panel measures:
Volts: 0-1000 A.C. — D.C.
Ohms: 20,000 per volt D.C.
1,000 per volt A.C.
Resistance: 0.1 to 100 megohms, in 2 ranges.
Inductance: to 70 henries.
Capacitance: .0001 to 50 microfarads, in two ranges.
Current: 0-200 MA D.C.
Decibels: —10 to +50.

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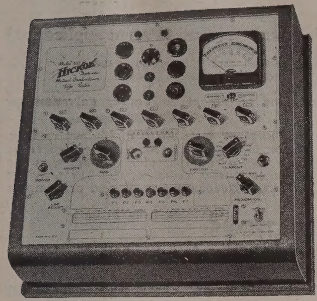
HICKOK TEST INSTRUMENTS HICKOK

DYNAMIC MUTUAL CONDUCTANCE IN A SMALLER COUNTER MODEL



Model 533-C, a lower cost dealer's counter model. Attractively designed to set on the counter and increase your tube sales. Highly accurate Dynamic Mutual Conductance circuits. Encourages customers to bring their tubes in where they can see the actual test. If customers' tubes check "OK" you have an excellent opportunity to invite him to bring his receiver in for a thorough check of all its circuits. With the 533-C you will build customer confidence, increase tube sales and promote your complete radio and TV service.

Model 533-C, illustrated at the right. Satin finish aluminum panel. Beautifully styled, blue enameled steel case. 17½" W., 18½" L., 6" H. 24 lbs. net, 32 lbs. shipping weight. 110-130 V.A.C.

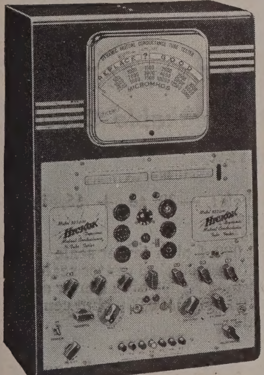
For those who prefer; optionally available, at same price, Model 533-D in attractive steel bench model for matched set arrangement with other HICKOK test instruments. See the "D" case illustrated below, right.

Model 533C **Price: $156.50**

SPECIFICATIONS:

Dual-scale meter provides readings in micromhos for the technician and "Good", "Bad", "Replace" scale for easy customer interpretation.
Quick, impressive, accurate, and dependable.
Detects more weak, ordinarily passable tubes.
Contains the HICKOK Tube Gas Test, and a circuit for accurate forecast of future tube life.
Contains all necessary tube information on a handy built-in roll chart.
Simple to operate.
Tests tubes under simulated operating conditions.
Tests all the latest tubes including television.
Filament selector switch has a 20 volt tap.

ATTRACTIVE DISPLAY MODELS



Model 533DM
Price: $170.00

MOST EFFECTIVE TUBE SALESMAN

Model 533-DM. Dealers who use this tube tester enthusiastically report that it is the best salesman they ever used.

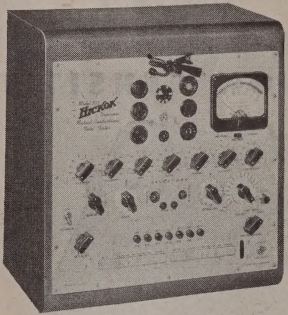
Customer convincing, the 533-DM contains a huge, illuminated nine-inch meter that clearly and accurately shows condition of the tube under test. Dual-scale meter provides micromho readings for the technician, and a multi-color "Good", "Replace", "Bad" scale for easy customer interpretation across the counter.

Contains the HICKOK Tube Gas Test, and a circuit for accurate forcast of future tube life.
Detects more weak tubes.
Tests all the latest tubes including television.

Model 533-DM, illustrated at the left. 9" chrome meter case, satin finish aluminum panel. Strong, attractive, enameled steel case. 26½" H., 17" W., 11" D. 35 lbs. net, 44 lbs. shipping weight. 110-130 V.A.C.

CATHODE RAY TUBE ADAPTER

Now available for all HICKOK Tube Testers. Provides for accurate test of any Cathode Ray Tube.



TECHNICIAN'S MATCHED-SET DISPLAY CASE, BENCH MODEL

Model D

Matched to the set, HICKOK "D" cases have been designed to make it easier for you to sell and safeguard your service.

HICKOK "D" cases dress up your bench and pack a most effective sales punch. They help to promote your service, make it possible for you to proudly display your test instruments where customers can see them, and out where they will do you more good.

Model 533-D, shown above. Satin finish aluminum panel. Strong, attractive, enameled steel case, 17" W., 18¼" H., 11" D. Optional, at same price, for all 533, 534, 536 and 539 tube testers.

HICKOK . . . Sold By 1000 Jobbers Throughout The World

HICKOK TEST INSTRUMENTS HICKOK

VACUUM TUBE VOLTMETER

Smaller Size Laboratory Model

Model 215

Price: $67.50

INCLUDES: NEW, DUAL-PURPOSE AC-DC PROBE

A single unit with built-in switching arrangement. (Patent applied for)

- ★ Combination RMS or Peak-to-Peak voltage measurements.
- ★ New, guaranteed unbreakable, insulated and shockproof case.
- ★ Modern lucite meter case with large 5" easy-to-read scale.
- ★ Handier size for greater portability.
- ★ Zero-Center for faster discriminator alignment and other galvanometer applications.

This new HICKOK Model 215 is truly a laboratory instrument of highest quality, accuracy and dependability. Though ideal for the radio-television manufacturer or service shop, this fine instrument will meet a greater number of applications in the electronic design or industrial laboratory. Exceptionally versatile, the 215 provides the sensitivity and ranges for quick and accurate measurements of sine or complex waves of TV or industrial devices.

SPECIFICATIONS

105-125 VAC. Insulated, shockproof, unbreakable case. 5¾" W., 8⅜" H., 4½" D. 4½ lbs. net weight. 8 lbs. shipping.

Test leads included:
New combination AC-DC HICKOK Dual-Probe, ohms lead and probe, and ground lead.

RANGES

D. C. VOLTMETER
Volts: 0 to 1.5, 3, 12, 30, 120, 300, 1200.
Input Resistance: 10 megohms with new HICKOK Dual-Probe.
Accuracy: ±3% of full scale.
Zero-Center Scale: For discriminator alignment and other galvanometer applications.

OHMMETER
Design Center: 10 ohms.
Ranges: x1 x10, x100, x1,000, x10,000, x100,000, x1 megohm.
Readability: .2 ohms to 1000 megohms.

A. C. VOLTMETER
7 Ranges AC, RMS: 0 to 1.5, 3, 12, 120, 300, 1200.
7 Ranges AC, Peak-to-Peak: 0 to 4, 8, 32, 80, 320, 800, 3200.
Frequency Characteristics: Flat from 40 cps. to 3.5 MC. Crystal Probe available to extend frequency range to 250 MC.
Input Impedance: With new HICKOK Dual-Probe, 30 megohms shunted by 150 uuf.
Accuracy: ±5% of full scale.

HIGH SENSITIVITY VOLT-OHM-MILLIAMMETER

Compact Portable . . . Unbreakable Case

LARGE 5" METER

Model 450

Price: $46.50

RANGES:

20,000 ohms per volt DC, 5,000 ohms per volt AC.
Volts AC and DC: 2.5, 10, 50, 250, 1,000, 5,000
Output: 2.5, 10, 50, 250, 1,000
Milliamperes, DC: 2.5, 10, 50, 250, 1,000
Microamperes, DC: 0 to 50
Amperes, DC: 0-10.

Decibels: —30 to + 55, in 5 ranges
Ohms:
0 to 1,000, 5 ohm center scale
0 to 10,000, 50 ohm center scale
0 to 1 meg., 5,000 ohm center scale
0 to 100 meg., 500,000 ohm center scale

This fine, new HICKOK Model 450 is the last word in design for attractive, high sensitivity volt-ohm-milliammeters.

The modern HICKOK lucite meter case provides increased readability. No glass-window chips to ruin meter movement.

Compact HICKOK design provides the thinnest instrument of its kind. Handier for the field engineer for on-location servicing.

The new HICKOK guaranteed unbreakable, shock-resistant case protects the high sensitivity and accuracy of this fine instrument.

Rugged and dependable, the HICKOK 450 provides for long, hard, day-in, day-out service on the bench or in the field.

Order the Model 450 from your jobber today.

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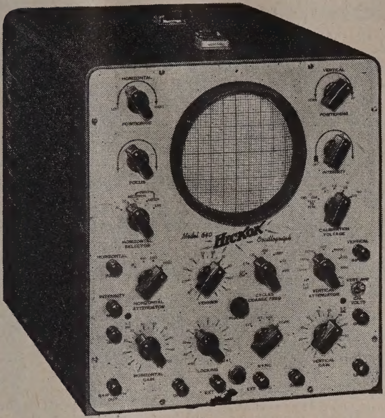
HICKOK TEST INSTRUMENTS HICKOK

NEW MODEL 640 OSCILLOGRAPH



Model 640

The new Model 640 Oscillograph is an outstanding, versatile instrument designed for General Purpose, Industrial Laboratory and Television applications for observation of transient or regular recurring phenomena.

Designed with outstanding range and sensitivity and completely built to the highest quality standards throughout. Rigidly field-tested and proved in the HICKOK laboratories.

SPECIFICATIONS:

WIDE BAND AMPLIFIER: Frequency response DC, 0 to 4.5 mc, (down 3 db).

VERTICAL DC AND AC AMPLIFIER: 10 M. V. per inch with sensitivity switch in high position. 25 M. V. per inch in low position.

FREQUENCY RESPONSE: 0 to 1,000,000 cycles (3 db point), in high position. 0 to 4,500,000 cycles (3 db point), in low position.
No jitter, even with high gain amplifiers.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.
Excellent stability and minimum microphonics and drift.

HORIZONTAL AMPLIFIER:
Deflection Factor —
Direct: 20 volts RMS per inch.
Full Gain Setting: 50 millivolts RMS per inch.
Frequency Response: 0 to 200,000 cycles, with 3 DB down at upper limit.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.

BUILT-IN CALIBRATING VOLTAGES:
Peak-to-Peak—100, 10, 1, .1 volts.

TEST SIGNALS: Line Frequency: 3 volts RMS per inch.
Sawtooth: Available from front panel.
Direct connection to both horizontal and vertical deflection plates.

SHOCK MOUNTED: Provides minimum microphonics due to external mechanical vibrations.

SHIELDED: Mu Metal magnetic shield gives maximum protection to the cathode ray tube against effects of external magnetic fields.

CALIBRATED SCALE: Provided for quantitative measurements and comparisons.

LINEAR TIME BASE: Recurrent and Driven Sweep: 2 cycles to 30,000 cycles.
Provision for external capacities for slower frequency sweeps of 10 seconds and slower.
Sweep Speeds: Faster than 0.75 inch per microsecond.
Television fixed frequencies; 30 and 7,875 for observing blanking and sync waveforms in the horizontal and vertical circuits of TV receivers.
Synchronization at line or 2-times line frequency.

EXPANDABLE SWEEP: 6 times expansion, or equivalent to 30 inches of screen diameter.

LINE FREQUENCY PHASING CONTROL: Zero, plus or minus 90° phase shift.

"Z" AXIS MODULATION: Capacitively coupled to the grid of the cathode ray tube. 15 volts will blank trace fully at normal intensity.

INTENSITY: Standard Model 640 includes 5UP1 cathode ray tube with medium persistence screen. High accelerating potentials give excellent intensity for viewing transient waves and high frequencies.
Some engineers may prefer a 5UP11 tube for short persistence, or a 5UP7 tube for long persistence. Either is available in the Model 640 at slight additional cost.

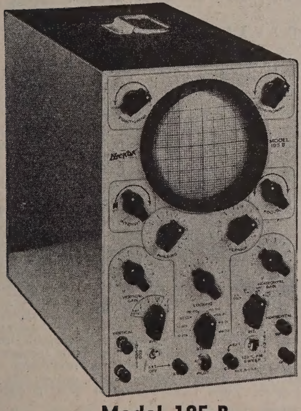
STABILIZED: Designed so that sweep lengths and synchronizations are maintained as signal level varies.

DIMENSIONS: Portable steel case, 14"x11½"x19", approximately 35 lbs.
Combination light shield and camera base provided.

Price: $355.00

5", HIGH SENSITIVITY OSCILLOGRAPH

With this oscillograph you can align I. F. transformers, trace trouble, analyze wave shape of signal, determine unknown frequencies, amplify and view very weak signals. Has big 5" screen, extra high gain vertical amplifiers, sinusoidal sweep circuit and phasing control for proper I. F., R. F. and discriminator alignment.



Model 195-B
Price: $169.50

Also available in matched set "D" case — $178.70

TECHNICAL CHARACTERISTICS

1. Power supply required: 105-125 V, 50-70 cycles A.C.
2. Power Consumption: 50 Watts at 115 Volts
3. Deflection Sensitivity:
   A. Vertical—.015 Volt (rms) per inch
   B. Vertical, Direct—15 Volts (rms) per inch
   C. Horizontal—.15 Volt (rms) per inch
   D. Horizontal, Direct — 20 Volts (rms) per inch
4. Input Impedance:
   A. Vertical—1 meg, 25 mmf
   B. Vertical, Direct—2.2 meg
   C. Horizontal—4 meg, 35 mmf
   D. Horizontal, Direct—2.2 meg
5. Frequency Range:
   Amplifier, Vertical—2 cycles to over 1.0 mc
   Amplifier, Horizontal—10 cycles to 50 kc
6. Tube Complement:

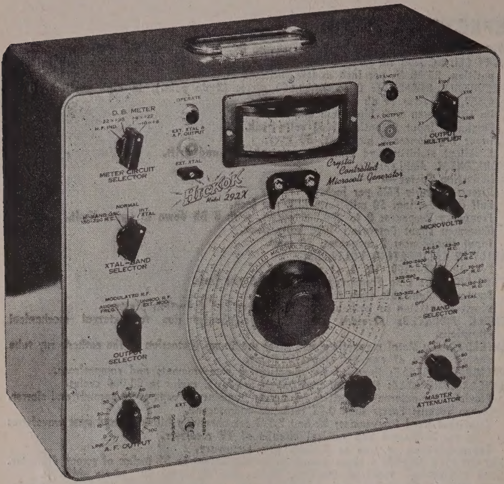
	Tube	Function
1	6SJ7	—Horizontal Amplifier
1	884	—Sweep Circuit Oscillator
1	6AC7	—Vertical Amplifier
1	6SN7	—Vertical Amplifier and Cathode Follower
1	6X5	—Low Voltage Rectifier
1	5Y3	—High Voltage Rectifier
1	5UP1	—Cathode Ray Tube
1	12AT7	—Vertical Amplifier

7. Size: $8\frac{5}{16}$" wide x 18½" deep x 13" high
   Weight: 27 lbs. Ship. wgt. 38 lbs.

HICKOK . . . Sold By 1000 Jobbers Throughout The World

HICKOK TEST INSTRUMENTS HICKOK

NEW MICROVOLT SIGNAL GENERATOR for AM, FM, TV and Mobile Bands



MODEL 292-X —

125 KC to 120 MC and 150 MC to 220 MC on fundamentals.

The Only Signal Generator with all These FEATURES

- Covers all AM, FM, TV and Mobile Frequencies in 7 ranges. Also ideal for industrial applications.
- Crystal controlled. Temperature compensated.
- Modulated and Unmodulated Output from .2 to 100,000 microvolts
- Cast Aluminum Attenuator for Minimum Signal Leakage
- May be externally modulated from 15 to 10,000 cycles per second
- Decibel Meter for faster servicing to indicate reference level
- Self-contained Crystal Oscillator Circuit—Crystals from 500 kc to 20 mc are available
- Negligible Change in Frequency due to output
- Most accurate Microvolt Generator available for practical radio servicing and communication's manufacturers final inspections

•

OPTIONAL

Crystal Oscillator for Accuracy to .0025% in 30-50 and 152-162 mc Mobile Ranges.

•

This new HICKOK Model 292-X is the only popularly priced Microvolt Generator available that covers both Upper Channel TV and Mobile frequencies — on fundamentals.

Model 292-X **Price $266.00**

TECHNICAL CHARACTERISTICS

Fundamental Frequency Coverage: Bands A through G — 125 kc to 120 mc; Band H — 150 to 220 mc. **Output Calibrated:** .2 to 100,000 microvolts. **Output Impedance:** X1, X10, and X100 microvolts — 5 ohms; X1K — 30 ohms. X10K — 0 to 100 ohms. **Modulation Fixed:** 400 cycles. **AF Output:** 0-2 volts. The Model 292-X is wired for plug-in type crystals (152-162, 30-50 mc), with accuracy to .0025%. Self-Contained crystal oscillator circuit has crystal jack on front panel permitting crystal outputs at any frequency from 250 kc to 20 mc on fundamentals; and to over 250 mc on harmonics. Type CCO-56 Crystal Oscillator unit available with frequency accuracy to .0025% for Mobile Band coverage. **Self-Contained Decibel Meter:** −10 to +38 DB in 3 ranges. **Power Consumption:** 35 watts at 115 volts. **Meter Model:** 50; 105-125 V., 50-70 cycles, A.C. 14"x16½"x8"; 29 lbs. Net: 38# Ship. Satin Chrome Panel. Blue hammertex steel case. Test leads included.

UNIVERSAL CRYSTAL CONTROLLED SIGNAL GENERATOR

Models 277, 277X and 288X

Model 288-X

Price: $186.00

SPECIFICATIONS

Dimensions—13¼" x 16¼" x 7"
Net Weight—25 lbs.—Ship. 36 lbs.
Meter—Model 51X, Model 288X only
Scale—over 100"
Satin-chrome finish panel
Blue baked Hammertex finished case

TECHNICAL CHARACTERISTICS:

105-125 V, 50-70 cycles, A-C Power Consumption: 20 watts at 115 volts. Amplitude Modulated, Pure R-F Frequency Range: 100 kc-110 mc. Frequency Modulated R-F Frequency Ranges: Narrow Band (0-30 kc Sweep): 100 kc to 110 mc in 7 ranges: Wide Band (0-150-450 kc Sweep) 1 mc to 160 mc in 7 ranges. Modulation: Amplitude Modulation —400 cycles; Frequency Modulation—0-450 kc variable sweep, 50 mc. modulating frequency 60 cycles; 0-150 kc variable sweep, 50 mc, modulating frequency 400 cycles; 0-30 kc variable sweep, 1000 kc, modulating frequency 60 cycles; External Modulation—Amplitude or frequency modulation, variable 0-15,000 cycles. A-F Range: Fixed at 400 cycles, variable from 0-15,000 cycles. Crystal Controlled Output (Models 277X and 288X only)—100 kc, Unmodulated: 100 kc-15 mc, utilizing harmonics; 100 kc, 400 cycle amplitude modulated: 100 kc-15 mc, utilizing harmonics; 1000 kc, Unmodulated: 1000 kc-125 mc, utilizing harmonics; 1000 kc, 400 cycle amplitude modulated: 1000 kc-125 mc, utilizing harmonics. Output: R-F, continuously variable from 0 to maximum (with multipliers X1, X10 and X100); A-F, continuously variable from 0 to maximum, linear control, for both 400 cycle and variable frequency outputs. Synchronized Sweep Voltage: for horizontal deflection of oscillograph (60 cycles.) DB Meter Range (Model 288X only): −10 to +6, +6 to +22, +22 to +38. Tube Complement—1 6C4, 2 6SN7, 1 6SJ7, 1 6X5G.

Also available as Model 277X. Contains all features of 288X excepting decibel meter and crystal controlled oscillator. **Price: $165.00.**

HICKOK . . . Sold By 1000 Jobbers Throughout The World

HICKOK TEST INSTRUMENTS HICKOK

THE ACCEPTED TV ALIGNMENT GENERATOR

Hickok Model 610A
Universal Television-F.M. Alignment Signal Generator
MEGACYCLE SWEEP
FREQUENCY ADJUSTMENT
RANGE SELECTOR
MARKER
MARKER INJECTION
PHASING CONTROL
OUTPUT CONTROL
OUTPUT MULTIPLIER
POWER
OUTPUT
PILOT
STANDBY OPERATE
EXTERNAL
HORIZONTAL
CRYSTAL
MARKER
INT. MARKER
GND

Model 610A **Price $219.00**

Power Supply: 105-125 V., 50-60 cycles, A.C.
Tube Complement: 6J6—Variable oscillator; 6AK6—Fixed oscillator; 6J6—Mixer; 6AK5—Cathode follower output; 6SN7—Crystal oscillator & marker oscillator; 6J5—Audio oscillator; 6/5—Rectifier.
Net 24 lbs. **Shipping Weight:** 31 lbs.
Size: 16¼"x13¼"x7"; Satin chrome finish panel; Blue Hammertex finished case. Also available in matched set "D" case at no additional cost.

More in use today than all others combined. Contains 3 most practical markers including Absorption. Marker Range: 19.5 to 48 m.c.—Covers all I.F. frequencies in TV receivers.

Contains linear sweep with unusual accuracy to 2%. Hickok iron modulator furnishes symmetrical pattern response curve for easier and more accurate readings.

THIS 1 INSTRUMENT DOES THIS

1. Visually align a television receiver to any of the 12 present-day television channels from 44 mc to 216 mc.
2. Visually align IF stages of any television receiver—including the old and current bands, and new bands. Marker range—20 to 40 mc.
3. Align all traps with a calibrated signal—modulated or unmodulated.—19.5 - 48 mc.
4. Insert a marker—accurate to .05 mc—at any point along the IF response curve. This marker frequency is directly calibrated on a dial 9½ inches long.
5. Align IF or RF Sections by single stage method—with high output.
6. Attenuate the output down to a very low signal in microvolts.
7. Align a television receiver independent of any local television station. The generator is complete.
8. Align channels 5 through 13 directly by the calibrated FM Oscillator without necessity of heterodyning the oscillator against a fixed oscillator.
9. Highly stable.
10. Makes possible a crystal controlled frequency modulated or unmodulated for any frequency as low as 5 mc to the upper television channel No. 13 at 216 mc.

THIS IS ANOTHER OUTSTANDING HICKOK "FIRST"
Hickok was first with Dynamic Mutual Conductance—first with the serviceman's FM sweep generator—first with the complete oscillograph including FM sweep oscillator. Now first again with the complete Television Alignment Generator—the latest in a line of fine test equipment that has lead the field for over 40 years. 40 years.

NEW TELEVISION VIDEOMETER

Model 650
Hickok Television Videometer
CHANNELS
TIMER
OUTPUT SELECTOR
VIDEO ATTENUATOR
MASTER R.F. ATTENUATOR
OUTPUT MULTIPLIER
MICROVOLT CONTROL
PILOT
POWER

Model 650

Price: $279.00

This fine new instrument is the first of its kind. Now available to rapidly and accurately solve your service problems.

The 650 has a new timer circuit which delivers video pulses of 60 cycles, 900 cycles, 15,750 cycles and 315 kc., singularly or in any combination, both positive and negative output. Pulses are all locked together and crystal controlled for greater accuracy.

Pulses can be used directly, metered in peak-to-peak volts or to modulate the self-contained RF oscillator.

RF oscillator covers all TV channels in two bands (2-6 and 7-13), al on fundamentals. RF output is metered at all times from 1 to 10,000 microvolts with calibrated attenuation and variable percentage modulation. RF can be externally modulated with video frequencies from 5 cycles to 4 MC with variable percentage modulation on all channels.

Self-contained, substitute external video amplifier, 5 cycles to 4 MC with a variable gain from 0 to 10, with high input impedance, low output impedance and metered peak-to-peak voltage output.

Includes horizontal and vertical sawtooth voltages which can be directly substituted for vertical and horizontal oscillator in a TV receiver. Both the vertical and horizontal sawtooth amplitude is sufficient to give full raster deflection and in the case of flyback type high voltage power supplies the horizontal sawtooth can be used to light up the picture tube.

The 650 also contains an AC line voltage scale for instantaneous check on line voltage fluctuation, a common source of TV trouble. This HICKOK Videometer is truly an all-purpose video generator, and a must for the income-minded, successful and aggressive TV service technician.

FEATURES

Quickly localizes and accurately identifies trouble in any section of a TV receiver.
Provides electronically accurate bar or dot pattern on the screen of any TV receiver — independent of station operation.
R.F. output, directly calibrated in microvolts for sensitivity measurements.
Substitute Video Amplifier with gain of 0 to 10.
Crystal controlled timer for greater accuracy.
Fast, accurate, the ideal instrument for fringe area TV servicing.
Increases TV maintenance profits — allows you to trouble shoot many more installations per day.
Built only by HICKOK. Contains highest quality components throughout for lasting accuracy and dependability.

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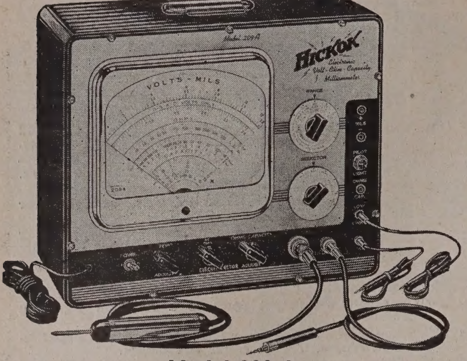
HICKOK TEST INSTRUMENTS HICKOK

VACUUM TUBE VOLT-OHM MILLIAMMETER



Model 209-A

POWER SUPPLY: 105-125 V, 50-70 cycles. Ranges: Volts, A-C and D-C 0-3, 12, 30, 120, 300, 1200. Mils (D-C): 0-3, 12, 30, 120, 300, 1200. Cap.: 0-10,000 mmf in 2 ranges, 0-1000 mf in 5 ranges. Ind.: 50 mh-100 henries. Ohms: 0.1 ohm to 10,000 megohms in 7 ranges. Frequency: A-C up to approximately 5 megacycles may be measured. Input Impedance: Volts D-C: 15 megohms, Volt A-C: 12 megohms. Tube Complement: 6X5GT A-C rectifiers, 6SJ7 cathode follower, 6SN7GT vacuum tube voltmeter, OD3/VR150 voltage regulator.

LABORATORY SIZE . . .
LARGE NINE-INCH METER WITH ZERO CENTER SCALE

A universal test instrument for all radio and electronic service work. Accurately and easily measures wide ranges of inductances, capacitances, resistances, currents and voltages, both A.C. and D.C.

This new giant size instrument matches the size and attractiveness of the Hickok complete line of test equipment. Large 9-inch meter improves ease of operation. Has a 1200 Volt scale, and a new Peak-to-Peak Voltmeter to measure peak to peak or RMS values of A.C.

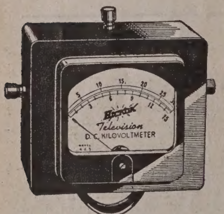
The new Zero-Center scale on D.C. permits much faster alignment of discriminator and other galvanometer applications.

SPECIFICATIONS:
Dimensions—13¼"x16¼"x7"
Meter—Hickok Model S-22
Weight—19 lbs. Net.—26 lbs. Ship.
Blue baked Hammertex finish
Also available in matched set "D" case at same price.

High input impedance prevents loading when making voltage tests. Measurement of inductances are possible with the use of a conversion chart supplied in the instruction book. Damage due to overload is impossible in all except current measurements. Regulated power supply incorporated permits normal operation and accuracy with wide line voltage fluctuation.

Price $132.50
Including probe and all leads.

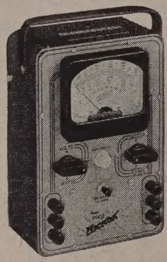
DOUBLE RANGE DC KILOVOLTMETER



Model 465

For measuring DC voltages as high as 30,000 volts. 10,000 ohm per volt sensitivity. Low current drain. Well insulated phenolic case for ample protection against the high voltages being measured. 7" x 6⅛" x 4$\frac{5}{16}$". 6 lbs. net; 8½ lbs. shipping. $51.35. Extra leads $5.20. Top grain leather carrying case $10.10.

PORTABLE TRUE WATTMETER



Model 900-B

Tests all AC electrical units under actual use conditions. Continuity test for shorts. Accurately tests even smallest units. 3¾" meter shows wattage, amperes and line voltage. Portable case complete with leads, 9⅜" x 6¼" x 3¼". 6 lbs. net; 10 lbs. shipping. $69.95. C-105 external transformer for ranges to 10,000 watts and 130 amp. $17.00. 9A and 9B leads for 220 volts, $18.00. Strong, detachable-cover carrying case. $10.20.

PROBES

Model TUP-1 TELEVISION PROBE — Increases 'scope usefulness in servicing TV receivers. Enables technician to accurately duplicate manufacturer's pattern. Reduces loading effect. Phenolic, black and chrome probe, 4 ft. heavy-duty cord with spade connectors. 6 oz. net; 2 lbs. shipping. Light and easy to handle. $12.60.

Model 34 CRYSTAL DEMODULATOR PROBE — Use with any 'scope to trace a modulated RF signal, at any frequency to 500 MC, through a radio or TV receiver from the antenna post to the detector or discriminator. 4 ft. long. 2 oz. net; 2 lbs. shipping. A quick and accurate aid to trouble-shooting with your 'scope. $9.80.

Model PR-30 HIGH VOLTAGE DC PROBE — Extends range of your VTVM to 30,000 volts DC. Doubles use of any voltmeter. Ideal for use with HICKOK 203-PR or 209. Heavy-duty black phenolic, 4 ft. cord and cable type connector. 12 oz. net; 2 lbs. shipping. $11.90. Also PR30-A for use with HICKOK 209-A. $11.90.

CRYSTALS

.005% or .0025% accuracy for 292-X	$18.80
4.5 MC for 610-A	4.65
Specified channels for 610-A	6.30
Special frequencies for 610-A	14.30

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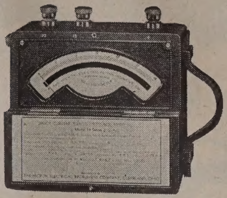
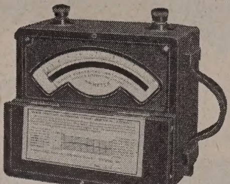
HICKOK TEST INSTRUMENTS HICKOK

For More Than Forty Years HICKOK Has Been Building The Finest in Electrical Indicating Instruments

Model 19



Model 14



PORTABLE AC and DC INSTRUMENTS

MODEL 19 AC-DC ASTATIC MILLIAMMETERS, AMMETERS, VOLTMETERS, WATTMETERS and WATTLESS COMPONENT INDICATORS

ASTATIC Electrodynamometer Movements. Accuracy within ½ of 1% on AC or DC. Not affected by external magnetic fields. Scale length is 5½ inches. Wattmeter scales are uniform, others uniformly squared. Pointer reflecting mirrors.

DIMENSIONS: 4" x 6¼" x 7⅛". 4½ lbs. net. Case material is molded phenolic. Prices on application.

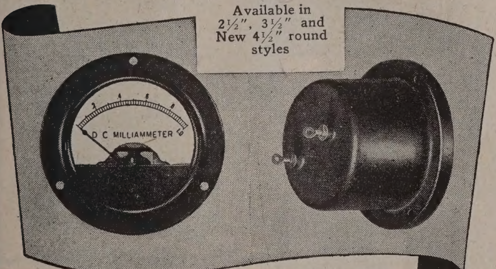
PORTABLE DC INSTRUMENTS

MODEL 14 DC AMMETERS, MILLIAMMETERS, MICROAMMETERS, VOLTMETERS, MILLIVOLTMETERS, VOLT-AMMETERS and THERMO-METERS

D'ARSONVAL Movement. Accuracy within ½ of 1%. Shielded from effect of external magnetic fields. Uniform scales provided with anti-parralax mirrors. Scale length is 5½".

DIMENSIONS: 7⅛" x 6¼" x 4". 6½ lbs. net. Molded, polished phenolic cases. Prices on application.

HERMETICALLY SEALED METERS



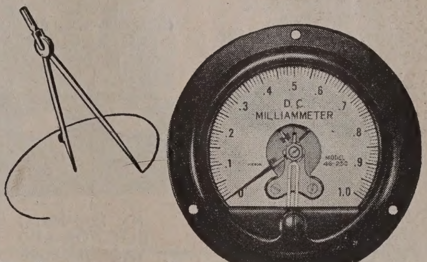
Available in 2½", 3½" and New 4½" round styles

Voltmeters . . . Ammeters . . . Milliammeters . . . Microammeters . . . Wattmeters . . . Both AC and DC

Now, you can get HICKOK accuracy and dependability in hermetically sealed meters. Designed and manufactured to conform to J.A.N.-A.S.A. Specifications for Sealed Instruments.

Fully tested. Shielded for use on steel panels. Steel case, brass bezel, standard finish is satin black. Extra thick glass. Internal pivot construction in DC types to assure longer life. Also available with logarithmic deflection.

LONG SCALE METERS



Easier to Read Accurately

The improved HICKOK meter scale is 2½ times longer than conventional meters to provide faster, more positive readings.

Panel size 250° meters, pioneered by HICKOK, fit a smaller space and can be read more accurately with less eyestrain.

Accuracies to 1% of full scale reading!

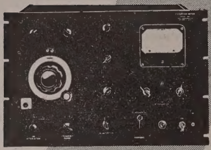
Case widths and diameters, 2½" to 5½". In reply kindly give details of your requirements.

HICKOK . . . Sold By 1000 Jobbers Throughout The World

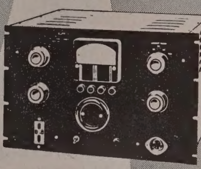
Net

FREED PRECISION LABORATORY *Test Instruments*

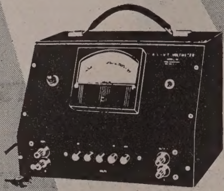
"PRODUCTS OF EXTENSIVE RESEARCH"



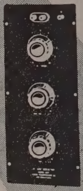
No. 1410 HARMONIC DISTORTION METER



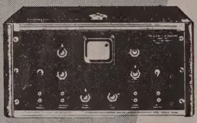
No. 1170 D.C. SUPPLY
DIRECT CURRENT
UP TO 500



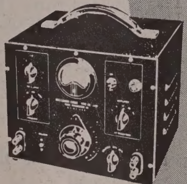
No. 1060 VACUUM TUBE VOLTMETER
INPUT IMPEDANCE
50 MEGOHMS



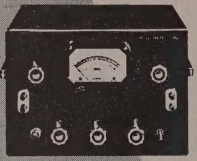
DECADE INDUCTORS 3 UNIT
30 CPS to 300 KC



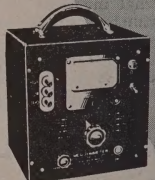
No. 1360
FREQUENCY STANDARD



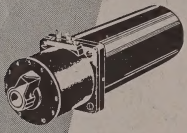
No. 1010
COMPARISON BRIDGE
FAST, ACCURATE,
RELIABLE



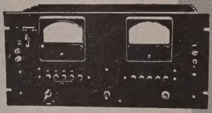
No. 1140 NULL
DETECTOR COMPLETE
WITH
SELECTIVE CIRCUITS



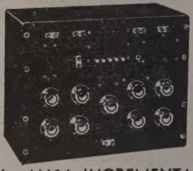
No. 1020 MEGOHMETER
2,000,000 MEGOHMS
DIRECT READING



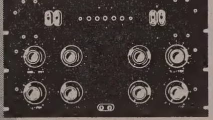
No. 1270 SINGLE UNIT
DECADE INDUCTOR



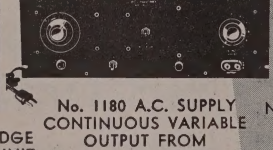
No. 1210 NULL
DETECTOR AND
VACUUM TUBE
VOLTMETER



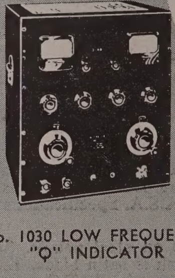
No. 1110A INCREMENTAL
INDUCTANCE BRIDGE
A NECESSITY FOR
EVERY LABORATORY



No. 1150 UNIVERSAL BRIDGE
5 AC BRIDGES IN ONE UNIT



No. 1180 A.C. SUPPLY
CONTINUOUS VARIABLE
OUTPUT FROM
.1 to 100 VOLTS



No. 1030 LOW FREQUENCY
"Q" INDICATOR

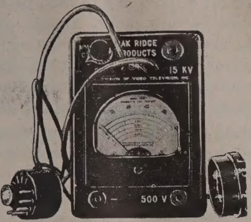
SEND FOR LATEST CATALOG!

FREED TRANSFORMER CO., INC.

Instruments Division 1716 WEIRFIELD STREET BROOKLYN (RIDGEWOOD) 27, N.Y.

PORTABLE PRECISION TV TESTING INSTRUMENTS *by OAK RIDGE*

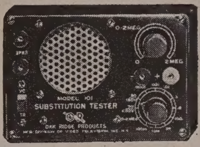
New OAK RIDGE "CATHETTE"
MODEL 106
CATHODE RAY TUBE TESTER



An exclusive OAK RIDGE development, the "Cathette" is designed to check Cathode Ray Tube in Set, under actual operating conditions!

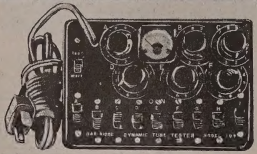
- Checks all magnetic focus and deflection type Cathode Ray Tubes.
- Checks electron gun and hi-voltage anode.
- Checks leakage in gun or anode.
- Special inter-electrode conductance tube circuit.
- Easy to read calibrated D.C. Voltage scales (0-500V, 0-15KV).
- Easy to read tube test scales.
- Supplied with duo-decal plug and socket. (Special adaptors available as accessories).
- Pocket size (5½" x 3⅞" x 2¼").

SUBSTITUTION TESTER MODEL 101



Indispensable for speedy on-the-job testing. Has test speaker with voice coil and transformer connections; range of resistors, papers, ceramicon, electrolytic condensers, variable potentiometer. Can also be used as audio signal tracer for Television and Radio! Bakelite Case, 5¾ x 4 x 2¼".

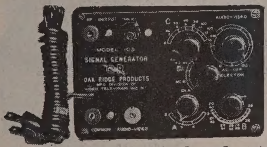
"DYN-A-TUBE" Model 107 DYNAMIC TYPE TUBE TESTER



"Smallest in the World"

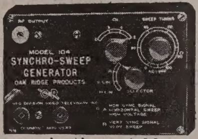
A Dynamic, not emission, type tester. Tests tubes under actual operating conditions. Versatile switching permits check of all types of radio, TV, etc., receiving tubes. Accommodates all octal, loktal 7 pin and 9 pin miniature tubes. Adaptors available for other bases. Pocket size: (5½" x 3⅞" x 2¼"). Complete with tube chart.

PRECISION SIGNAL GENERATOR MODEL 103



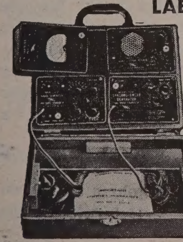
Miniature and rugged, with separate tuning bands, modulation output control and extreme dial accuracy. Locates trouble in minutes, from antenna to Cathode Ray Tube, and speaker. This marvelously compact instrument is packed with features to make Television servicing easier, faster and more profitable. It's a "must" for successful servicing of TV sets in the home. Bakelite Case, 5¾ x 4 x 2¼".

"SYNCHRO SWEEP" MODEL 104



A NEW INVENTION FOR TELEVISION TESTING, widely endorsed by leading Service organizations, jobbers, technical schools, etc. It's the only instrument to supply own sync pulses and sweep saw tooth voltages for signal tracing sync and sweep circuits, right on the spot, with or without test pattern, scope, or bench equipment! Also provides bar pattern for linearity adjustments. (T.M. Reg. App. for. Pat. App. for.) Bakelite Case, 5¾ x 4 x 2¼".

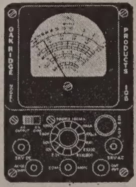
COMPLETE PORTABLE TV TEST LABORATORIES



MODEL A-100 — Rugged mobile testing outfit. Sturdily constructed, complete with table brackets. Contains Model 101 Substitution Tester, Model 102 High Voltage Tester, Model 103 Signal Generator, and Model 104 "Syncro-Sweep." Each Unit individually removable!

MODEL B-100—Similar to above but contains Model 101 Substitution Tester, Model 103 Signal Generator, Model 104 "Syncro-Sweep," and Model 105 Multitester.

20,000 OHMS PER VOLT MULTITESTER MODEL 105



Fully equal to any popular multitester in operating characteristics and performance, **yet less than half the size!** Ranges: DC Volts (20,000 ohms per volt) and AC Volts (1000 ohms per volt) 0-2.5, 10, 50, 250, 1000, 5000 volts. Output: 0-2.5, 10, 50, 250, 1000. DC Milliamps: 10, 100, 500. DC Microamps: 100. Decibels: —12 to +55 in 5 ranges. Ohms: 0-2000, 20,000, 20 Meg. Full size 3" Meter. Complete with test leads and instructions. Size: 5½" x 3⅞" x 3".

MODEL HV 105 Hi-Voltage probe to 25,000 Volts.

MODEL 102 HIGH VOLTAGE METER (not illustrated) has 3 voltage ranges: 0-500V, 0-15KV, 0-30KV. 10,000 ohms per volt sensitivity. Size: 5¾" x 4" x 2¼".

Mfg. Division of Video Television Inc.

OAK RIDGE PRODUCTS LONG ISLAND CITY, N. Y.

Industrial Instruments

Electrical Test Equipment

WHEATSTONE BRIDGE

● A carefully engineered bridge made for all around use in lab., plant, or field. Both models contain own 4½-volt battery power supply and galvanometer. Provision for external batteries and galvanometer if desired. Both models have ratio dial settings of .001, .01, .1, 1, 10, 100, and 1000 as well as built-in resistance standards of 1, 10, 100, and 1000-ohm decades. Ratios are guaranteed to .05% tolerance. Resistance dial resistors to .1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below panel. Galvanometer of well-known moving-coil type. Separate binding posts for use of external galvanometer if desired, and for use of bridge as resistance decade. Hardwood case with removable cover. 9¼″ x 7½″ x 6¼″ h. Wt. 9¼ lbs. net; 12¼ lbs. shipping.

MODEL RN-1. Standard Portable Wheatstone Bridge, complete with batteries.. **Net Price $121.00**

MODEL RN-2. Standard Portable Wheatstone Bridge with Murray & Varley Loops.. **Net Price $140.00**

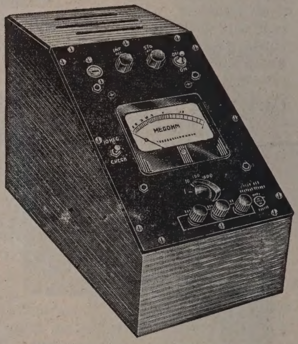
MEGOHM METER

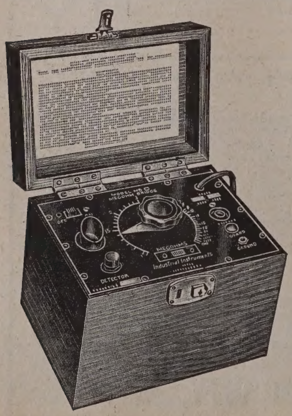
● For high-speed testing of condenser leakage resistance, insulation resistance and insulation measurements in production and inspection of components. Terminals for charging capacitors prior to test. Self-contained power source up to 200 volts. Arranged for use of external battery voltage supply up to 1000 volts. Internal checking standard to check and adjust calibration. Broad scale meter. Accuracy within ±1% based on full scale current. Range of 1 megohm to 100,000 megohms on four multiplier ranges of 1, 10, 100, and 1000. Highest range can be extended to 500,000 megohms using external 1000 v. supply. Hardwood case. Sloping bakelite panel designed for production use. 15″ x 8″ x 10″ h. Wt. 19 lbs. net; 23 lbs. shipping.

MODEL L-2A. Megohm Meter with tubes........................ **Net Price $160.00**

MODEL L-4. Megohm Meter having 200 volt DC and 500 volt DC measuring voltage.. **Net Price $195.00**

MODEL L-6. Megohm Meter having continuously variable source voltage 100-600 volts DC and built-in voltmeter to check voltage. **Net Price $245.00**





MEGOHM BRIDGE

● A fast, accurate instrument for routine inspection work. May be used by laboratory workers, or production workers. Very simple to operate. "Magic Eye" replaces costly and delicate galvanometer. Operates from AC power line. Self-contained DC source. Accuracy within 5% from 1 to 15 on scale; as close as readable on remainder of scale. Hardwood case with slip-hinge removable cover. 8″ x 5¾″ x 7″ h. Wt. 6¼ lbs. net; 8¼ lbs. shipping.

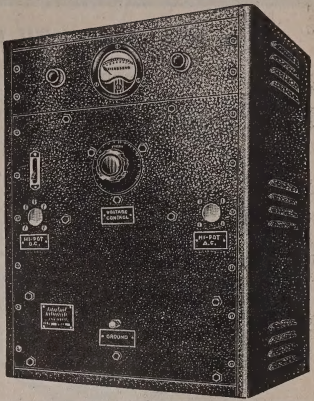
MODEL MB-8. 1 megohm to 1,000 megohms; 100 megohms to 100,000 megohms 500 Volts, D.C. Bridge source........................ **Net Price $90.00**

MODEL MB-11. 1 megohm to 1,000 megohms; 10 megohms to 10,000 megohms; 100 megohms to 100,000 megohms........ **Net Price $132.00**

Industrial Instruments

Electrical Test Equipment

VOLTAGE BREAKDOWN TESTER



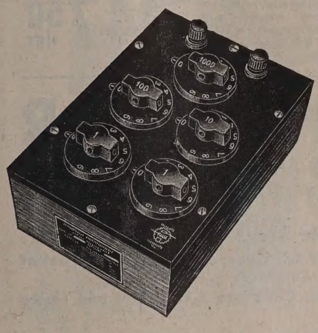
● A simple, positive, safe and quick means of testing voltage breakdown of materials and components. Step-up transformer accurately controlled by Variac. Continuously variable over entire range, 0 to 4,000 v. DC. For safety, load is limited to 5 milliamperes over full range. Also safety switch if instrument is removed from case. Operates on AC line. Warning light indicates instrument is operative. Voltage breakdown indicated by red light.

MODEL P-1. Voltage Breakdown Tester with tubes. 15" x 8" x 10". Hardwood case with fine-grained crackle enamel sloping panel. Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $165.00**

MODEL P-2. Voltage Breakdown Tester with tubes and additional 0 to 3,000 v. AC outlet. 15" x 8" x 10". Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $200.00**

MODEL P-3. Voltage Breakdown Tester with tubes. Upright, crackle enamel finish cabinet of metal. Range 0 to 10,000 v. DC, 0 to 8,000 v. AC..**Net Price $385.00**

RESISTANCE DECADES

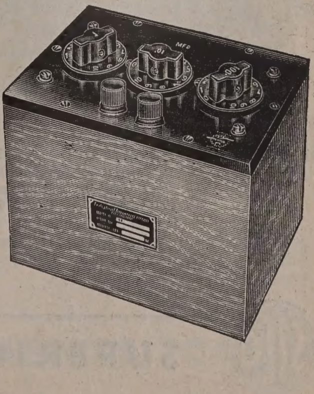


● Available in standard models with resistance ranges of .9 to 999,990 ohms total. Accuracy to ±0.1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below the panel. Hardwood case. Models DR-1 to DR-4, 5¾" x 8" x 4" h.; wt. 4 lbs. net; 6 lbs. shipping. Models DR-10 to DR-14, 4⅛" x 6" x 4" h.; wt. 3 lbs. net; 5 lbs. shipping. Models DR-50 to DR-52, 6⅛" x 9" x 4¼" h.; wt. 5 lbs. net; 7 lbs. shipping.

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Net Price
DR-1	999,000	9x(1,000+10,000+100,000)	±1%	$ 55.00
DR-2	99,900	9x(100+1,000+10,000)	±1%	55.00
DR-3	9,990	9x(10+100+1,000)	±.1%	50.00
DR-4	999	9x(1+10+100)	±.1%	48.50
DR-10	.9	9x.1	±.1%	22.00
DR-11	9	9x1	±.1%	22.00
DR-12	90	9x10	±.1%	22.00
DR-13	900	9x100	±.1%	22.00
DR-14	9,000	9x1,000	±.1%	25.00
DR-50	9,999.9	9x(.1+1+10+100+1,000)	±.1%	72.00
DR-51	99,999	9x(1+10+100+1,000+10,000)	±.1%	77.00
DR-52	999,990	9x(10+100+1,000+10,000+100,000)	±.1%	100.00

CAPACITANCE DECADES

● Instrument calibrated directly in capacitance so that reading from left to right, the dial settings will give the exact value in microfarads. Progressive adjustment in .01, .001, or .0001 mfd. steps depending on model. .001 to 11.1 mfd. can be obtained by group assembly. All units employ paper or mica capacitors of highest quality and stability. Enclosed in hardwood case. DK-3, DK-4, DK-10 and DK-2A, 8" x 5½" x 7¼"H.; wt. 8 lbs.; 12 lbs. shipping. DK-11, 11" x 8" x 7¼" H.; wt. 10 lbs. net; 12 lbs. shipping.

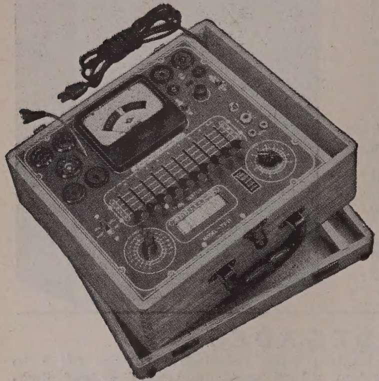


Model	Capacitance Mfd. Steps	Accuracy	Dielectric Section	P.F.	Peak Volts	Price
DK-3	11.1 in .01	1%	.01 Mica	.2%	700 DC	$ 75.00
			.1 paper	1%	400 DC	
			1.0 paper	1%	400 DC	
DK-4	1.11 in .001	1%	.001 mica	.2%	700 DC	60.00
			.01 mica	.2%	700 DC	
			.1 paper	1%	400 DC	
DK-2A	1.11 in .001	1%	Mica throughout	.2%	700 DC 500 AC 60 cycle	140.00
DK-10	.111 in .0001	.5% or 10 mmfd.	Mica throughout	.2%	700 DC 500 AC 60 cycle	100.00
DK-11	11.1 in .01	.5%	.01 Mica	.2%	700 DC	150.00
		.5%	.1 mica	.2%	500 DC 60 cycle	
		1%	1.0 paper	1%	400 DC	

Net

SUPERIOR TEST EQUIPMENT

The New Model TV-11 **TUBE TESTER**



Specifications:

- Tests all tubes including 4, 5, 6, 7, Octal, Lock-in, Peanut, Bantam, Hearing-aid, Thyratron, Miniatures, Sub-Miniatures, Novals, Sub-Minars, Proximity Fuse Types, etc.
- Tests for "shorts" and "leakages" up to 5 Megohms.
- Uses the new self-cleaning Lever Action Switches for individual element testing. Because all elements are numbered according to pin-number in the RMA base numbering system, the user can instantly identify which element is under test. Tubes having tapped filaments and tubes with filaments terminating in more than one pin are truly tested with the Model TV-11 as any of the pins may be placed in the neutral position when necessary.
- The Model TV-11 does not use any combination type sockets. Instead individual sockets are used for each type of tube. Thus it is impossible to damage a tube by inserting it in the wrong socket.
- Free-moving built-in roll chart provides complete data for all tubes.
- Newly designed Line Voltage Control compensates for variation of any line voltage between 105 Volts and 130 Volts.

EXTRA SERVICE
The Model TV-11 may be used as an extremely sensitive Condenser Leakage Checker. A relaxation type oscillator incorporated in this model will detect leakage even when the frequency is one per minute.

*** NOISE TEST**
Phono Jack on front panel for plugging in either phones or external amplifier will detect microphonic tubes or noise due to faulty elements and loose external connections.

The Model TV-11 operates on 105-130 Volt 60 Cycles A.C. Comes housed in a beautiful hand-rubbed oak cabinet complete with portable cover. Size 11½" x13"x6". Shipping Weight 15 lbs.

$47.50 NET

TELEVISION BAR GENERATOR

THROWS AN ACTUAL BAR PATTERN ON ANY TV RECEIVER SCREEN!!

Superior Instruments Co.
SICO
HOR LIN
VERT LIN
HOR SWEEP
VERT SWEEP
FUNCTION
Television Cross-Bar Generator
CHANNELS
LINEARITY
POWER
ON
OFF
SWEEP
OUTPUT
SWEEP FREQ.

SPECIFICATIONS:
Power Supply: 105-125 Volt 60 Cycles
Power Consumption: 20 Watts
Channels: 2-5 on panel, 7-13 by harmonics
Horizontal lines: 4 to 12 (Variable)
Vertical lines: 12 (Fixed)
Vertical sweep output: 60 Cycles
Horizontal sweep output: 15,750 Cycles

Two Simple Steps

1. **Connect Bar Generator to Antenna Post of any TV Receiver.**
2. **Plug Line Cord into A.C. Outlet and Throw Switch.**

RESULT: **A stable never-shifting vertical or horizontal pattern projected on the screen of the TV receiver under test.**

Features:

1. Provides linear pattern to adjust VERTICAL linearity, height, centering.
2. Provides linear pattern to adjust HORIZONTAL drive, width, peaking, linearity, centering.
3. Provides vertical sweep signal for adjusting and synchronizing vertical oscillator discharge and output tubes.
4. Provides vertical signal to replace vertical oscillator to check vertical amplifier operation.
5. Provides horizontal sweep signal for adjusting and synchronizing horizontal oscillator A.F.C. and output tubes.
6. Provides horizontal sweep signal to check H.V. section of fly-back and pulse operating power supplies.
7. Provides signal for testing video amplifiers.
8. Can be used when no stations are on the air.

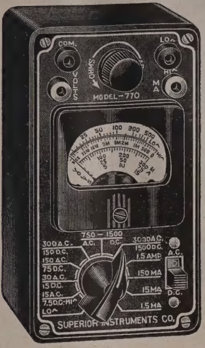
TV BAR GENERATOR COMES COMPLETE WITH SHIELDED LEADS AND DETAILED OPERATING INSTRUCTIONS. ONLY . . .

$39.95 NET

Manufactured by

SUPERIOR INSTRUMENTS CO.
NEW YORK 7, N. Y.

SUPERIOR TEST EQUIPMENT



The new model 770

AN ACCURATE POCKET-SIZE VOLT-OHM MILLIAMMETER

(SENSITIVITY: 1000 OHMS PER VOLT)

FEATURES

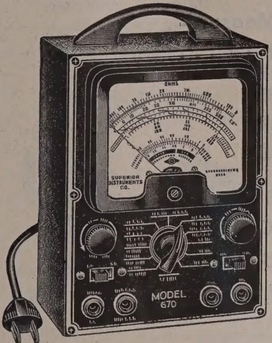
- ★ Compact-measures $3\frac{1}{8}$" x $5\frac{7}{8}$" x $2\frac{1}{4}$".
- ★ Uses latest design 2% accurate I Mil. D'Arsonval type meter.
- ★ Same zero adjustment holds for both resistance ranges. It is not necessary to readjust when switching from one resistance range to another. This is an important time-saving feature never before included in a V.O.M. in this price range.
- ★ Housed in round-cornered, molded case.
- ★ Beautiful black etched panel. Depressed letters filled with permanent white, insures long-life even with constant use.

The Model 770 comes complete with self-contained batteries, test leads and all operating instructions.

SPECIFICATIONS

6 A.C. VOLTAGE RANGES:
0—15/30/150/300/1500/3000 VOLTS
6 D.C. VOLTAGE RANGES:
0—7.5/15/75/150/750/1500 VOLTS
4 D.C. CURRENT RANGES:
0—1.5/15/150 MA. 0—1.5 AMPS.
2 RESISTANCE RANGES:
0—500 OHMS 0—1 MEGOHM

\$14 90 NET



The new model 670 SUPER-METER

***A COMBINATION* VOLT-OHM MILLIAMMETER PLUS CAPACITY REACTANCE INDUCTANCE AND DECIBEL MEASUREMENTS**

SPECIFICATIONS:

D.C. VOLTS: 0 to 7.5/15/75/150/750/1,500/7,500 Volts

A.C. VOLTS: 0 to 15/30/150/300/1,500/3,000 Volts

OUTPUT VOLTS: 0 to 15/30/150/300/1,500/3,000 Volts

D.C. CURRENT: 0 to 1.5/15/150 Ma. 0 to 1.5 Amperes

RESISTANCE: 0 to 500/100,000 Ohms 0 to 10 Megohms

CAPACITY: .001 to .2 Mfd. .1 to 4 Mfd. (Quality test for electrolytics)

REACTANCE: 700 to 27,000 Ohms 13,000 Ohms to 3 Megohms

INDUCTANCE: 1.75 to 70 Henries 35 to 8,000 Henries

DECIBELS: —10 to +18 +10 to +38 +30 to +58

ADDED FEATURE:

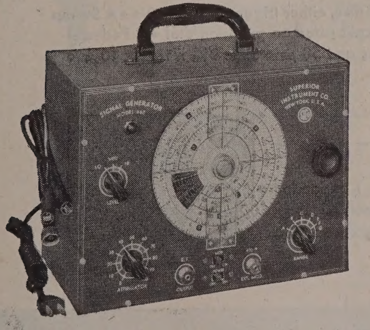
The Model 670 includes a special GOOD-BAD scale for checking the quality of electrolytic condensers at a test potential of 150 Volts.

The Model 670 comes housed in a rugged, crackle-finished steel cabinet complete with test leads and operating instructions. Size $5\frac{1}{2}$" x $7\frac{1}{2}$" x 3".

\$28 40 NET

The new model 660 — AN AC OPERATED

SIGNAL GENERATOR



Provides Complete Coverage for A.M.-F.M. and TV Alignment

SPECIFICATIONS

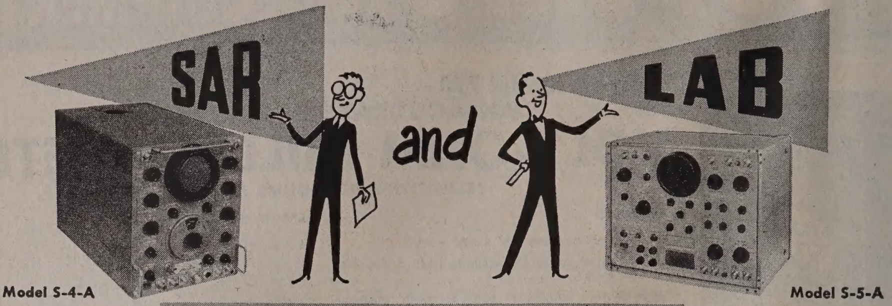
- ★ Generates Radio Frequencies from 100 Kilocycles to 60 Megacycles on fundamentals and from 60 Megacycles to 240 Megacycles on powerful harmonics.
- ★ Accuracy and stability assured by use of permeability trimmed Hi-Q coils.
- ★ R.F. available or modulated by the internal audio oscillator.
- ★ Built in 400 Cycle sine wave audio oscillator used to modulate the R.F. signal also available separately for audio testing of receivers, amplifiers, etc.
- ★ Oscillator Circuit: Uses a miniature high frequency type of acorn triode in a Hartley circuit to insure a high degree of stability. By using the same type of triode as a buffer amplifier, complete and positive isolation between the R.F. oscillator and the attenuator is attained.
- ★ Attenuator: A 3 step ladder type of attenuator is used. Each step of the attenuator is controlled by a separate attenuator control thus providing intermediate level steps.
- ★ Tubes used: 955, as R.F. Oscillator, 955 as Modulated Buffer Amplifier, 6SN7 as Audio Oscillator and Power Rectifier.

The Model 660 comes complete with coaxial cable test lead and instructions.

\$42 95 NET

Manufactured by

SUPERIOR INSTRUMENTS CO.
NEW YORK 7, N. Y.



WATERMAN PIONEERING

WATERMAN INTRODUCES

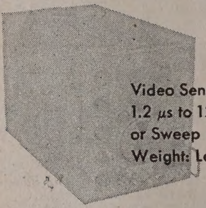
TWO NEW CATHODE RAY OSCILLOSCOPES

Compact, Portable Instruments For Precision Pulse Measurement Adaptable To All Electronic Work, Including TV . . .

The PULSESCOPE

TO PORTRAY THE ATTRIBUTES OF THE PULSE:
SHAPE, AMPLITUDE, DURATION AND TIME DISPLACEMENT

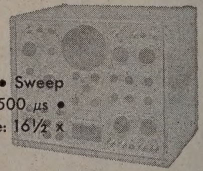
Video Amplifier up to 11 MC • Video Delay 0.55 μs
Pulse Rise and Fall Time Better Than 0.07 μs



S-4-A SAR PULSESCOPE

Video Sensitivity 0.5 v p to p/in. • S Sweep 80 cycles to 800kc, either trigger or repetitive • A Sweep 1.2 μs to 12,000 μs • R Delay 3 μs to 10,000 μs, directly calibrated on precision dial • R Pedestal or Sweep 2.4 μs to 24 μs • Internal Crystal Markers 10 μs and 50 μs • Size: 9⅛ x 11¼ x 10¼ • Weight: Less than 32 pounds.

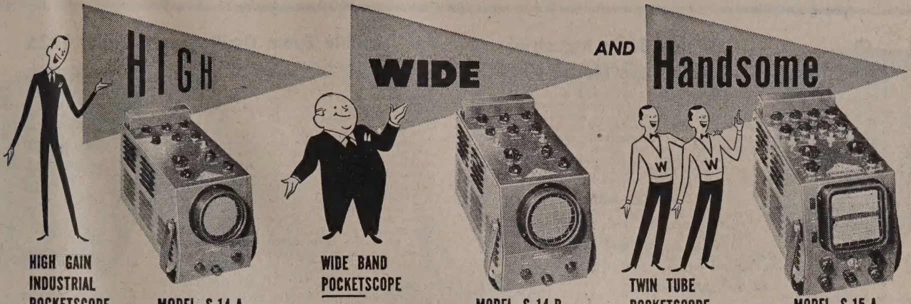
S-5-A LAB PULSESCOPE



Video Sensitivity 0.1 v p to p/in. • Sweep 1.2 μs to 120,000 μs with 10 to 1 expansion • Sweep either trigger or repetitive • Internal Markers synchronized with sweep from 0.2 μs to 500 μs • Trigger Generator and built-in precision amplitude calibrator • Completely cased • Size: 16½ x 14⅛ x 17½ • Weight: Less than 60 pounds.

CABLE ADDRESS:
POKETSCOPE, PHILA.

WATERMAN PRODUCTS



HIGH GAIN INDUSTRIAL POCKETSCOPE MODEL S-14-A

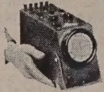
WIDE BAND POCKETSCOPE MODEL S-14-B

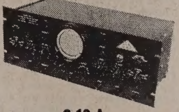
TWIN TUBE POCKETSCOPE MODEL S-15-A

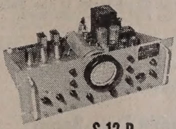
THE WATERMAN LINE-UP

HI, WIDE and HANDSOME POCKETSCOPES are characterized by small size, light weight, and outstanding electrical performance. All units have frequency compensated attenuators as well as non-frequency discriminating gain controls. All units have both periodic and trigger sweeps from ½ cycle to 50KC. The amplifiers are direct coupled thus frequency response starts from 0 cycles. No peaking coils are used, thus, the transient response is good. Full expansion of trace, both vertical and horizontal, is built in. Combination filter and graph screens are used for better visibility, thus traces can be observed even under high ambient light condition. Binding posts for convenience of connections, with effective shield, are used. S-14-A has sensitivity of 10 mv/inch with pass band above 200KC. S-14-B has sensitivity of 50 mv/inch with pass band above 1 megacycle. S-15-A is similar to S-14-A except that it has two independent CR Tubes for multi-trace oscilloscope work. Accessories such as carrying cases and probes are available.

S-10-B


S-11-A


S-12-A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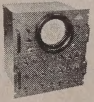
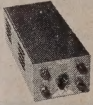

S-13-A


S-21-A

POCKETSCOPES and RAKSCOPES have achieved a reputation for dependability and accuracy. The LINEAR TIME BASE can be used with the S-11-A POCKETSCOPE or with any other oscilloscope to convert the scope to trigger operation from ½ cycle per second.

WATERMAN RAYONIC TUBE DEVELOPMENTS

3SP

Since the introduction of Waterman RAYONIC 3MP1 tube for miniaturized oscilloscopes, Waterman has developed a rectangular tube for multi-trace oscilloscopy. Identified as the Waterman RAYONIC 3SP, it is available in P1, P2, P7 and P11 screen phosphors. The face of the tube is 1½″ x 3″ and the over-all length is 9¼″. Its unique design permits two 3SP tubes to occupy the same space as a single 3″ round tube, a feature which is utilized in the S-15-A TWIN-TUBE POCKETSCOPE. On a standard 19″ relay rack, it is possible to mount up to ten 3SP tubes with sufficient clearances for rack requirements. Photographic means of recording are under development and will be available shortly.

3MP

TYPICAL OPERATION

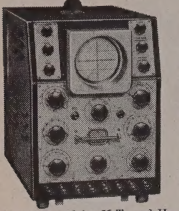
TUBE	VOLTS ANODE #2	VOLTS ANODE #1	VOLTS GRID #1	V/IN D1, D2	V/IN D3, D4	MAX. VOLT ANODE #2	MAX. VOLT ANODE #1	VOLTS HEATER	CURRENT HEATER
3SP	1000	165 to 310	−28 to −67	73 to 99	52 to 70	2750	1100	6.3	.6 Amp.
	2000	330 to 620	−58 to −135	146 to 198	104 to 140				
3MP	1000	200 to 350	0 to −68	140 to 190	130 to 180	2500	1000	6.3	.6 Amp.
	2000	400 to 700	0 to −126	280 to 380	260 to 360				

WATERMAN PRODUCTS CO., INC.

PHILADELPHIA 25 • PENNSYLVANIA • U. S. A.

Manufacturers of POCKETSCOPES® • RAKSCOPES® • PULSESCOPES® and RAYONIC TUBES®

COSSOR OSCILLOGRAPHS THRU BEAM INSTRUMENTS



Double Beam Industrial Oscillograph Model 1049

This Instrument is presented to meet the requirements of Industrial concerns and Research Laboratories who require to measure phenomena of zero or very low frequency and to make photographic records of transients requiring a high photographic writing speed.
Two independent Y axis amplifiers are used; one for each beam. Y1 and Y2 gain 900 and 25 respectively, with response D.C.—100 Kcs.

Y1 D.C. AMPLIFIER

Gain—900, Five Tubes.
Frequency response, D.C. to 100 Kcs. plus or minus 15%.
Fitted with directly calibrated Y Shift control. Compensated for H.T. and Heater supply variations.
Input Impedance, 0.5 to 0.75 megohms capacity 10 to 40 pF.

Y2 D.C. AMPLIFIER

Gain—25, One Tube.
Frequency response, D.C. to 100 Kcs. plus or minus 15%.
Fitted with switch attenuator calibrated in the following range of Y2 sensitivity:—
Volts per mm. 10.0, 5.0, 2.0, 1.0, 0.5, 0.2, 0.1.
Max. input, 1,000 V.D.C., or Peak A.C.
Input Impedance, 0.5 to 1 megohm, 70 pF (Miller effect).

TIME BASE

Repetitive, Triggered or Single Stroke operation.
Positive or Negative sync. and Trigger by continuously variable control. Directly calibrated time scale with 9 ranges from 150 microseconds to 1.5 seconds.

SYNCHRONIZATION AND TRIGGER

Switch selection for External sync. or Internal sync. from Y1 or Y2 signals. Sync. input impedance, 2 megohms 20 pF.

BEAM TRIGGER

H.F. circuit giving the following facilities:—

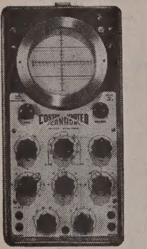
1. Beam Trigger off.
2. Electrical Beam Trigger enabling beam to be switched on and off by application of D.C. to trigger terminal, and giving beam switching for time marking from A.C. signal.
3. Mechanical Beam Trigger enabling beam to be switched by shorting "Beam Trigger" and "Common terminals".
4. Line Frequency Beam Trigger giving blackout pips at Line Frequency.
5. Push-button to facilitate photography and to inspect the trace.

CATHODE RAY TUBE

Type 89 Double Beam 4″ diam. "J" (blue) Screen.
The output of the Amplifier and Time Base and direct access to the Tube Plates and Anode, and "Ground" available at the side of the instrument.

POWER RATING

Voltage—110, 125, 207, 225 and 245. Stabilized for variations of up to plus or minus 10% of input volts.
Frequency—40-100 cycles. Consumption—130 watts.
Stabilized D.C. voltages:—
Tube—2KV and 4KV. Amplifiers, Time Base, etc.—650 volts.



Cossor Portable Twin-Beam Oscilloscope Model 1037C

The instrument uses the unique Cossor Double Beam Type 89 Cathode Ray Tube (green screen). C.R.T. has a flat 4″ diameter face, facilitating accurate measurements and avoids optical focussing troubles when photographing traces. Signals to the tubes normally pass through the amplifiers but direct connection to the CRT electrodes is provided. Time Base is an extremely linear Miller Transitron with cathode follower coupling, synchronized via a limiter stage, dispensing with front panel synch. control.

Y1 AMPLIFIER—is direct coupled. Gain is 25, sensitivity 1.0 r.m.s. volt/inch. Input impedance is .5 megohm and 30 uuf. Maximum input 1000 volts DC. Response from D.C., i.e. 0 to 100,000 cycles within 15% or 1 db., approximately. 3 stages. Gain levels in preset calibrated steps. Voltage inputs read directly off vertical shift control.

Y2 AMPLIFIER—is A.C. coupled, single stage. Gain is 10 and sensitivity 2.7 r.m.s. volts/inch. Input impedance 1 mogohm, 30 uuf. Gain levels in preset steps. Frequency response from 20 cycles up to 300,000 cycles within 15% or 1 db. approximately. An A.C. connection from a front panel terminal direct to the Y2 plate is provided when the A2 volts switch is set to 60. Calibration and synchronism are maintained.
Sensitivity of either beam direct is 15 volts r.m.s./inch. With amplifiers in cascade, 0.1 r.m.s. volts/inch.

X AXIS

No X axis amplifier is used. Durect sensitivity is 12.5 r.m.s. volts/inch. The Miller Transitron system generates recurrent sweeps from 2 - 50,000 cycles/sec., calibrated in milliseconds and microseconds on the X shift control for direct reading of time intervals within 10% accuracy. Synchronization is automatic. Front panel switch selects sync. from Y1 or Y2 amplifier outputs or from mains frequency. Flyback is blanked out at all speeds. Time base voltage is available at high impedance at X1 terminal at rear panel.

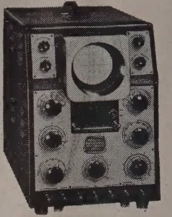
TEST SIGNAL

50 volts peak to peak at power frequency available at front panel.

POWER RATING

70 watts approximately at input voltages of 80, 105, 110, 115, 180 and 230 volts, **at any frequency from 25 to 2400 cycles/sec.** Tube supply 1000 volts. General D.C. voltage supply 350 volts.

Double Beam Oscillograph Model 1035



Model 1035 Oscillograph is designed to meet the exacting needs of the modern Research Laboratory and Industrial Plant whose requirements demand a simply operated and versatile instrument for quantitative measurements and waveform analyses.
Two independent Y axis amplifiers are used. One for each beam. The mechanical presentation of this Oscillograph combines functional simplicity with robustness and attractive appearance.
Calibrated controls enable direct measurement of Time and Voltage and thus provide a valuable facility of equal appeal to Laboratory, Production or Service Engineers.
The traces are presented over the full diameter of a 4″ double beam flat-screen and special screens with a long afterglow can be supplied for special work.

Y1 AMPLIFIER

3 tubes.
Directly calibrated voltage scale with 7 ranges—(Accuracy plus or minus 15%) 7 Mcs. to 20 C.P.S.

VOLTS RANGE	GAIN	FREQUENCY 15% Down	RESPONSE 50% Down
50 volts	3	7.0 Mcs.	10.0 Mcs.
15 volts	10	3.0 Mcs.	4.5 Mcs.
5 volts	30	2.2 Mcs.	2.8 Mcs.
1,500 millivolts	100	1.6 Mcs.	2.0 Mcs.
500 "	300	1.0 Mcs.	1.4 Mcs.
150 "	1,000	150 Kcs.	500 Kcs.
50 "	3,000	60 Kcs.	250 Kcs.

L.F. Response down to 20 c.p.s.
Maximum Input Volts; 500 D.C.
Input Impedance, 2 megohms. Input Capacity 20 pF.

Y2 AMPLIFIER

One tube.
Directly calibrated voltage scale with 5 ranges.
(Accuracy plus or minus 15%). 500, 150, 50, 15, and 5 volts.
Frequency Response 20 c.p.s. to 100 Kcs. plus or minus 15%.
Output available at terminal on front panel.
Cathode Follower facilities for external use.
A.C. connection to tube plate via terminal on front panel.
Maximum input volts, 500 D.C.
Input impedance, 0.2 megohms.
Input capacity, 35 pF.

TEST WAVEFORM VOLTAGE ("CAL.")

50 volts peak to peak.

TIME BASE

Repetitive, Triggered and Single Stroke operation. Positive or Negative sync. and Trigger by switch control. Directly calibrated time scale with 9 ranges; (Accuracy plus or minus 10%) 15 microseconds to 150 microseconds. Time base volts available at high impedance at X1 terminal. Switch positions provided for EXT. T.B. and Time Base "OFF." Flyback suppressed.

SYNCHRONIZATION AND TRIGGER

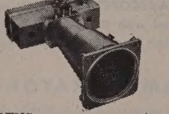
Switch selection for positive or negative sync. and trigger from external source or internally from Y1 Amplifier.

CATHODE RAY TUBE

Cossor double beam, 4″ dia. flat face.
Output of both Amplifiers, Time Base and direct connections to tube plates and modulator circuits are available at the side of the instrument.

POWER RATING

Voltage—105 to 235 in 10 steps. Frequency—50 to 100 cycles.
Consumption—170 watts (approx.) C.R.T. supply—2,000 volts.



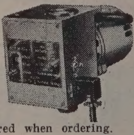
Cossor Oscillograph Camera Model 1428

CAMERA SPECIFICATIONS

LENS	Aperture F/3.5
SHUTTER	Single-bladed, push button operated.
FILM DRIVE	Sprocket feed.
LENS REDUCTION RATIO	2.6:1.
MAZ. SIZE OF RECORD	On Tube screen—6.5 cms. On film—25 mm.
SHUTTER SWITCH	Switch contacts close during shutter opening period for Beam or Event triggering. Maximum switch rating 50 volts. 100 mA non-inductive load.
FITTING	Camera is located with Oscillograph tube bezel by two register pins and clamped by four captive thumb-screws.
FOCUSSING	Focus is set at Works but is adjustable.
RECORDS	Single frame or continuous film with Motor Attachment.
FILM AND PAPER	35mm. perforated film or paper in 25-foot rolls.
LOADING	Camera in daylight. Cassette in dark room.
FILM SPEEDS WITH MOTOR ATTACHMENT	(Type F) 4″, 12″, 36″ per second. (Type M) .4″, 1.2″, 3.6″ " (Type S) .04″, .12″, .36″ "

WEIGHT, camera only 5½ lbs., approx.

Cossor Camera Motor Drive Attachment Model 1429



For A.C. supplies only, 110v., 200-220v. and 230-250v., 50-60 cycles.

FILM SPEEDS

Gearbox Type F	4″, 12″ and 36″ per second
" " M	.4″, 1.2″ and 3.6″ " "
" " S	.04″, .12″ and .36″ " "

Please state supply voltage and type of gearbox required when ordering.

WEIGHTS

Motor Drive Attachment and Gearbox complete 13¼ lbs.

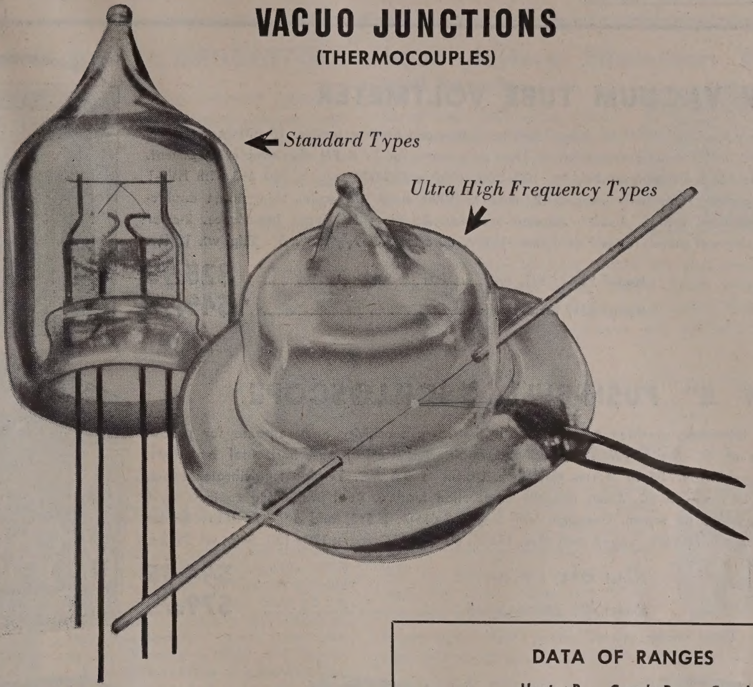
Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION 350 Fifth Avenue, New York 1, N. Y.

BEST PRODUCTS THRU BEAM INSTRUMENTS

VACUO JUNCTIONS

(THERMOCOUPLES)



Standard Types

Ultra High Frequency Types

GENERAL INFORMATION.

Insulation.
Vacuo Junctions are electrically insulated from the heaters, and tested to 100 volts D.C.

Resistance Tolerances.
Resistance tolerances for Heater or Thermo-Couple are plus or minus 10%.

Sensitivity Tolerances.
The nominal output of 7 millivolts is subject to a variation of plus or minus 12%.

Current Overload.
The current ratings can be exceeded by a 50% overload without risk of damage to the Thermo-Couple for continuous running. The millivolts output at any overload within this limit can be calculated by relating it to the square of the current approximately.

The Heater will withstand transient overloads of 100%, but there is a risk of burning out if this overload is maintained.

General.
Owing to the extremely fine gauges employed it is not possible to guarantee any closer tolerances.

Temperature Co-efficient.
The over-all temperature co-efficient of the Thermo-Couple does not exceed 0.2% per degree centigrade. This temperature co-efficient, generally speaking, is of no value because the Thermo-Couples, being used invariably with indicating galvanometers, it is the over-all temperature co-efficient of couple and galvanometer which is important, and this can only be ascertained experimentally, the interacting factors being too numerous for estimation or calculation.

DATA OF RANGES

Range	Heater Res. Ohms.	Couple Res. Ohms.	Couple Output
Stand. Types			
1.25 M.A.	1600	13	7MV ± 12%
2.5 MA.	400	8	" "
Stand. and U.H.F. Types			
5 MA.	90	8	" "
10 "	25	8	" "
15 "	20	4	" "
25 "	10	4	" "
50 "	3	4	" "
100 "	1.5	4	" "
200 "	0.7	4	" "
500 "	0.3	4	" "
1000 "	0.15	4	" "

The above range is available in ULTRA HIGH FREQUENCY type, from 5 MA. upwards.

All joints are spot welded. Couple is insulated from heater. Special ranges and outputs can be made to suit customers' individual requirements. Quotations on request.

Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

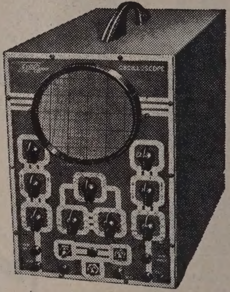
EICO Laboratory Precision Instruments and KITS

NEW VACUUM TUBE VOLTMETER

Laboratory-precision VTVM for trigger-fast operation and lifetime service. 15 different ranges. Large 4½" meter, can't-burn-out circuit. New zero center for TV & FM discriminator alignment. Electronic AC & DC ranges: 0-5, 10, 100, 500, 1000 v. (30,000 volts & 200 MC with HVP-1 & P-75 probes). Ohmmeter ranges, .2 ohms to 1000 megs. DB scale. New stable double-triode balanced bridge circuit — extreme accuracy. 26 megs DC input impedance. 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. 9$\frac{7}{16}$"x 6"x 5". Ship. wt. 10 lbs.

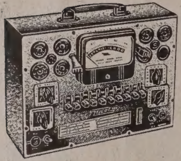
Model 221-K, KIT, only	**$25.95**
Model 221, factory wired	**$49.95**

NEW 5" PUSH-PULL OSCILLOSCOPE



All-new laboratory-precision scope with all the extra sensitivity and response for precise servicing of TV, FM & AM sets. Push-pull undistorted vertical and horizontal amplifiers. Boosted sensitivity, .05 to .1 rms volts/inch. Useful to 2.5 MC. TV-type multivibrator sweep circuits, 15 cps — 75 KC. Z-axis intensity modulation feature. Dual positioning controls move trace anywhere on screen. Complete with 2-6J5, 3-6SN7, 2-5Y3, and 5" C.R. Tube. 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. 8½"x 17"x 13". Ship. wt. 29 lbs.

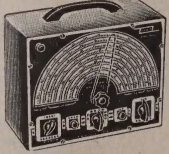
Model 425-K, KIT, only	**$44.95**
Model 425, factory wired	**$79.95**



NEW TUBE TESTER

Brand new professional tube tester and merchandiser EICO Service-Engineered for unbeatable value! Large 4½" full-vision meter. Tests *conventional and TV tubes* including 9-pin miniatures. New lever-action switches — tests every tube element. Illuminated "Speed Roll-Chart". 2 grid caps. Short and open-element tests. Spare socket for new tubes. Protective overload bulb. Electronic rectifier. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 12½"x 9½"x 4¼". Ship. wt. 12 lbs.

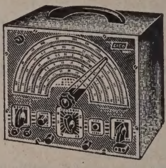
Model 625-K, KIT, only	**$34.95**
Model 625, factory wired	**$49.95**



NEW SIGNAL GENERATOR

For FM-AM precision alignment and TV marker frequencies. Vernier Tuning Condenser. Highly stable RF oscillator, range: 150 KC - 102 MC with fundamentals to 34 MC. Separate audio oscillator supplies 400-cycle pure sine wave voltage. Pure RF, modulated RF or pure AF for external testing. 3-color etched panel; rugged steel case. Ship. wt. 10 lbs.

Model 320-K, KIT, only	**$19.95**
Model 320, factory wired	**$29.95**



NEW SWEEP GENERATOR

Covers all TV-FM alignment frequencies, 500 KC - 228 MC. Vernier-driven dial: center of each of 13 TV channels marked on front panel. Sweepwidth variable 0-30 MC with mechanical inductive sweep — permits gain comparison of adjacent RF TV channels. Crystal marker oscillator, variable amplitude. Provides for injection of external marker. Phasing control. Complete with HF tubes. Less Crystal. 10"x 8"x6¾". 5 MC Crystal, ea. $3.95. Ship. wt. 12 lbs.

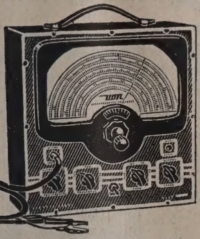
Model 360-K, KIT, only	**$34.95**
Model 360, factory wired	**$49.95**

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT COMPANY, INC. • BROOKLYN 12, N. Y.

EICO Laboratory Precision Instruments and KITS

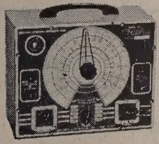
NEW DELUXE SIGNAL GENERATOR



Laboratory-precision generator EICO Service-Engineered with 1% accuracy. Extremely stable, frequency 75 kc-150 mc in 7 calibrated ranges. Illuminated hairline *vernier tuning*. VR stabilized line supply. 400-cycle pure sine wave with less than 5% distortion. Tube complement: 6X5, 7F7, 6C4, VR-150. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 12"x 13"x 7". Ship. wt. 21 lbs.

Model 315-K, KIT, only	**$39.95**
Model 315, factory wired	**$59.95**

NEW RESISTANCE-CAPACITANCE BRIDGE & R-C-L COMPARATOR



This brand new professional resistance-capacitance bridge is especially EICO Service-Engineered for extremely wide usefulness. Measures and tests all resistors from 0.5 ohms to 500 megohms. Measures and tests every type condenser, 10 mmfd to 5000 mfd. Special built-in **Precision Comparator Range** gives instant, easy comparison measurement of resistance, capacitance and inductance with a complementary component as a standard: exceptional wide range of 400:1. Self-contained continuously variable 0-500 DC voltage source, tests for leakage, polarization, power factor. Latest bridge-type circuit. 110 v. 60-cycle transformer and rectifier. All ranges calibrated on front panel. Large magic-eye indicator. 3-color etched rub-proof panel; rugged steel case. 10"x8"x4¾".

Model 950-K, KIT, only	**$19.95**
Model 950, factory wired	**$29.95**

RADIO FREQUENCY PROBE

Sensitive Germanium crystal probe for signal tracing and measurements to over 200 mc. Extends range of VTVMs and scopes.

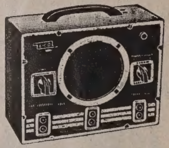
P-75K, KIT, for VTVM; P-76K for Scope; ea	**$3.75**
P-75 or P-76, factory wired, ea	**$5.95**

NEW Battery Eliminator, Charger and Booster

For *all* auto radio testing. Latest-type full-wave *Bridge* circuit. 4-stack manganese copper-sulfide rectifiers. Specially designed transformer, continuously variable from 0 to 15 volts. Continuous operation: 5-8 v., 10 amps. Intermittent: 20 amps. 10,000 mfd filter condenser. Meter measures *current and voltage output*. Fused primary and an automatic reset overload device for secondary. Rugged hammertone steel case. 115 v., 60 cycle AC. 10½"x7¾"x8¾". Ship. wt. 15 lbs.

Model 1040-K, KIT, only	**$25.95**
Model 1040, factory wired	**$34.95**

MULTI-SIGNAL TRACER



Highest gain and flexibility in low-cost field! Audibly traces all IF, RF, Video & Audio from ANT to SPKR or CRT without switching. Response well over 200 mc. Integral test speaker. Provision for visual tracing with VTVM. Complete with 6SJ7, 6K6, 6X5. Germanium crystal diode probe. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 10"x8"x4¾". Ship. wt. 9 lbs.

Model 145-K, KIT, only	**$19.95**
Model 145, factory wired	**$28.95**

HIGH VOLTAGE PROBE

New professional EICO-engineered HV probe carefully designed and insulated for extra safety and versatility. Extends range of VTVMs and voltmeters up to 30,000 v. Lucite head. Large flash-guards. Multilayer processed handle. Complete with interchangeable ceramic Multiplier to match your instrument.

Model HVP-1 (wired only)	**$6.95**

5 MC CRYSTAL

EICO-designed for all generators and oscillators, this highest quality crystal accommodates all standard sockets and circuits. Gives excellent performance with EICO Model 360 Sweep Generator.

Model C-5 (not a kit) only	**$3.95**

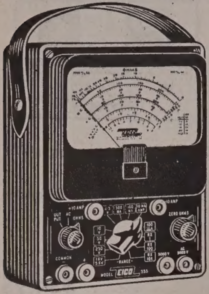
Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT COMPANY, INC. • BROOKLYN 12, N. Y.

EICO Laboratory Precision Instruments and KITS

NEW VOLT-OHM-MILLIAMMETERS

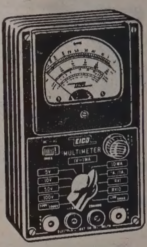
20,000 OHMS/VOLT MULTIMETER



MODEL 555. Brand new 20,000 ohms/volt Multimeter featuring the greatest ranges and precision for its type in the world! 31 different ranges! DC Voltage: 0-2.5, 10, 50, 250, 1000, 5000, at 20,000 ohms/volt. AC Voltage: same ranges at 1,000 ohms/volt. Output Voltage: same ranges, 0.1 mfd internal series condenser. Decibels: —12 db to + 55 db in 5 ranges. DC Resistance: Rx1, Rx100, Rx10,000. DC Current: 0-100 ua, 10 ma, 500 ma, 10 A, (250 millivolts). DC Accuracy: ±3% of full scale. AC Accuracy: + 5% of full scale. 4½" meter, 50 ua D'Arsonval movement. All resistors 1% or better accuracy. Hand-calibrated and tested rectifier. High-impact Bakelite case. Complete with batteries. 6¾" x 5¼" x 3". Ship. wt. 3 lbs.

Model 555-K, KIT, only	**$29.95**
Model 555, factory wired	**$34.95**

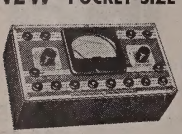
1,000 OHMS/VOLT MULTIMETER (Patent applied for)



MODEL 526. 31 different ranges plus a host of special features make this brand new instrument the industry's leading 1,000 ohms/volt Multimeter. AC and DC Voltage: 0-1, 5, 10, 50, 100, 500, 5000, at 1000 ohms/volt. DC Resistance: Rx1, Rx10, Low Ohms. AC and DC Current: 0-1 ma, 10 ma, 0.1 A, 1 A. 6 Decibel ranges: —20 to + 69 db. DC Accuracy: ± 3% of full scale. AC Accuracy: ± 5% of full scale. 3½" meter, 400 ua movement. All resistors 1% or better accuracy. Separate jack for high current and voltage positions. New low minimum battery-drain ohm ranges. Dual rectifier has separate low- and high-voltage calibration in AC ranges. Slide AC-DC switch. Ohms-adjust battery pot. High-impact Bakelite case. Complete with battery. 6¼" x 3¾" x 2". Ship. wt. 1½ lbs.

Model 526-K, KIT, only	**$13.90**
Model 555, factory wired	**$16.90**

NEW POCKET-SIZE VOLT-OHM-MILLIAMMETER



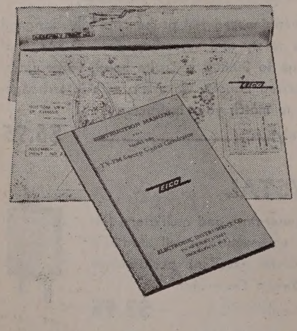
Pocket-size VOM cram-packed with value! 22 different ranges. 3" D'Arsonval movement. Ring-type shunts. Germanium crystal rectifier. Ranges — DC: 0-5, 50, 250, 500, 2500 v. AC and Output: 0-10, 100, 500, 1000 v. DC Ma: 0-1, 10, 100. DC Amp: 0-1, 10. Ohms: 0-500, 100,000; 0-1 Meg. DB: —8 to + 55. 3-color etched panel; rugged hardwood case. 8"x 4½"x 3". Ship. wt. 3½ lbs.

Model 511-K, KIT, only	**$14.95**
Model 511, factory wired	**$17.95**

NEW RESISTANCE DECADE BOX

Brand new extra-accurate instrument EICO-engineered for exceptionally easy operation and extra-wide usefulness. Supplies resistance values from 0-99,999 ohms with ½% precision! 5 separate switches, 10 positions each. All resistors have ±½% accuracy. **Special feature:** New separate Comparator Position and binding posts permits instant substitution of actual equivalent component for the resistance value indicated on decade box. Rugged, extremely simple construction. 3-color etched panel; sturdy steel case. 3½"x 12"x 3". Ship. wt. 2½ lbs.

Model 1171-K, KIT, only	**$19.95**
Model 1171, factory wired	**$24.95**



COMPREHENSIVE INSTRUCTIONS

Every EICO Kit contains the most comprehensive, easiest-to-follow step-by-step instructions and the clearest, easiest-to-read schematic and pictorial diagrams in electronics! All small parts (resistors, condensers, etc.) are packed in individually marked envelopes clearly numbered and identified on the blueprints. That's why servicemen and students say "it's a snap" for *anyone* to build the EICO Kits!

THE EICO GUARANTEE

Only EICO gives you the Make-Good Guarantee — the strongest, most substantial guarantee in the industry! When you buy EICO, you enjoy the greatest protection available for your test equipment investment!

the exclusive EICO Make-Good GUARANTEE
(included with every *EICO* product)

Each EICO Kit and Instrument is *doubly guaranteed*, by EICO and your jobber, to contain only selected quality components. EICO guarantees to replace any component which might become defective in normal use if returned to the factory transportation charges pre-paid within 90 days of purchase. EICO guarantees all Kits assembled according to EICO's simplified instructions will operate as specified therein. EICO guarantees service and calibration of every EICO Kit and Instrument at the nominal charge as stated in the instructions.

SEE THESE FAMOUS EICO INSTRUMENTS AND KITS AT YOUR LOCAL JOBBER — *TODAY!*

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT COMPANY, INC. • BROOKLYN 12, N. Y.

GENERAL ELECTRIC

RADIO DIAL LAMPS

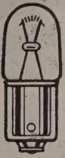
Designed and engineered for the job

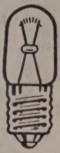
BECAUSE of the vibration conditions under which General Electric radio dial lights must operate, General Electric devotes special care to their design and manufacture. Filaments are designed to vibrate without damage and are secured by a shake-proof joint.

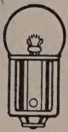
General Electric research is constantly at work to assure the quality and serviceability of G-E radio dial lamps. Shock tests, vibration tests and base torsion tests are used in the laboratory to make certain your customers will get good service from the General Electric lamps you install.

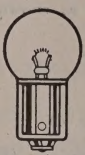
Features like these make it worthwhile for you to sell and install G-E lamps:

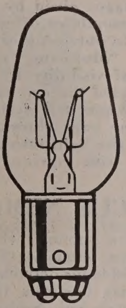
1. *Dependable, trouble-free performance.*
2. *High level of maintained light output.*
3. *Low current consumption.*
4. *Long life.*
5. *Profitable to handle.*
6. *Preferred by both dealers and customers.*

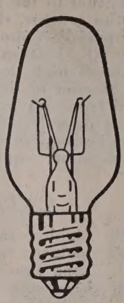

T-3¼
Miniature
Bayonet


T-3¼
Miniature
Screw


G-3½
Miniature
Bayonet


G-4½
Miniature
Bayonet


C-7
Double-Contact
Bayonet


C-7
Candelabra
Screw

SPECIFICATIONS

Lamp Number	40	41	42	43	44	45	46	47	48	49	51	55	1490	10C7	10C7DC
Volts	6-8	2.5	3.2	2.5	6-8	3.2	6-8	6-8	2	2	6-8	6-8	3.2	115-25	115-25
Amps	0.15	0.50	0.35	0.50	0.25	0.35	0.25	0.15	0.06	0.06	Max.0.25	Max.0.45	0.16	10 watts	10 watts
Bulb	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	T-3¼	G-3½	G-4½	T-3¼	C-7	C-7
Base	Min. Screw	Min. Screw	Min. Screw	Min. Bay.	Min. Bay.	Min. Bay.	Min. Screw	Min. Bay.	Min. Screw	Min. Bay.	Min. Bay.	Min. Bay.	Min. Bay.	Cand. Screw	D.C. Bay.
Bead Color	Brown	White		White	Blue		Blue	Brown	Pink						

General Electric makes a complete line of neon glow lamps—including NE-51, NE-2, NE-45, NE-48, NE-16, NE-17—for radio and other electronic applications.

GENERAL ELECTRIC

LAMP DEPARTMENT DISTRICT SALES OFFICES

Pittsburgh 19, Pa.	238 W. Carson St.
New York 22, N.Y.	570 Lexington Avenue
Cleveland 14, O.	215 Euclid Avenue
Charlotte 2, N. C.	516 Johnston Building
Baltimore 2, Md.	Court Square Bldg.
Chicago 4, Ill.	230 So. Clark Street
New Haven 10, Conn.	185 Church Street
Philadelphia 2, Pa.	1405 Locust Street
Tampa 2, Florida	505 Twiggs St.
Indianapolis 4, Ind.	1115 Circle Tower
Davenport, Iowa	301 Davenport Bank Bldg.
Detroit 2, Mich.	820 Fisher Building
Kansas City, Mo.	200 E. 16th Ave., N. Kas. City 16
St. Louis 1, Mo.	710 N. Twelfth Blvd.
Albany 7, N. Y.	8 Elk Street
Boston 10, Mass.	50 High Street
Newark 2, N. J.	Room 606, 744 Broad Street
Buffalo 2, N. Y.	1 West Genesee Street
Minneapolis 13, Minn.	500 Stinson Boulevard
Portland 9, Oregon	1238 N.W. Glisan Street
Cincinnati 2, Ohio	36 East Fourth Street
Oakland 7, Calif.	1614 Campbell Street
Seattle 4, Wash.	202 Hoge Building
Denver 2, Colo.	1863 Wazee Street
Memphis 7, Tenn.	1179 Morehead Street
Atlanta 3, Ga.	187 Spring Street, N.W.
Los Angeles 13, Cal.	601 West Fifth Street
Dallas 2, Tex.	1801 N. Lamar Street
Houston 2, Texas	1811 Nat'l Standard Bldg.
Richmond 19, Va.	7th and Main Street
Milwaukee 3, Wisc.	161 W. Wisconsin Ave.

General Office: Nela Park, Cleveland 12, Ohio. GLenville 1-6600

PILOT LIGHT ASSEMBLIES

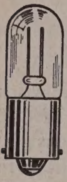
for

T-3¼ NEON LAMP • NE-51

11/16″ MOUNTING HOLE

BUILT-IN RESISTOR

(Patent No. 2,421,321)



NE-51

All of these assemblies are listed by Underwriters' Laboratories, Inc.

For 110 and 220 volts

The new NE-51 lamp is especially useful for pilot lights to be operated on commercial voltages. It has a distinctive orange-red glow and consumes very little current.

MULTI-VUE CAP

In addition to the advantages given by the provision of the built-in resistor, these assemblies offer another feature that is especially important in obtaining effective indication with the NE-51 lamp. The "Multi-vue" cap shown at the right gives a high degree of visibility by directing an increased amount of light toward the eye when the indicator is viewed from any angle. When it is desirable to view the electrodes directly, the clear caps shown below are very effective. For concentrating the light into a beam the metal lens holders are equipped with convex lenses as shown.

CATALOGUE NUMBERS

521308-991	Multivue cap, Screw terminals (Fig. 1)
531308-991	Multivue cap, Screw terminals (Fig. 2)
91408-931	Long clear cap, Soldering terminals (Fig. 4)
95408-931	Clear cap, Soldering terminals (Fig. 3)
81408-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80408-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801308-831	Screw cap, Dome plastic lens, Screw terminals
51408-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511308-111	Screw cap, Convex lens, Screw terminals

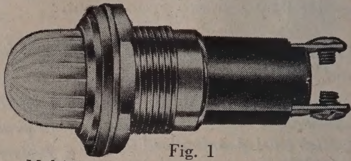
COLOR— The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2*, Amber-3, Blue-4*, White-5, Yellow-6, Clear-7

***not recommended with neon lamps.**

Equipped with

BINDING SCREWS



Multivue caps

Fig. 1

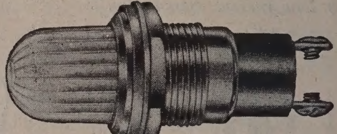


Fig. 2

Equipped with

SOLDERING TERMINALS

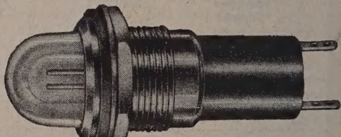


Fig. 3

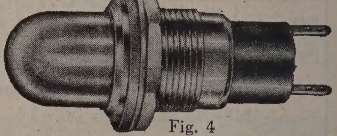
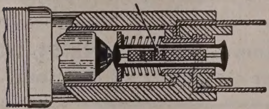


Fig. 4

BUILT-IN RESISTOR



PATENTED
No. 2,421,321

External resistors will be furnished which will permit use of these pilot lights on voltages higher than 220 volts.

This series of pilot light assemblies is unique and has several exclusive features. The resistors are permanently built into the high quality DIALCO designed socket.

This socket is constructed with heavy molded bakelite insulation in which the terminals are securely anchored. The insulated socket is mounted in a threaded bushing equipped with nut and shakeproof washer for mounting on a panel of any usual thickness.

The DIAL LIGHT COMPANY of AMERICA
Foremost Manufacturer of Pilot Lights
NEW YORK 3, N. Y.

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

CAPS

All illustrations are approximately actual size

FRICTION

Convex lens

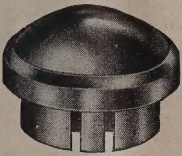


Fig. 5

BAYONET

Convex lens

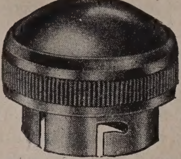


Fig. 6

SCREW

Torpedo lens

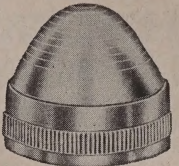


Fig. 7

Large convex lens

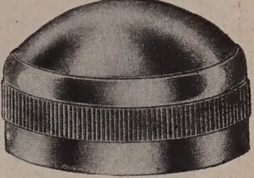


Fig. 8

SCREW

Dome plastic lens

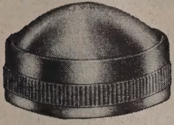


Fig. 9

Faceted lens

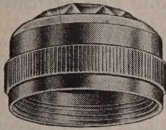


Fig. 10

Convex lens

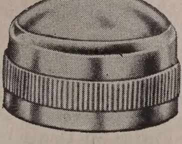


Fig. 11

Large torpedo lens

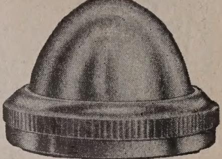
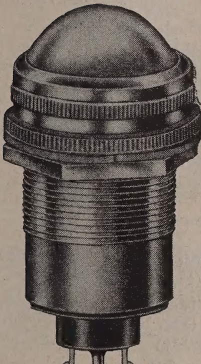


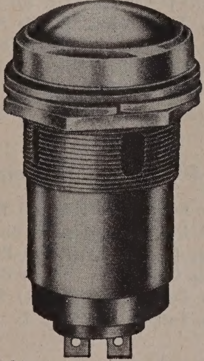
Fig. 12

ASSEMBLIES FOR 1 INCH MOUNTING HOLE

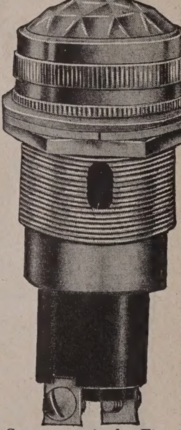
DOUBLE CONTACT BAYONET



Screw terminals Fig. 15

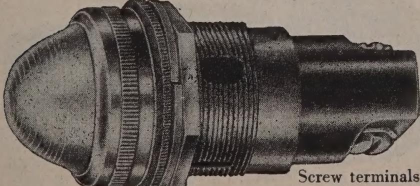


Soldering terminals Fig. 17

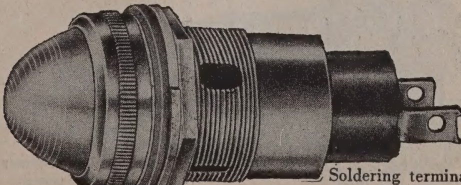


Screw terminals Fig. 16

CANDELABRA SCREW



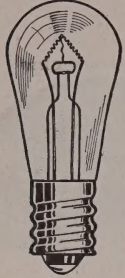
Screw terminals
Fig. 13



Soldering terminals
Fig. 14

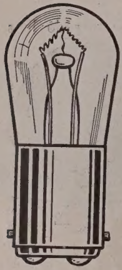
The DIAL LIGHT COMPANY of AMERICA
Foremost Manufacturer of Pilot Lights
NEW YORK 3, N. Y.

CATALOG NUMBERS FOR ENCLOSED ASSEMBLIES
Mount in one inch clearance hole
UNDERWRITERS' LISTED



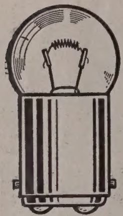
For S-6 Lamp with Candelabra Screw Base

51901-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 13)
61901-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 13)
51901-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig 13)
19901-531	Screw cap, Large torpedo lens (Fig. 12) Screw terminals (Fig. 13)
51101-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering lugs (Fig. 14)
41901-111	Bayonet cap Convex lens (Fig. 6) Screw terminals (Fig. 13)
31901-111	Friction cap Convex lens (Fig. 5) Screw terminals (Fig. 13)
47901	Light Shield cap (Fig. 19) Binding Screw terminals (Fig. 13)
71101-111	Mechanical dimmer (Fig. 18) Soldering terminals (Fig. 14)
78101-111	Polaroid dimmer (Fig. 18) Soldering terminals (Fig. 14)



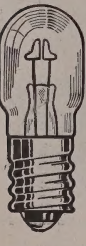
For S-6 Lamp with Double Contact Bayonet Base

513202-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 16)
613202-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 16)
513202-111	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 16)
803202-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 16)
413202-111	Bayonet cap Convex lens, frosted back (Fig. 6) Screw terminals (Fig. 16)
313202-111	Friction cap Convex lens, frosted back (Fig. 5) Screw terminals (Fig. 16)



For G-6 Lamp with Double Contact Bayonet Base

51704-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 15)
51704-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 15)
80704-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 15)
80704-841	Screw cap, Dome plastic lens, matted back (Fig. 9) Screw terminals (Fig. 15)
51204-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering terminals (Fig. 17)
41204-111	Bayonet cap Convex lens (Fig. 6) Soldering terminals (Fig. 17)
31204-111	Friction cap Convex lens (Fig. 5) Soldering terminals (Fig. 17)



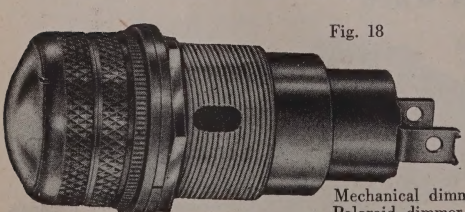
For NE-45 Neon Glow Lamp, Candelabra Screw Base

51914-131	Screw cap, Convex lens (Fig. 11) Binding screw terminals (Fig. 13)
80914-841	Screw cap, Dome lens (Fig. 9) Binding screw terminals (Fig. 13)
41914-131	Bayonet cap Convex lens (Fig 6) Binding screw terminals (Fig. 13)
31914-131	Friction cap Convex lens (Fig. 5) Binding screw terminals (Fig. 13)
51114-131	Screw cap, Convex lens (Fig. 11) Soldering terminals (Fig. 14)
80114-531	Screw cap, Torpedo lens (Fig. 7) Soldering terminals (Fig. 14)

COLOR—The final figure 1 in the above number indicates RED LENS COLOR. If other color is desired, change final figure to one from table below.

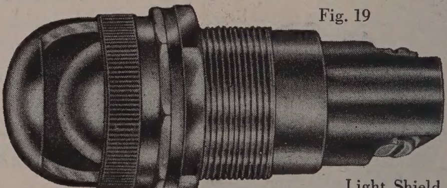
Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Fig. 18



Mechanical dimmer
Polaroid dimmer

Fig. 19



Light Shield

PILOT LIGHT ASSEMBLIES

ASSEMBLIES FOR T-3¼ LAMPS

MINIATURE BAYONET BASE

(for low voltages)

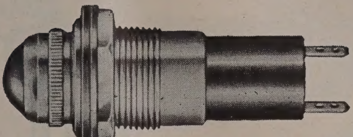


Fig. 20

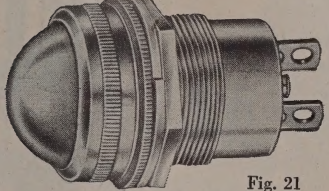


Fig. 21

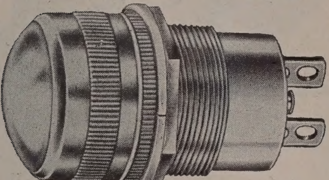


Fig. 22

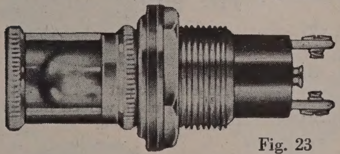
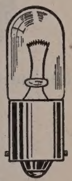


Fig. 23



CATALOGUE NUMBERS

521310-991	Multivue cap, Screw terminals (Fig. 1)
531310-991	Multivue cap, Screw terminals (Fig. 2)
91410-931	Long clear cap, Soldering terminals (Fig. 4)
95410-931	Clear cap, Soldering terminals (Fig. 3)
81410-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80410-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801310-831	Screw cap, Dome plastic lens, Screw terminals
51410-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511310-111	Screw cap, Convex lens, Screw terminals
211310	Light shield cap Screw terminals (Fig. 23)
93410-111	Polaroid dimmer cap, Convex lens, Soldering terminals (Fig. 25)
98410-111	Dimmer cap, Convex lens, Soldering terminals (Fig. 24)

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Smaller assemblies as illustrated in Figs. 20, 23, 24 and 25 mount in 11/16″ clearance hole. Figs. 21 and 22 require 1″ clearance hole.

MECHANICAL and POLAROID DIMMERS

mechanical

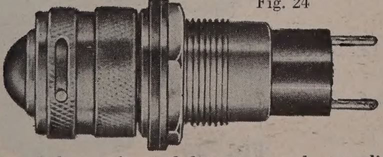


Fig. 24

polaroid

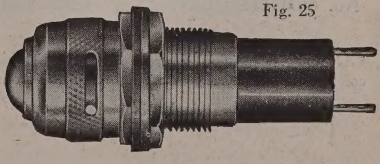


Fig. 25

Any of the mechanical dimmers can be supplied in either the "Complete Blackout" or the regulation type.

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

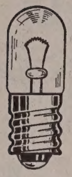
NEW YORK 3, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For T-3¼ Low voltage Incandescent Lamps

Miniature Bayonet Base



Miniature Screw Base

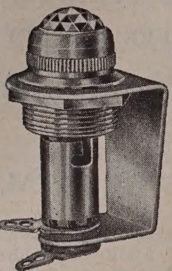


FIG. 26

Typical assemblies for bayonet base lamp. Available also for screw type, see listing below.

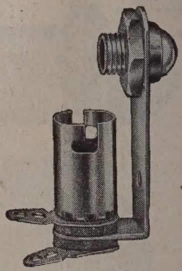


FIG. 28

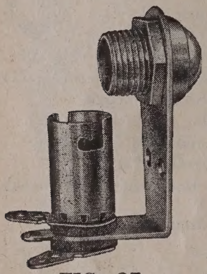


FIG. 27

DIALCO

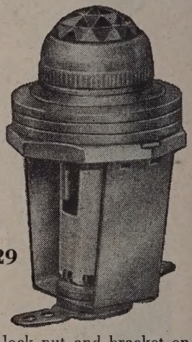


FIG. 29

Octagon lock nut and bracket on these two units welded into one-piece construction.

CATALOGUE NUMBERS

Assemblies for T-3¼ miniature bayonet base lamps

No. 810B-431	Faceted	½″ lens.	For 11/16″ mounting hole.	Fig. 26
No. 710-121	Convex	½″ lens.	For 7/16″ mounting hole.	Fig. 27
No. 755-621	Convex	11/32″ lens.	For 9/32″ mounting hole.	Fig. 28
No. 857B-431	Faceted	½″ lens.	For 11/16″ mounting hole.	Fig. 29
No. 67B-111	Convex	¾″ lens.	For 13/16″ mounting hole.	Fig. 30

Assemblies for T-3¼ miniature screw base lamps

No. 810M-431	Faceted	½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 26
No. 510-121	Convex	½″ lens.	For 7/16″ mounting hole.	Similar to Fig. 27
No. 555-621	Convex	11/32″ lens.	For 9/32″ mounting hole.	Similar to Fig. 28
No. 855-431	Faceted	½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 29
No. 66M-111	Convex	¾″ lens.	For 13/16″ mounting hole.	Similar to Fig. 30

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

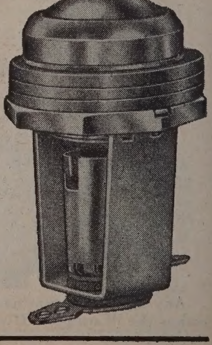


FIG. 30

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For Candelabra Screw Base Lamps

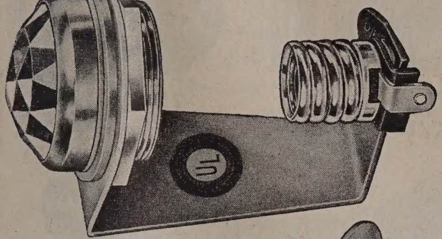


FIG. 31

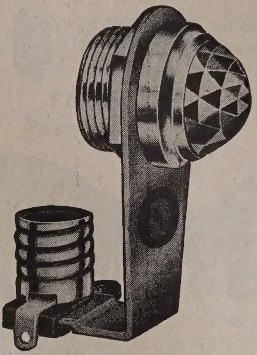
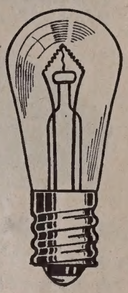


FIG. 33



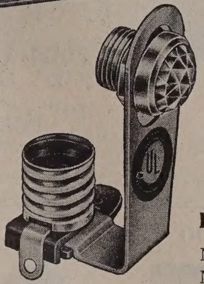


FIG. 32

For S-6 Incandescent Lamps, candelabra screw base

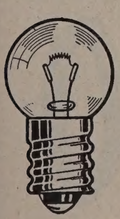
No. 10-18-14-431 Faceted ½″ Lens (for 7/16″ mounting hole) (Fig. 32)
No. 25-18-15-431 Faceted ⅝″ Lens (for 11/16″ mounting hole) (Fig. 33)
No. 31-18-16-431 Faceted 1″ Lens (for 1″ mounting hole) (Fig. 31)

All of the above assemblies are listed by Underwriters' Laboratories, Inc.

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Octagon lock nut and bracket on these two units welded into one-piece construction.



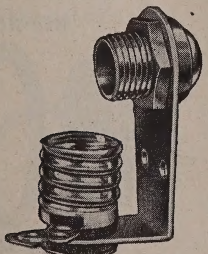


FIG. 34

For G-6 Low voltage lamps, candelabra screw base

No. 610-121 Convex ½″ lens
Fig. 34 (for 7/16″ mounting hole)

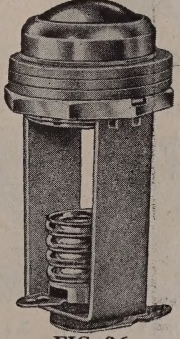


FIG. 36

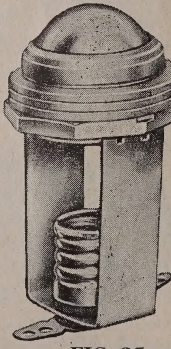


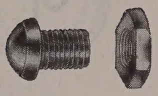
FIG. 35

For NE-45 Neon Glow Lamps, candelabra screw base

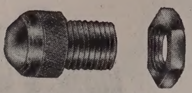
No. 67BN-831 Dome Plastic Lens (¾″ diam.) Fig. 35
No. 66N-131 Convex Glass Lens (¾″ diam.) Fig. 36
(Both mount in 13/16″ hole. Cap removable)

Lens Holders with Lenses for Panel Mounting

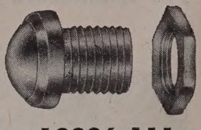
Screw Types Are Complete With Nut for Shank



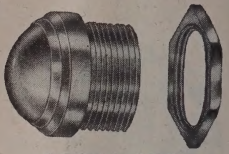
5006-111
9/32"-27 thread



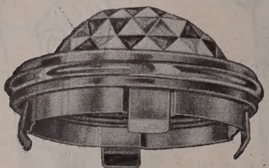
7005-111
3/8"-24 thread



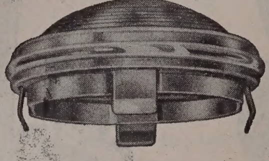
10006-111
7/16"-27 thread



25006-111
11/16"-27 thread

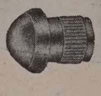


34-431
GLASS LENS



34-841
PLASTIC LENS

These holders snap into 1½" hole

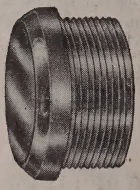


6004-111
9/32" hole

38-111
⅜" hole

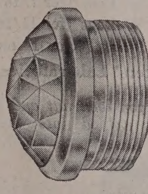
PUSH-IN TYPES

FLAT



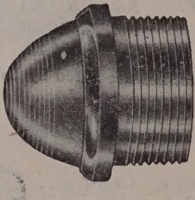
76006-231

FACETED



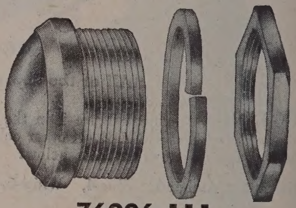
76006-431

TORPEDO



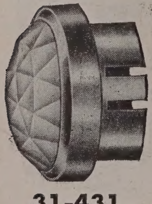
76006-531

CONVEX



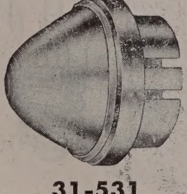
76006-111

FACETED



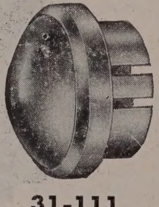
31-431

TORPEDO



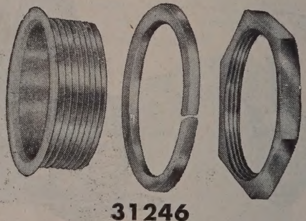
31-531

CONVEX



31-111

BUSHING



31246

The above two groups mount in 1" clearance hole. The upper series lock to the panel and are tamper proof. The lower series permit lamp replacement from the front of the panel.

LENS COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

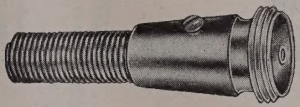
NEW YORK 3, N. Y.

CONNECTORS FOR SINGLE CONDUCTOR CABLE FOR MICROPHONES - SPEAKERS - PICK-UPS - JACKS

(using cable shield for second conductor)

The fittings shown here are designed for use with standard metal shielded single conductor cable up to ¼″ diameter. These connectors are heavily constructed from solid brass and all exposed parts are chrome plated and highly polished.

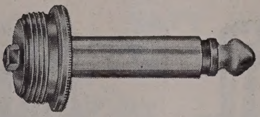
The cable end connectors are provided with rugged wire spring protectors which prevent sharp bends at the connection. The protector is soldered to the cable sheath and secured in the connector by a set screw so that all strain is relieved from the conductor.



No. 101

MALE CONNECTOR FOR CABLE

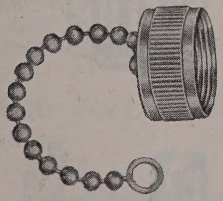
With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 102

PLUG WITH MALE CONNECTOR

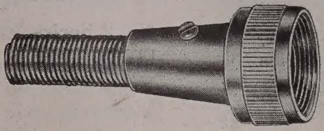
Fits standard jacks



No. 103

CAP AND CHAIN

To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.



No. 100

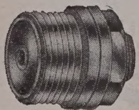
FEMALE CONNECTOR FOR CABLE

With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.

No. 51

MALE CONNECTOR FOR CHASSIS

Has sprung center contact which grounds before cable connection is broken preventing open circuit howls.



No. 50

MALE CONNECTOR FOR CHASSIS

Shell grounds to panel — or may be insulated by washers. Fit ⅜″ — 24 threaded hole or may be secured by nut.

No. 50 P

MALE CONNECTOR FOR CHASSIS

(Similar to No. 50 above)

Designed for force fit in hole in panel. Requires no nut to secure in place.

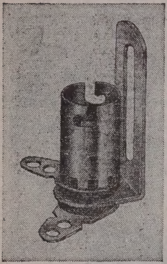
SOCKETS

BRACKET MOUNTED

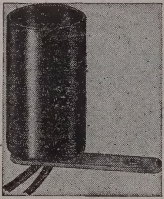
DIALCO

MINIATURE BAYONET

MINIATURE SCREW

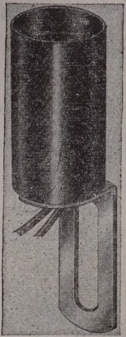


No. 7 Series

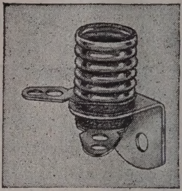


No. 2 Series
FIBRE TUBE

Wire Leads



No. 3 Series
MOLDED BAKELITE



No. 5 Series

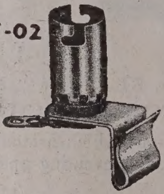
Socket suffix Bracket Description

—01—Plain clip, upturned
—02—Plain clip, downturned
—03—Clip with ears, upturned
—04—Clip with ears, downturned
—05—Right angle, upturned, slotted. Slot—⅞″ x 3/16″
—06—Right angle, downturned, slotted. Slot—⅞″ x 3/16″
—07—Plain socket, no bracket
—08—Right angle, downturned, short. Hole Size—5/32″
—09—Right angle, upturned, short. Hole Size—5/32″

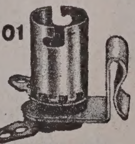
Socket suffix Bracket Description

—11—Square U-shaped. Hole Size—5/32″
—12—Horizontal (no bend), short. Hole Size—5/32″
—13—Horizontal (no bend), slotted. Slot—⅞″ x 3/16″
—14—Vee with locking tongue, short—1″
—15—Vee with locking tongue, short—1¼″
—16—Vee with locking tongue, intermediate—1-5/16″
—17—Vee with locking tongue, long—1⅜″
—18—Vee with locking tongue, long—1½″
—19—Right angle, upturned, long. Hole Size—9/64″
—20—Right angle, downturned, long. Hole Size—9/64″

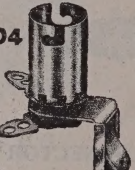
7-02



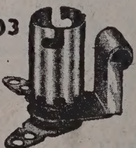
7-01



7-04



7-03



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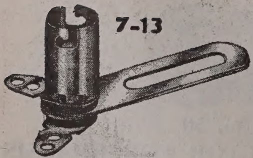
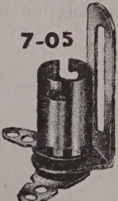
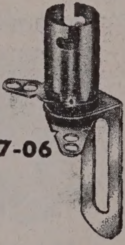


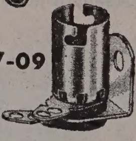
7-05



7-06



7-09



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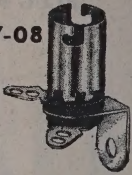

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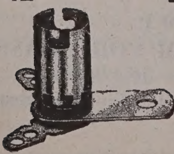

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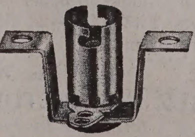

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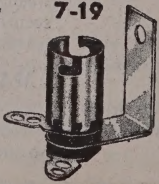

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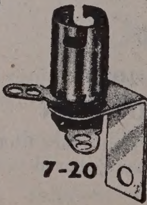

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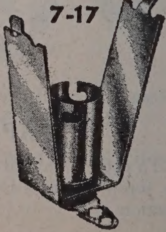


SOCKETS

BRACKET MOUNTED

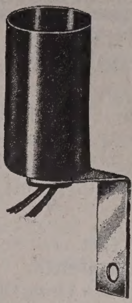
75 Watts, 125 Volts

UNDERWRITERS'

LISTED

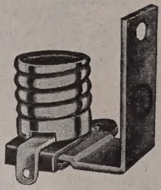
No. 4 Series
Wire Leads

Insulated with heavy molded Bakelite. Square shoulder locks into square hole in bracket — all securely held by large tubular rivet.

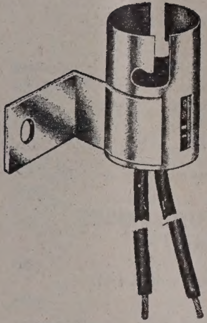


IDEAL FOR S-6 and C-7 LAMPS

No. 18 Series



Soldering Terminals
(locked in position)



No. 12 Series
CERAMIC DISK

No. 12 Series — Double Contact Bayonet Ceramic Insulating Disk

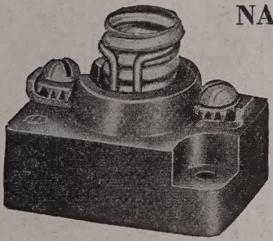
The new "12" series socket is constructed with a high quality ceramic disk supporting the socket contacts. Recesses in the disk receive the lead wires so that no live metal is exposed.

Wire Leads

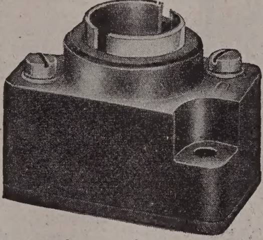
The standard flexible leads are of plastic insulated approved wire, 18 gauge. Usual length is 8 inches; longer leads will be supplied when specified.

Many Bracket Types

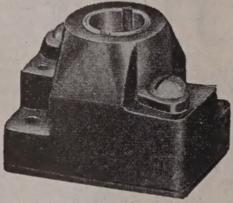
NAVY SPECIFICATION SOCKETS



Candelabra screw 9S2036
Candelabra screw 9S5038
(not illustrated)



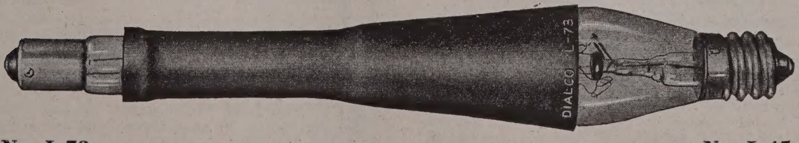
Double Contact bayonet 9S4634



Miniature bayonet
9S4931

LAMP INSTALLER

The DIALCO lamp installer shown below is a useful tool in installing lamps and in servicing pilot lights.



No. L-73

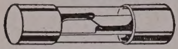
No. L-45
For NE-45 Neon

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.

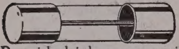


Formerly called 8AG.
Dimension 1/4 x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	**MJB**	1/500	$0.70
"	**MJB**	1/200	.30
"	**MJB**	1/100 or 1/32	.20



Formerly called 8AG
Dimension 1/4 x 1 inch, Glass tube.

Provide high speed action necessary to protect instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

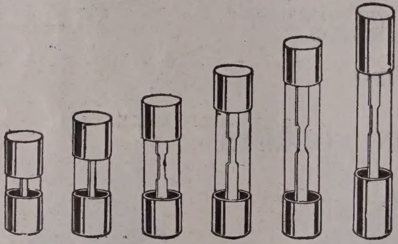
AGX are listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**MJW**	1/16 or 1/8	$0.15
"	**AGX**	1/8	.15
"	**AGX**	1/4, 3/8 or 1/2	.12
125 or less	**AGX**	3/4	.12
"	**AGX**	1, 1 1/2 or 2	.10

The MJW fuses are special low resistance fuses.

BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fuseing.



SFF 4 SFE 6 SFE 9 SFE 14 SFE 20 SFE 30

Glass tube — diameter 1/4 inch. Length as per table below.

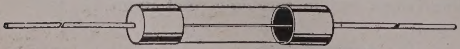
Test specification—carry 100%, open at 125% in 1/2 hour.

Listed as approved by Underwriters' Laboratories.

Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	**SFE4**	5/8	.70	$0.05
"	**SFE6**	3/4	.71	.05
"	**SFE9**	7/8	.72	.04
"	**SFE14**	1 1/16	.77	.04
"	**SFE20**	1 1/4	.83	.035
"	**SFE30**	1 7/16	1.05	.06

BUSS PIG-TAIL FUSES



1/4 x 1 1/4 inch Glass tube fuse with 1 3/4 inch leads of No. 20 tinned copper wire. Symbol GJV.

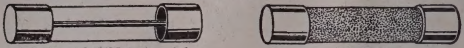
1/4 x 1 1/8 inch Paper tube fuse with 1 3/4 inch leads of No. 20 tinned copper wire. Symbol GJC.

Test specifications — carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**GJV**	1/8, 1/4, 3/8, 1/2 or 3/4	$0.20
"	**GJV**	1, 1 1/2, 2 or 3	.15
"	**GJC**	1/8, 1/4, 3/8, 1/2 or 3/4	.20
"	**GJC**	1, 1 1/2, 2 or 3	.15

BUSS GLASS TUBE FUSES, 1/4 x 1 1/4 inch



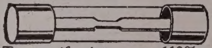
AGC and MTH 4, 5 and 6 MTH 8

Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**AGC**	1/8, 1/4, 3/8, 1/2 or 3/4	$0.15
"	**AGC**	1, 1 1/2, 2 or 3	.07
"	**MTH**	4, 5 or 6	.10
"	**MTH**	8	.15



Formerly called 3AG

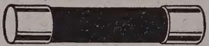
Test specification—carry 110%, open at 135% in 1 hour.

Voltage	Symbol	Amperes	List Price
32 or less	**AGC**	5, 6 or 7 1/2,	$0.05
"	**AGC**	10 or 15,	.04
"	**AGC**	25 or 30	.05

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fusetron dual-element fuses.

BUSS CERAMIC TUBE FUSES 1/4 x 1 1/4 inch



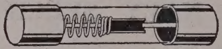
Formerly called 3AB

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories, 15 amps and less.

Voltage	Symbol	Amperes	List Price
250 or less	**ABC**	10, 12, 15 or 20	$0.15

FUSETRON FUSES, 1/4 x 1 1/4 inch



Glass tube —
Dual-Element type

A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

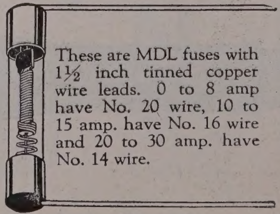
Test specification—carry 110%, open at 135% in 1 hour.

Approximate blowing time: at 200% load 25 seconds
at 300% " 8 "
at 500% " 3 "

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**MDL**	1/100, 1/32, 1/16, 1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10 or 1	$0.25
125 or less	**MDL**	1 1/4, 1 6/10, 2, 2 1/2, 2 8/10 or 3 2/10	.20
32 or less	**MDL**	4, 5, 6 1/4, 8, 10, 15, 20, 25 or 30	.20

FUSETRON PIG-TAIL FUSES



These are MDL fuses with 1 1/2 inch tinned copper wire leads. 0 to 8 amp have No. 20 wire, 10 to 15 amp. have No. 16 wire and 20 to 30 amp. have No. 14 wire.

Symbol MDV

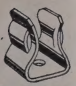
For sizes and all other information see MDL fuses above.

Amperes	List Price
1/100 to 1	$0.30
1 1/4 to 2	.25
2 1/2 to 30	.23

BUSS Fuses
FUSETRON DUAL-ELEMENT Fuses and Fuse Holders
for Protection of Radios, Instruments and Electronic Equipment

BUSS FUSE CLIPS for ¼ inch Fuses

(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)



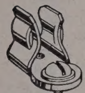
Spring bronze clips are made of Herculoy — a bronze of distinctly superior quality for spring clips. This metal gives clips great gripping strength and ability to retain spring under adverse conditions.

Beryllium copper clips combine low electrical resistance with great gripping strength. This means maximum electrical conductivity and results in cooler operation of clips and fuse.

Size of mounting hole; .130 to .135 inch.
Center of hole to back-stop; .125 to .135 inch.
Min. length of contact surface; 8/32 inch
Maximum height; 14/32 inch
Maximum width; 11/32 inch

		List Price
4548	Spring bronze clip, Nickel plated.	$0.02
4592	Beryllium copper clip, Silver plated.	.05

BUSS CLIP ASSEMBLIES for ¼ inch Fuses



(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MJW, MTH fuses)

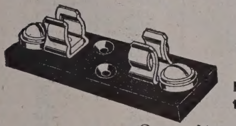
Clips as described above. Brass terminal. 3/16 inch 6-32 washer head terminal screw. ¼ inch 4-40 flat head iron mounting screw.

4431 includes No. 4548 spring bronze clip, terminal screw, terminal and mounting screw. List Price $0.10

4432 includes No. 4592 beryllium copper clip, terminal screw, terminal and mounting screw. List Price $0.13

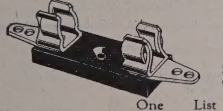
BUSS FUSE BLOCKS

Bakelite base blocks 3/16 inch thick. Countersunk mounting holes for No. 6 flat head screws. Brass No. 6 terminal screws. No. 4548 spring bronze clips.



Full base, Screw terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE4	4511	$0.35	4521	$0.70	4531	$1.00
SFE6	4516	.35	4526	.70	4536	1.00
SFE9	4517	.35	4527	.70	4537	1.00
SFE14, AGX, MJB	4514	.35	4524	.70	4534	1.00
SFE20, ABC, AGC, MDL, MTH	4512	.35	4522	.70	4532	1.00



Small base, Solder Terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE14, AGX, MJB	4520	$0.15	4485	$0.30	4403	$0.45
SFE20, ABC, AGC, MDL, MTH	4405	.15	4408	.30	4411	.45

Other standard and special fuses, fuse blocks and fuse holders

If the fuses, blocks and holders shown do not fit your requirements ask for information on other types.

Fuses and fuse mountings to meet JAN and Military specifications also are available.

If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

BUSS FUSE HOLDERS

Make it convenient to mount fuse on any equipment.

Changing or inspection of fuse is easy and quick.

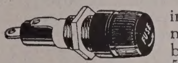
Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.

Fuse and contacts are protected from dirt and fumes.

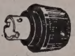
Good contact on fuse is made certain by strong coil spring pressure. Poor contact heating that often causes fuse to blow needlessly is eliminated.

Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.

PANEL MOUNTED HOLDERS for ¼ inch Fuses



Holders are inserted through hole in panel and are locked in place by nut on holder. They can be used on panels up to 5/16 inch thick.



Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen or come off.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut (zinc plated, chromate dipped) furnished with each holder.

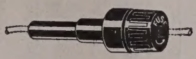
Wire hole in terminals; .115 inch.

Normal current carrying capacity; 15 amperes.

Listed as approved by Underwriters' Laboratories.

		List Price
HJM	for ¼ x 1inch fuses (AGX, MJB, MJW, SFE 14)	$0.40
HKP	for ¼ x 1¼ inch fuses (ABC, AGC, SFE20, MDL, MTH)	.40

IN–THE–LINE HOLDERS for ¼ inch fuses



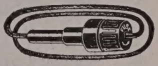
These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity: 15 amperes.

Symbol		List Price
HDI	for ¼ x 1 inch fuses (AGX, MJB, MJW, SFE 14) Takes No. 18 or smaller wires.	$0.20
HDJ-A	for ¼ x 1¼ inch fuses (ABC, AGC, MDL, MTH, SFE 20) Takes No. 18 or smaller wires.	.20
HDJ-B	for ¼ x 1¼ inch fuses (as above) Takes No. 14 or 16 wires.	.20
No. 9969	Spring nut for panel mounting above holders.	.04

Holder-and-Fuse Assemblies



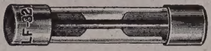
Assembly consists of holder, fuse and 19 inch loop of No. 14 wire already staked and soldered to terminals.

Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to 3/32 inch thick.

		List Price
HRJ	Complete with SFE 20 fuse	$0.40
HRI	Complete with SFE 14 fuse	.40
HRH	Complete with SFE 9 fuse	.40

LITTELFUSE "Quicker than a Short Circuit"

3 AG "LITTELFUSES"



¼" x 1¼"

Standard Package—100

Blow Time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

311000 Series **Littelfuses**—Quick to medium-blowing fuses—for use in radios, auto-radios, amplifiers, etc. Straight-type fuse element—positioned to center of fuse—makes open link always in the visible portion of fuse.

Catalog No.	Amp. rating	Max. volt	Ohms res.	List Price, each
311005.	5	32	.028	$0.05
31107.5	7½	32	.02	.05
311010.	10	32	.011	.04
311015.	15	32	.008	.04
311020.	20	32	.006	.035
311030.	30	32	.005	.05

312000 Series **Littelfuses**—Quick-acting fuses—for low time-lag applications similar to the 311000 fuse series above. Protective-coated elements, on fuses to 3 amperes, prevent oxidation and promote clean break on fusion. Diagonal element alignment of this fuse assures accurate alignment and calibration, even when the fuse element is expanded by heat.

Catalog No.	Amp. rating	Max. volt.	Ohms res.	List Price each
312.062	1/16	250	5.400	$0.15
312.125	⅛	250	6.35	.15
312.250	¼	250	3.275	.15
312.375	⅜	250	2.38	.15
312.500	½	250	1.39	.15
312.750	¾	250	.89	.15
312001.	1	250	.23	.07
31201.5	1½	250	.146	.07
312002.	2	250	.073	.07
312003.	3	250	.052	.07
312004.	4	250	.049	.10
312005.	5	250	.029	.10
312006.	6	250	.025	.10
312008.	8	125	....	.15

Approved by Underwriters' Laboratories.

3 AG "SLO-BLO" "LITTELFUSES"

¼ x" 1¼"

Standard package—100

Blow time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200	60 seconds max. 5 seconds min.

313000 Series **Littelfuses**—**Slo-Blo** fuses with high time-lag to withstand heavy surges—quick on shorts. Designed for circuits with equipment having high inductive or capacitative surges, such as magnets, solenoids, etc., and for circuits with heavy starting currents, such as motors and lamp circuits. Anti-fatigue construction (compound element, with spring and resistor) makes these fuses ideal for intermittent-duty circuits on vibrators, control circuits, hi-tension electric fences, small magnets, coils, etc. **"Pioneered by Littelfuse."**

Catalog No.	Former No.	Amp. rating	Max. volt.	List Price, each
313.010	1259	1/100	125	$0.25
313.032	1261	1/32	125	.25
313.062	1262	1/16	125	.25
313.100	....	1/10	125	.25
313.150	....	15/100	125	.25
313.200	....	2/10	125	.25
313.250	1264	1/4	125	.25
313.300	....	3/10	125	.25
313.400	....	4/10	125	.25
313.500	1266	1/2	125	.25
313.600	....	6/10	125	.25
313.800	....	8/10	125	.25
313001.	1268	1	125	.25
3131.25	....	1¼	125	.20
31301.6	....	1-6/10	125	.20
313002.	1042-C	2	125	.20
31302.5	....	2½	125	.20
31303.2	....	3-2/10	125	.20
313004.	....	4	125	.20
313005.	1080-C	5	125	.20
3136.25	....	6¼	32	.20
313008.	....	8	32	.20
313010.	1081-C	10	32	.20
313015.	1082-C	15	32	.20
313020.	1083-C	20	32	.20

Approved by Underwriters' Laboratories through 5 amps.

3 AB "TINY MIGHTY" "LITTELFUSES"

¼" x 1¼"

Standard package—100.

Blow Time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

314000 Series **Littelfuses**—The smallest Underwriters' Laboratory approved fuses in ratings this high. Steatite enclosed, arc-quenching, powder filled fuses. Shatter-proofed against quick shorts. Medium time lag. Recommended for use with amplifiers, rectifiers, battery charging equipment, small generators, control panels, amusement devices, communication and electronic equipment, radios, signal apparatus, small motor circuits, etc. Take less space than N.E.C. fuses—**"Pioneered by Littelfuse."**

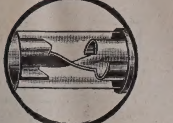
Catalog No.	Amp. rating	Max. volt.	Ohms res.	List Price, each
314008.	8	250	.021	$0.15
314010.	10	250	.014	.15
314012.	12	250	.013	.15
314015.	15	250	.012	.15
314020.	20	250	.0007	.15

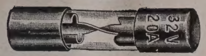
Approved by Underwriters' Laboratories through 15 amps.

LITTELFUSE "Quicker than a Short Circuit"

AIRCRAFT LITTELFUSES—ANTI-VIBRATION TYPE

Especially designed for Aircraft Service. Characteristics: High Mechanical Strength—Resistance to Fatigue—Long Vibration Life





4 AG Aircraft Fuse showing reinforced twisted element

20A
32V
20
LITTELFUSE
MADE IN U.S.

Bakelite-enclosed 4 AB Fuse

CONSTRUCTION: Glass-enclosed. Littelfuse Locked Cap Assembly (no cements) prevents loosening of caps. High visibility transparent label for amperage. Elements mechanically depolarized by twisting at 90° (see illustrations) are braced against extreme vibration. "Gooseneck" non-crystallizing fuse element takes up expansion and contraction. Ratings 5 amps. or less use Spring and Link. Service life six times simple wire. The 4 AG and 5 AG sizes are supplied for Aircraft Services for their strength and greater carrying capacity than 3 AG fuses.

BAKELITE-ENCLOSED: 4 AB and 5 AB fuses recommended where severe overloads might shatter glass.

CURRENT RATING: Rated to NEC specifications to carry 10% overload indefinitely, to blow on 35% overload within 1 hr., and 100% overload within 2 min.

VOLTAGE RATING: Voltage at which fuses will break without arcing over, or bursting under short circuit conditions.

VIBRATION FACTOR: Minimum hours these fuses endure our Magnetic Vibrator operating 120 cycles a second, while carrying the rated current. Acceleration is 10 times the worst field conditions.

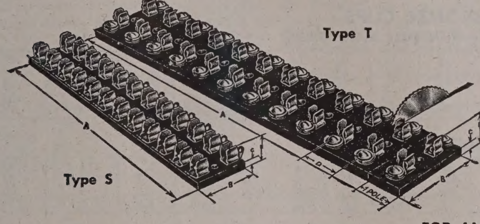
ibration Factor	4AG "LITTELFUSES" 1¼" x 9/32" Dia. Unit Wt.—3.5 Gms.						4AB "LITTELFUSES" 1¼" x 9/32" Dia. Unit Wt.—3.75 Gms.						5AG "LITTELFUSES" 1½" x 13/32" Dia. Unit Wt.—8.5 Gms.					
	Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	**Price, Each**	**Cat. No.**	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	**Price, Each**	**Cat. No.**	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	**Price, Each**
100+	**'Slo-Blo"**												**"Slo-Blo"**					
100+	413001.	1091C	1	250	.71	$0.25	414001.	1091B	1	250	.39	$0.25	513001.	1160C	1	250	.88	$0.25
100+	413002.	1092C	2	250	.094	.25	414002.	1092B	2	250	.16	.25	513002.	1161C	2	250	.24	.25
500+	413003.	1093C	3	250	.059	.25	414003.	1093B	3	250	.055	.25	513003.	1162C	3	250	.18	.25
500+	413005.	1094C	5	32	.023	.25	414005.	1094B	5	115*	.041	.25	513005.	1163C	5	32	.05	.25
500+	**Aircraft**						414010.	1095B	10	115*	.016	.25	**Aircraft**					
500+	411010.	1095	10	32	.016	.13	414015.	1096B	15	115*	.012	.25	511010.	1164	10	32	.039	.15
500+	411015.	1096	15	32	.010	.13	414020.	1097B	20	32	.008	.25	511015.	1165	15	32	.013	.15
500+	411020.	1097	20	32	.008	.13	414025.	1098B	25	32	.007	.25	511020.	1166	20	32	.013	.15
500+	411025.	1098	25	32	.007	.13	414030.	1099B	30	32	.007	.25	511025.	1442	25	32	.030	.15
500+	411030.	1099	30	32	.007	.13	414035.	1100B	35	32	.006	.25	511030.	1167	30	32	.013	.15
500+	411035.	—	35	32	.006	.18	414040.	—	40	32	.003	.25	511035.	1472	35	32	.008	.15
500+	411040.	1100	40	32	.004	.20							511040.	1168	40	32	.010	.15
													511050.	1169	50	32	.009	.18
													511060.	1222	60	32	.010	.18

* Good for power supplies up to 25 KVA at 115V—400 cycles.

NEW FUSE MOUNTING PANELS

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 1, 2, 3, 4 or more poles as ordered, or you may cut them in your plant (1/8" allowance for saw cut).

Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"
8AG	S	1 3/8	3/16	5/8	21/32
3AG	S	1 5/8	3/16	5/8	21/32
3AG	T	2 3/8	7/32	29/32	11/16
4AG	T	2 3/8	7/32	29/32	13/16
5AG	T	2 3/4	9/32	9/32	35/32



Mountings with Solder Terminals—Type "S". Phosphor-Bronze, bright-dipped finish "Lug-Clips" are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG and 3AG size fuses.

Mountings with Screw Terminals—Type "T". Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. Type 356 (3AG) and type 556 (5AG or Midget) have cupped wire-retaining washers under terminal screws as required by U/L. Type 456 (4AG) has lock washers or terminals.

FOR 3AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
356001	1	25/32	$0.35
356002	2	1 11/16	0.70
356003	3	2 19/32	1.05
356004	4	3 1/2	1.40
356005	5	4 13/32	1.75
356006	6	5 5/16	2.10
356007	7	6 7/32	2.45
356008	8	7 1/8	2.80
356009	9	8 1/32	3.15
356010	10	8 15/16	3.50
356011	11	9 27/32	3.85
356012	12	10 3/4	4.20

FOR 4AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
456001	1	25/32	$0.40
456002	2	1 11/16	.75
456003	3	2 19/32	1.10
456004	4	3 1/2	1.45
456005	5	4 13/32	1.80
456006	6	5 5/16	2.15
456007	7	6 7/32	2.50
456008	8	7 1/8	2.85
456009	9	8 1/32	3.20
456010	10	8 15/32	3.55
456011	11	9 27/32	3.90
456012	12	10 3/4	4.25

FOR 5AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
556001	1	27/32	$0.50
556002	2	1 13/16	.95
556003	3	2 25/32	1.40
556004	4	3 3/4	1.85
556005	5	4 23/32	2.30
556006	6	5 11/16	2.75
556007	7	6 21/32	3.20
556008	8	7 5/8	3.65
556009	9	8 19/32	4.10
556010	10	9 9/16	4.55
556011	11	10 17/32	5.00
556012	12	11 1/2	5.45

FOR 3AG FUSES—TYPE "S"

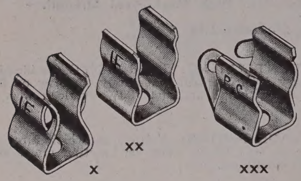
Catalog No.	No. Poles	Dim. "A"	List Price, Each
357001	1	1/2	$0.15
357002	2	1 1/8	.30
357003	3	1 3/4	.45
357004	4	2 3/8	.60
357005	5	3	.75
357006	6	3 5/8	.90
357007	7	4 1/4	1.05
357008	8	4 7/8	1.20
357009	9	5 1/2	1.35
357010	10	6 1/8	1.50
357011	11	6 3/4	1.65
357012	12	7 3/8	1.80

FOR 8AG FUSES—TYPE "S"

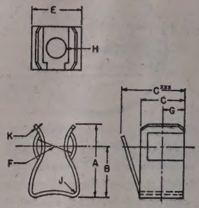
Catalog No.	No. Poles	Dim. "A"	List Price, Each
387001	1	1/2	$0.15
387002	2	1 1/8	.30
387003	3	1 3/4	.45
387004	4	2 3/8	.60
387005	5	3	.75
387006	6	3 5/8	.90
387007	7	4 1/4	1.05
387008	8	4 7/8	1.20
387009	9	5 1/2	1.35
387010	10	6 1/8	1.50
387011	11	6 3/4	1.65
387012	12	7 3/8	1.80

LITTELFUSE *"Quicker than a Short Circuit"*

LITTELFUSE BERYLLIUM COPPER AND PHOSPHOR BRONZE FUSE CLIPS



Littelfuse fuse clips are available in three standard styles: "X," with "ears" or fuse stops; "XX," earless; and "XXX," "Lug-Clips," a new **Littelfuse** clip having a lug or solder terminal made as an integral part of the clip. All styles are furnished in either Phosphor-Bronze or Beryllium Copper.



Catalog Number	Former Number	Fuse Adaptation	Type	DIMENSIONS							Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
				A	B	C	E	F	G	H			

BERYLLIUM COPPER CLIPS

SILVER PLATED—WITH FUSE STOP "EARS"

Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
121001	1216B	SFE, 3AG & 8AG Fuses	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	$0.05
123001	1217B	4AG & 4AB Fuses	X	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125001	1218B	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	15/32	13/32	7/32	.196	3	2	.15
127001	1219	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129001	1221	Standard Hi-Voltage	X	17/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40

SILVER PLATED—EARLESS TYPE

Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
121002	1417	SFE, 3AG & AB, & 8AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.05
123002	1437	4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125002		5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	15/32	13/32	7/32	.196	3	2	.15
127002	1475	N.E.C.-30 Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129002	1476	Standard Hi-Voltage	XX	17/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40

SILVER PLATED—"LUG-CLIP"—SOLDER TERMINAL ATTACHED

Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
121004	New	SFE, 3AG, AB, & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.08
123004	New	4AG Fuses	XXX	9/16	3/8	19/32	.385	9/32	3/16	.171	1.7	1	.12
125004	New	5AG & Midget Fuse	XXX	3/4	1/2	5/8	15/32	13/32	7/32	.196	3.5	2	.20

PHOSPHOR BRONZE CLIPS

BURNISHED NICKEL PLATE—WITH FUSE STOP "EARS"

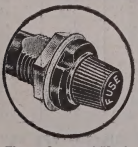
Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
101001	1011B	SFE, 3AG & AB, & 8AG	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
103001	1319	4AG & 4AB	X	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105001	2048	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	15/32	13/32	7/32	.196	3.2	2	.05
107001	5048	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06
109001	1463	Standard Hi-Voltage	X	17/32	13/16	.750	7/8	13/16	5/16	.265	15.6	4	.16

BURNISHED NICKEL PLATE—EARLESS TYPE

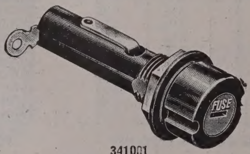
Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
101002	125-2	1AG, 3AG & AB, 7AG & 8 AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
104002		4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105002	2049B	5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	15/32	13/32	7/32	.196	3.2	2	.05
107002	SP-178	N.E.C. Bantam Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06

BRIGHT-DIP PHOSPHOR BRONZE—"LUG CLIP" SOLDER TERMINAL ATTACHED

Catalog Number	Former Number	Fuse Adaptation	Type	A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
101003		1AG, 3AG & AB, 7AG & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.03
103003		4AG & 4AB	XXX	9/16	3/8	19/32	.385	9/32	3/16	.171	1.7	1	.05
105003		5AG, Hi-Voltage-Midget	XXX	3/4	1/2	5/8	15/32	13/32	7/32	.196	3.5	2	.08



Finger Operated Knob



341001

"LITTELFUSE"
FUSE EXTRACTOR POSTS

Quicker, safer method for mounting and changing fuses. Held in end of removable knob, fuse is easily replaced by unscrewing knob. Available with finger-operated knob, screw driver slot knob, and finger operated with keep chain.

Catalog No.	Former No.	Descr.—Knob, How Operated	Mtg. Hole	Length Under Panel	Wt, Grams	List Price Each
341001	1075S	3AG—Screw Driver	.495″ dia.*	2 3/32	15.0	$0.45
342001	1075F	3AG—Finger	.495″ dia.*	2 7/32	14.3	.45
371001	1087S	8AG—Screw Driver	.495″ dia.*	2 3/32	15.3	.45
372001	1087F	8AG—Finger	.495″ dia.*	2 7/32	14.3	.45

*With flat .224″ from C.L. †With flat .250″ from C.L.

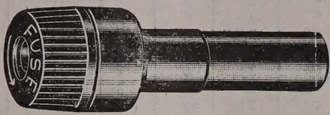
LITTELFUSE “Quicker than a Short Circuit”

8AG INSTRUMENT *high speed* LITTELFUSES

Locked Cap Assembly and other exclusive Littelfuse features for protection of delicate test equipment, galvanometers, microammeters, milliammeters, voltmeters, etc. Glass-enclosed: 1 x ¼″ dia., accurately rated, high speed action, short time lag. Voltage ratings up to 250 V., AC or DC. For higher voltages use fuses in series.

Catalog No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res. @ 5 m.a.	APPLICATIONS			List Price Ea.
					Volt-meters Ohms P.V.	All Magnetic Movement Milliammeters	Thermo-couples	
361.002	....	1/500	250	3,470.	Over 1000	Galvanometers	0–0.1 to 0–0.5	$0.70
361.005	1000	1/200	250	480.	Over 1000	Galvanometers	Up to 0–5	0.30
361.010	1001	1/100	250	263.4	1000	Up to 0–1	0–5 to 0–10	.20
361.031	1002	1/32	250	40.0	500–100	0–1 to 0–10	0–10 to 0–25	.20
361.062	1003	1/16	250	5.0	100–500	0–10 to 0–25	0–25 to 0–60	.15
361.125	1004	⅛	250	2.0	20–100	0–25 to 0–75	0–75 to 0–150	.15
361.250	1005	¼	250	3.5	10–20	0–75 to 0–150	0–115 to 0–200	.15
361.375	1006	⅜	250	3.0	5–10	0–150 to 0–250	0–200 to 0–300	.15
361.500	1007	½	250	2.0	3–5	0–250 to 0–350	0–300 to 0–400	.15
361.750	1007-A	¾	250	2.0		0–350 to 0–500	0–400 to 0–600	.15
361001.	1008	1	250	.24		0–500 to 0–750	0–600 to 0–1000	.10
36101.5	1008-A	1½	250	.13		0–750 to 0–1000	0–1000 to 0–1500	.10
361002.	1009	2	250	.10		0–1000 to 0–1500	0–1500 to 0–2000	.10
361003.		3	32	.043		0–1500 to 0–2000	0–2000 to 0–3000	.10
361005.		5	32	.030		0–2000 to 0–4000	0–3000 to 0–5000	.10

BAKELITE IN-LINE FUSE RETAINER



Designed to hang in the cable or mount in the chassis, the inline fuse retainer molded of high impact bakelite is primarily for low-voltage applications: car radios, heaters, spot lights, clocks, etc.

More compact, better insulated than old metal types. Spring locked, bayonet type knob opens with a push and twist of the finger tips. Double wall thicknesses of high impact bakelite at critical body angles give crack resistance strength.

Circuit breaks when knob is removed. Shock safe fuse examination and replacement. Body is tapered for ease in installing push-on nuts when mounting in panel. This permits tight locked chassis installation through panel. Simpler construction and assembly makes for greater ease and economy in installation and service.

The following engineering features are of particular interest when considering advantages of this unit at critical points:

155000 Series—For all low-voltage applications, particularly car radios, heaters, light circuits, etc.

155004 For 4-amp SFE and 1AG fuses
155006 For 6-amp SFE fuses
155009 For 9-amp SFE and 7AG fuses
155014 For 14-amp SFE and 8AG fuses
155020 For 20-amp SFE and 3AG fuses

List Prices **.18 ea.**

The disassembled unit consists of the bakelite body receptacle, bakelite knob with metal insert, one spring, two knife-edge rivet contacts.

155000 Series—Assembled with an 8″ loop of wire lead:

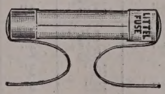
155004A For 4-amp SFE and 1AG fuses
155006A For 6-amp SFE fuses
155009A For 9-amp SFE and 7AG fuses
155014A For 14-amp SFE and 8AG fuses
155020A For 20-amp SFE and 3AG fuses

List Prices **.30 ea.**

Catalog Number	Description	List Price Each
	3AG SLO-BLO PIGTAIL FUSES	
315.150	15/100 amp. (125 volt)	$.30
315.200	2/10 amp. (125 volt)	.30
315.250*	¼ amp. (125 volt)	.30
315.500	½ amp. (125 volt)	.30
315002.	2 amp. (125 volt)	.25
315003.	3 amp. (125 volt)	.25
315004.	4 amp. (32 volt)	.25
315005.	5 amp. (32 volt)	.25
	3AG PIGTAIL FUSES	
318.125	⅛ amp. (250 volts)	.20
318.250*	¼ amp. (250 volt)	.20
318.375	⅜ amp. (250 volt)	.20
318.500	½ amp. (250 volt)	.20
	8AG T.V. FUSES (No Pigtail)	
362.250*	¼ amp. (250 volt)	.15
362.375*	⅜ amp. (250 volt)	.15
	SFE PIGTAIL FUSES	
310131.	20 amp. (32 volt)	.085

*Most commonly used by large volume set manufacturers.

All above fuses approved by Underwriters' Laboratories except 310131, 315004 and 315005.



Fuses listed to the left are the pigtail fuses which are being used by original set manufacturers as of March, 1950. Pigtail fuses in other amperages will be made available on demand.

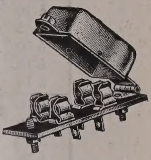
METER BACK MOUNTING

Cat. No. 383002 (1059)—Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1″ x 1⅛″. Length over screw terminal, 1½″. Std. Pkg. 20. Wgt. ½ lb. **List Price Each..........$0.20**

FUSE MOUNTINGS (3AG)

Hinged Cover Type

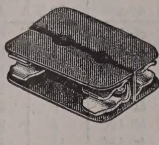
(Meets Underwriters' Requirements)



Cover fibre-lined. Metal shielded cover hinged to bakelite base. Terminal mounting extends through insulated base. Nut lightly staked to cover to prevent loss. Requires 1⅝″ x 1⅛″ knockout hole in panel. Two 6-32 x 5/16″ mounting studs at 2⅛″ centers. Base 2½″ x 1¼″. ¾″ high above panel. Std. Pkg. 20.

Cat. No.	List Price Each
351009 (1237A)—Double Pole	$0.75
351005 (1379)—Single Pole	.50

TV SNAP ON FUSE HOLDER

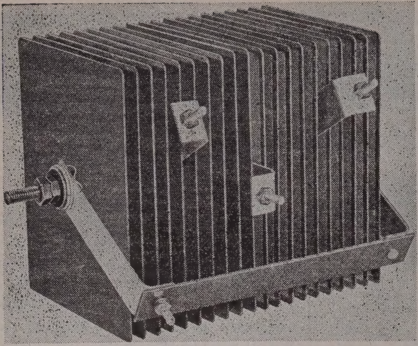


Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering.

In order to provide TV service men with their demand for a larger, more compact unit of TV Snap On Fuse Holders, Littelfuse has produced a package of 10 of the holders in a hard, long-wearing, plastic box.

No. 094025

List Price, per box, $3.00



Sarkes Tarzian

"Centre-Kooled"

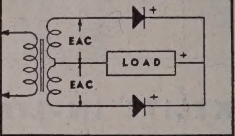
POWER RECTIFIERS

SINGLE PHASE—FULL WAVE RECTIFIER STACKS

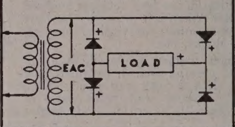
DC OUTPUT At 35°C. Amb.		CIRCUIT	Max. AC Input	APPROXIMATE DIMENSIONS—Refer to			Figure	Catalog
Volts	Max. Amps.	Refer to Diagram	Volts	A	B	C		No.
6-10	2	C.T.	13	3"	2¼"	3"	2	D-10
6-10	4	C.T.	13	4"	2¼"	4"	2	D-11
6-10	6	C.T.	13	4"	2½"	4"	2	D-12
6-10	8	C.T.	13	5"	2¼"	6"	2	D-13
6-10	12	C.T.	13	5"	2½"	6"	2	D-14
6-10	15	C.T.	13	4¼"	2¼"	12"	3	D-15
6-10	22.5	C.T.	13	4¼"	2½"	12"	3	D-16
6-20	2	BR.	26	3"	3"	3"	2	D-17
6-20	4	BR.	26	4"	3"	4"	2	D-18
6-20	6	BR.	26	4"	3¾"	4"	2	D-19
6-20	8	BR.	26	5"	3"	6"	2	D-20
6-20	12	BR.	26	5"	3¾"	6"	2	D-21
6-20	15	BR.	26	4¼"	3"	12"	3	D-22
6-20	22.5	BR.	26	4¼"	3¾"	12"	3	D-23
20-40	2	BR.	52	3"	4½"	3"	2	D-24
20-40	4	BR.	52	4"	4½"	4"	2	D-25
20-40	6	BR.	52	4"	6"	4"	2	D-26
20-40	8	BR.	52	5"	4½"	6"	2	D-27
20-40	12	BR.	52	5"	6"	6"	2	D-28
20-40	15	BR.	52	4¼"	4½"	12"	3	D-29
20-40	22.5	BR.	52	4¼"	6"	12"	3	D-30
40-60	2	BR.	78	3"	5¾"	3"	2	D-31
40-60	4	BR.	78	4"	5¾"	4"	2	D-32
40-60	6	BR.	78	4"	8¼"	4"	2	D-33
40-60	8	BR.	78	5"	5¾"	6"	2	D-34
40-60	12	BR.	78	5"	8¼"	6"	2	D-35
40-60	15	BR.	78	4¼"	5¾"	12"	3	D-36
40-60	22.5	BR.	78	4¼"	8¼"	12"	3	D-37
60-100	.5	BR.	130	1.6"	5"	1.6"	1	D-38
60-100	1	BR.	130	2"	5"	2"	1	D-39
60-100	2	BR.	130	3"	8⅝"	3"	2	D-40
60-100	4	BR.	130	4"	8⅝"	4"	2	D-41
60-100	6	BR.	130	4"	12⅞"	4"	2	D-42
60-100	8	BR.	130	5"	8⅝"	6"	2	D-43
60-100	12	BR.	130	5"	12⅞"	6"	2	D-44
100-120	.5	BR.	156	1.6"	5⅞"	1.6"	1	D-45
100-120	1	BR.	156	2"	5⅞"	2"	1	D-46
100-120	2	BR.	156	3"	10"	3"	2	D-47
100-120	4	BR.	156	4"	10"	4"	2	D-48
100-120	6	BR.	156	4"	15¼"	4"	2	D-49
100-120	8	BR.	156	5"	10"	6"	2	D-50
100-120	12	BR.	156	5"	15¼"	6"	2	D-51

CIRCUITS AND DIMENSIONAL DIAGRAMS

CENTER TAP (C.T.)



BRIDGE (BR.)



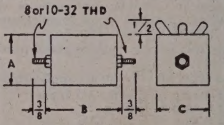


FIGURE-1

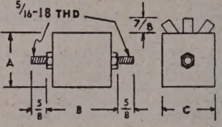


FIGURE-2

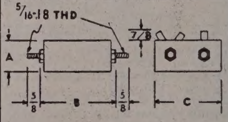


FIGURE-3

ALL DIMENSIONS
ARE APPROXIMATE

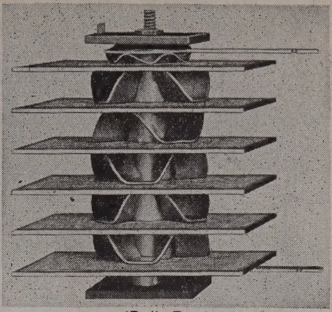
SARKES TARZIAN, INC., RECTIFIER DIVISION

Dept. O, 415 North College Ave., Bloomington, Ind.

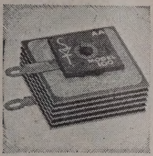
Sarkes Tarzian

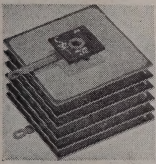
"Centre-Kooled"

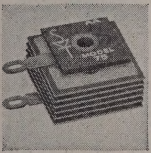
SELENIUM RECTIFIERS

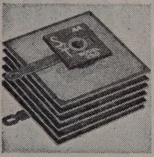

(Radio Type)

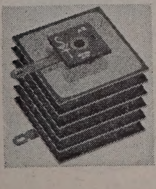
For All DC Power Requirements











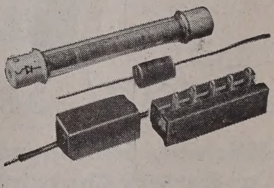
Model No.	Max. DC Current	Max. RMS Input Voltage	Max. RMS Current (MA)	Max. Inverse Peak Voltage	Max. Peak Current (MA)	Dimensions	Application
65	65	130	162	380	650	13/32″x1″x1″x11/16″	B+ Supply—Portable & AC-DC Radio
75	75	130	187	380	750	13/32″x1″x1″x13/16″	B+ Supply—Portable Radio
100	100	130	250	380	1000	13/32″ x1¼″x1¼″x13/16″	B+ Supply—AM-FM Radio
100A	100	130	250	380	1000	13/32″x1″x1″x1″	B+ Radio
150	150	130	375	380	1500	13/32″ x1¼″x1¼″x13/16″	B+ Supply—Radio-Television
200	200	130	500	380	2000	13/32″x1.6″x1.6″x1″	B+ Supply—Television
250	250	130	625	380	2500	13/32″ x1.6″x1.6″x15/16″	B+ Supply—Television
300	300	130	750	380	3000	13/32″x1.6″x1.6″x1⅞″	B+ Supply—Television
350	350	130	875	380	3500	13/32″x2″x2″x15/16″	B+ Supply—Television
450	450	130	1125	380	4500	13/32″x2″x2″x1⅞″	B+ Supply—Radio-Television
108	100	160	250	440	1000	13/32″ x1¼″x1¼″x31/32″	B+ Supply—½ Wave, Mobile Radio-TV
78D	75	160	187	440	750	13/32″x1″x1″x1⅝″	B+ Supply—Doubler —Radio-Television
108D	100	160	250	440	1000	13/32″ x1¼″x1¼″x1⅝″	B+—Doubler —Radio-Television
208D	200	160	500	440	2000	13/32″ x1.6″x1.6″x1⅝″	B+—Doubler —Radio-Television
154B	150	25	270	35	1800	13/32″x1″x1″x11/16″	Filament—Relay Supply
304B	300	25	540	35	2400	13/32″ x1¼″x1¼″x11/16″	Filament—Relay Supply
604B	600	25	1080	35	4000	13/32″ x1.6″x1.6″x11/16″	Filament—Relay Supply

HIGH VOLTAGE SELENIUM RECTIFIERS

Sarkes Tarzian high voltage selenium rectifiers are designed for use in photo-flash supplies, cathode ray oscilloscopes, television receivers, high potential test equipment, and electronic equipments used by military forces.

Designated as Type 0 for current ranges to 5 milliamperes and as Type 1 for current ranges to 25 milliamperes, the units are available in half wave, full wave bridge, and center tap stacks. Both types are available with voltage ratings to 4000 in a single unit and hundreds of thousands of volts by using multiple units in series. In center tap and bridge circuits the maximum allowable D.C. current is 10 MA for Type 0 and 50 MA for Type 1 assemblies.

The Type 0, in a glass enclosure is hermetically sealed for high humidity operation (Half Wave units only) and mounting is by means of silver plated ferrules. The bakelite enclosed Type 0 rectifiers are designed for normal commercial use and electrical connection is made by means of axial pigtail leads. For inverse voltage ratings to 208 volts A.C. the unit is self supporting; longer assemblies require a mounting clip.



SELENIUM RECTIFIER
handbook

The Type 1 rectifier is available only in square bakelite enclosures. The unit, normally supplied, is not hermetically sealed; however, it is possible to "capsulize" the Type 1 rectifier for high humidity applications.

For complete information or engineering assistance—write, phone or wire. No obligations on your part.

Handbook Available

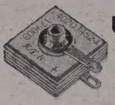
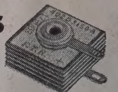
The Sarkes Tarzian 64 page Selenium Rectifier Handbook containing the most complete rectifier information ever published is now available. (Price 25 cents).

SARKES TARZIAN, INC., RECTIFIER DIV.

Dept. O, 415 North College Avenue, Bloomington, Indiana

Federal Miniature Selenium Rectifiers

The revolutionary rectifier with unlimited use in radio • television • electronics

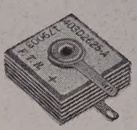
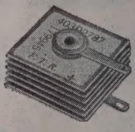
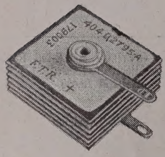
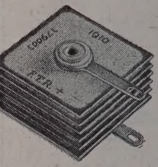
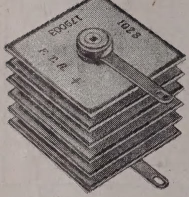
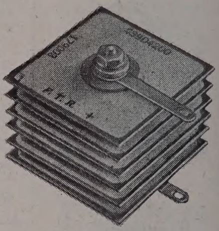



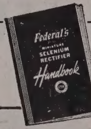
Federal		Output MA-DC	Input (RMS)		Inverse Volts	Peak MA	Plate Size	Application	Sugg'd Retail Price, Each
Cat. No.	Code No.		Volts	MA					
1097	**1097**	20	130	50	380	200	½″ Sq.	B+ Boosters; Bias	**$1.15**
1002	**402D3452A**	65	130	160	380	750	1″ Sq.	B+ AC-DC (5 tube)	**1.44**
1003	**402D3150A**	75	130	220	380	900	1″ Sq.	B+ 3-way Radios	**1.63**
1101	**1101A**	100	130	160	380	750	1″ Sq.	B+ Radios, Television	**2.05**
1004	**403D2625A**	100	130	325	380	1200	1$\frac{13}{64}$″ Sq.	B+ Radios, Television	**2.05**
1005	**403D2787A**	150	130	425	380	1200	1$\frac{13}{64}$″ Sq.	B+ Radios, Television	**2.42**
1006	**404D2795A**	200	130	550	380	2000	1$\frac{17}{32}$″ Sq.	B+ Television	**2.90**
1010	**404D3450**	250	130	625	380	2000	1$\frac{17}{32}$″ Sq.	B+ Television	**3.22**
1087	**1087A**	275	130	700	380	2000	1$\frac{17}{32}$″ Sq.	B+ Television	**3.34**
1090	**1090A**	300	130	750	380	2000	1$\frac{17}{32}$″ Sq.	B+ Television	**3.45**
1023	**1023**	350	130	900	380	3000	1¾″ Sq.	B+ Television	**4.25**
1130	**1130**	400	130	1000	380	4000	2″ Sq.	B+ Television	**4.83**
1021	**439D4200**	450	130	1150	380	4000	2″ Sq.	B+ Television	**5.27**
1014	**403D2889A**	100	160	325	440	1200	1$\frac{9}{32}$″ Max.	Vibrator	**3.16**
1022	**439D4300**	450	160	1150	440	4000	2″ Sq.	B+ Television	**5.75**
1007	**402D3239A**	75	160*	220	440	900	1″ Sq.	Vibrator Doubler	**3.74**
1008	**403D3240A**	100	160*	325	440	1200	1$\frac{13}{64}$″ Sq.	Vibrator Doubler	**4.77**
1009	**404D3241A**	200	160*	550	440	2000	1$\frac{17}{32}$″ Sq.	Vibrator Doubler	**6.61**
1015	**402D3550**	150	25	270	35	1800	1″ Sq.	Bridge Rectifier	**2.07**
1016	**403D3551**	300	25	540	35	2400	1$\frac{13}{64}$″ Sq.	Bridge Rectifier	**2.42**
1017	**404D3552**	600	25	1080	35	4000	1$\frac{17}{32}$″ Sq.	Bridge Rectifier	**2.93**
1013	**4D2814AS**	700	18†	......	......	......	1$\frac{17}{32}$″ Sq.	Battery Charger	**1.06**
1018	**104D2943S**	2000	18‡	......	......	......	4¼″ lg (Mtg.Plt.)	Battery Charger	**4.03**
1001	**402D3151**	75	20	220	55	900	1″ Sq. (Mtg.Plt.)	Bias Rectifier	**.69**
1019	N.T.C. Resistor (Resistance: Cold, 1400 ohms, Hot, 200 ohms)								**.31**

* These rectifiers have two sections—characteristics given apply to one section only; if both sections are used half-wave, voltage input is 320 volts.

† The characteristics given for this rectifier are based on its use in a half-wave rectifier circuit with a 3-cell battery load.

‡ The characteristics given for this rectifier are based on its use in a full-wave rectifier circuit with a 3-cell battery load.



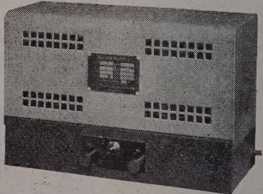
Federal's Miniature Selenium Rectifier Handbook—48 pages of valuable design and application data on America's most complete line of miniature selenium rectifiers.

Price, each 25¢

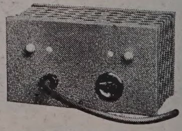
Federal Selenium Rectifier Equipment

Efficient, Economical Conversion of AC to DC For Battery Charging, Shop and Laboratory Use

Federal Type	Output (DC)		Input	Application	Suggested Retail Price, Each
	Volts	Amps.			
FTR 3246-BS	6	10	115 volts, 60 cycles single phase	"A" Eliminator	**$74.50**
FTR 3377-AS	115	.77	115 volts, 60 cycles single phase	Power Supply	**18.15**



FTR 3246-BS



FTR 3377-AS

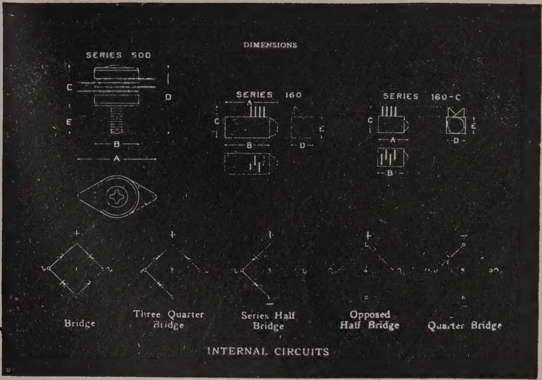
Federal Telephone and Radio Corporation

America's Oldest and Largest Manufacturer of Selenium Rectifiers

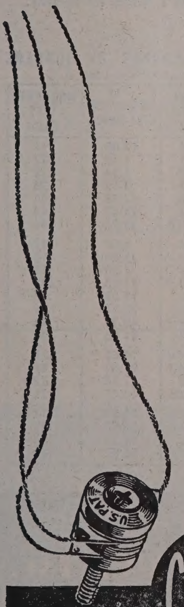
AN IT&T ASSOCIATE

Conant Instrument Rectifiers

"STANDARD SINCE 1933"



	Type	Body Color	Internal Circuit	Mounting	Number of Terminals	Weight (Grams)	Dimensions (Inches)					Net Price
							A	B	C	D	E	
SERIES 500	M	YELLOW	1	6-32 STUD	4	12.718	.890	.500	.485	.800	.315	$2.10
	TH	BROWN	2	6-32 STUD	4	11.833	.890	.500	.479	.800	.321	1.86
	HS	BLACK	3	6-32 STUD	3	10.631	.890	.500	.445	.800	.355	1.53
	T	RED	4	6-32 STUD	3	10.631	.890	.500	.445	.800	.355	1.53
	H	GREEN	5	6-32 STUD	2	9.072	.890	.500	.400	.675	.275	1.20
SERIES 160	B	YELLOW	1	#2 SCREW	4	2.531	.690	.590	.375	.250	.250	2.10
	BTH	BROWN	2	#2 SCREW	4	2,183	.690	.590	.375	.250	.250	1.86
	BHS	BLACK	3	#2 SCREW	3	1,824	.690	.590	.375	.250	.250	1.53
	BT	RED	4	#2 SCREW	3	1.824	.690	.590	.375	.250	.250	1.53
	BH	GREEN	5	#2 SCREW	2	1.477	.690	.590	.375	.250	.250	1.20
SERIES 160-C	B-C	YELLOW	1	FUSE CLIP	4	1,743	.345	.297	.310	.220	.200	2.10
	BTH-C	BROWN	2	FUSE CLIP	4	1.650	.345	.297	.310	.220	.200	1.86
	BHS-C	BLACK	3	FUSE CLIP	3	1.385	.345	.297	.310	.220	.200	1.53
	BT-C	RED	4	FUSE CLIP	3	1.385	.345	.297	.310	.220	.200	1.53
	BH-C	GREEN	5	FUSE CLIP	2	1.293	.345	.297	.310	.220	.200	1.20



- ★ Highest rectification efficiency for greatest instrument sensitivity.
- ★ Exceptional stability insures permanent instrument calibration.
- ★ Exclusive Conant Complete Color Code simplifies identification of type and terminal polarity.
- ★ Lead wires WELDED to terminals.
- ★ Sealed against moisture to insure permanent characteristics.
- ★ The only rectifiers with a NO-TIME LIMIT guarantee.
- ★ Manufactured by the exclusive Conant process from domestically produced materials only.
- ★ Life tests in continuous operation since June 1, 1934 prove Conant rectifiers do not deteriorate with age or continued normal service.
- ★ Sold by leading radio jobbers everywhere. Consult your local jobber, or your nearest Conant Representative.

SERIES 500 UNITS are for general applications requiring greater output current for meters, relays or other apparatus requiring more than 1 milliampere. Recommended for all such applications at commercial and the lower audio frequencies. Will also operate up to 1,000,000 c.p.s. in special applications wherein accuracy of readings is not essential.

SERIES 160 and 160-C are for applications requiring good frequency response over the entire commercial and audio range and especially when the meter, relay or other apparatus requires less than 1 milliampere for operation. In some special applications these units may be operated at frequencies up to 75,000,000 c.p.s. with special circuit treatment.

SPECIAL TYPES are available in both series 500 and 160-C. When requesting a quotation on a special type include a sketch of the rectifier required or a circut diagram showing source and frequency of the input voltage, resistance and kind of load, required load current and the ambient temperatures.

SERIES 500 Disc diameter .500 inch. Area each disc .15 square inch. Furnished with 3" braided, tinned copper leads. Finished in synthetic lacquer-enamel.

SERIES 160 Disc diameter .160 inch. Area each disc .02 square inch. Furnished with 3" stranded, tinned thermoplastic covered copper leads. Molded phenolic case. Assembly sealed with specially developed moisture-proof compound.

SERIES 160-C Disc diameter .160 inch. Disc area, lead wire and length and moisture-proof seal are identical with Series 160. Dimensions of the case have been reduced to the most compact size. These units may be mounted in a standard midget fuse clip.

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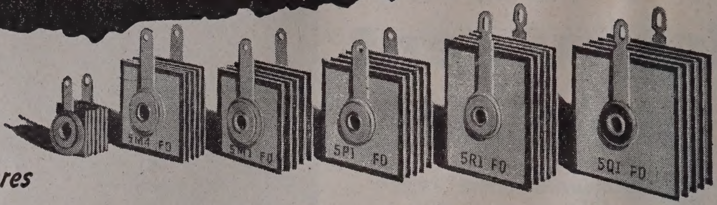


Miniatures

Seletron

SELENIUM RECTIFIERS

SELETRON Selenium Rectifiers are finding use in wider and wider fields of application ranging from half wave stacks for bias supply such as 8Y1 listed at the left, to multiple assemblies capable of delivering many kilowatts. Typical examples of such SELETRON power use are installations operating elevators in more than 100 office buildings in New York and Chicago; an assembly of 48 volts, 10,000 amps for electrolysis of water, and the spectacular Eveready searchlight on New York's Great White Way.

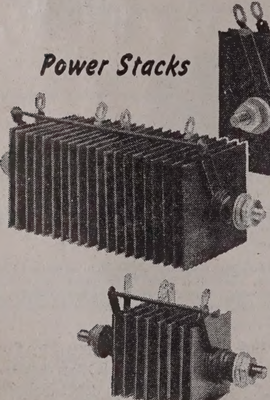
MINIATURE SELETRON SELENIUM RECTIFIERS

MODEL NO.	PLATE SIZE	STACK THICKNESS	MAX. INPUT VOLTAGE R.M.S.	MAX. PEAK INVERSE VOLTAGE	MAX. D.C. OUTPUT CURRENT	LIST PRICE
1M1	1" sq.	3/8"	25	75	100 MA	$0.83
8Y1	1/2" sq.	9/16"	130	380	20 MA*	1.15
16Y1	1/2" sq.	15/16"	260	760	20 MA*	2.28
8J1	11/16" sq.	9/16"	130	380	65 MA	1.38
5M4	1" sq.	11/16"	130	380	75 MA	1.65
5M1	1" sq.	7/8"	130	380	100 MA	2.00
5P1	1 3/16" sq.	7/8"	130	380	150 MA	2.45
6P2	1 3/16" sq.	1 3/16"	156	456	150 MA	2.60
5R1	1 1/2"x1 1/4"	7/8"	130	380	200 MA	2.85
5Q1	1 1/2" sq.	1 1/8"	130	380	250 MA	3.22
6Q1	1 1/2" sq.	1 1/8"	156	456	250 MA	3.28
6Q2	1 1/2" sq.	1 3/8"	156	456	250 MA	3.28
6Q4(†)	1 1/2" sq.		130	380	300 MA	3.55
5QS1	1 1/2"x2"	1 1/8"	130	380	350 MA	3.80
6QS2	1 1/2"x2"	1 1/4"	156	456	350 MA	4.05
5S1	2" sq.	1 1/8"	130	380	500 MA	4.35
6S2	2" sq.	1 3/8"	156	456	500 MA	5.20

* This rectifier is rated at 25 MA when used with a 47 ohm series resistor.

(†) Stud mounted—overall: 2".

Power Stacks



INDUSTRIAL TYPE SELENIUM RECTIFIERS STOCKED BY JOBBERS

Single Phase — Full Wave Bridge — Resistive-Inductive Load

D.C. OUTPUT @ 35°C MAX. AMPS.	APPROX. VOLTS NEW	APPROX. VOLTS AGED	MAX. INPUT R.M.S. VOLTS	SELETRON RECTIFIER CODE NO.	RECTIFIER LIST PRICE	BRACKETS LIST EACH
0.9	18	17	24	Q1B1S1B	$2.40	.17
1.4	19	18	24	S1B1S1B	4.16	.22
3.2	18	17	24	U1B1S1B	6.34	.22
5.2	18	17	24	F1B1S1B	8.82	.28
10.0	18	17	24	H1B1S1B	12.38	.44
20.0	18	17	24	H1B2S1B	23.43	.44
30.0	19	18	24	WH1B3S1B	35.26	.44
0.45	37	35	48	P2B1S1B	5.00	.17
0.9	37	35	48	Q2B1S1B	5.64	.17
1.4	37	35	48	S2B1S1B	7.60	.22
3.2	37	35	48	U2B1S1B	11.25	.22
5.2	37	34	48	F2B1S1B	16.08	.28
10.0	37	34	48	H2B1S1B	22.71	.44
16.0	37	35	48	H2B2S1B	42.73	.44
24.0	37	35	48	H2B3S1B	61.95	.44
0.9	112	105	144	WQ6B1S1B	14.65	.17
1.4	114	108	144	WS6B1S1B	21.32	.22
2.4	112	106	144	U6B1S1B	27.53	.22
5.2	110	103	144	WF6B1S1B	44.46	.28
0.9	130	122	168	WQ7B1S1B	16.57	.17
1.4	133	126	168	WS7B1S1B	24.56	.22
2.4	131	123	168	U7B1S1B	31.29	.22
5.2	129	120	168	WF7B1S1B	50.97	.28

Our Engineering Department will be glad to aid you in the solution of your rectifier problems without obligation. Write for booklet on SELETRON Selenium Rectifiers — Address Dept. US-4.

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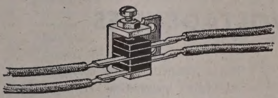
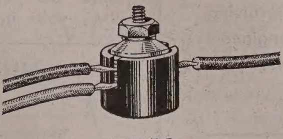
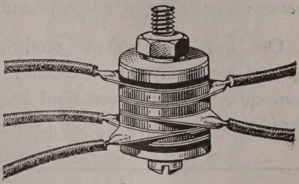


TYPE A-4
CAT. No. 5020



TYPE B-2
CAT. No. 5047
CAT. No. 5049

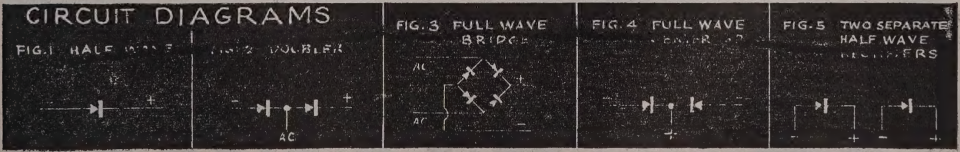


TYPE C-4
CAT. No. 5017

Max. Continuous Rating			Circuit Diagram Fig.	Element Diam. Inches	No. of Elements	Connections	Lead Length Inches	Type	Cat. No.
D.C. M.A.	D.C. Volts	A.C. Rms. Volts							
1	1	1.5	3	⅛	4	4 leads	4	AA-4	5064
5	3	4	3	3/16†	4	4 leads	3	A-4	5020
13		3	1	7/16	1	2 leads	3	B-1	5048
13		4	4	7/16	2	3 leads	3	B-2	5047
13		3*	2	7/16	2	3 leads	3	B-2	5049
20	3	4	3	7/16	4	5 leads	3	B-4	5016
32		3	1	¾	1	2 lugs		C-1	5011
32		3*	2	¾	2	3 leads		C-2	5057
32		3*	5	¾	2	4 lugs		C-2	5010
64	3	4.1	3	¾	4	5 lugs		C-4	5014
64	3	4.1	3	¾	4	5 leads	3	C-4	5017

*3 volts A.C. per element.

†3/16″ square.


CIRCUIT DIAGRAMS
FIG. 1 HALF WAVE
+
FIG. 2 DOUBLER
−
+
AC
FIG. 3 FULL WAVE BRIDGE
AC
AC
+
−
FIG. 4 FULL WAVE CENTER TAP
+
FIG. 5 TWO SEPARATE HALF WAVE RECTIFIERS
−
+
−
+

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BRADLEY RECTIFIERS

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BRADLEY SELENIUM RECTIFIERS

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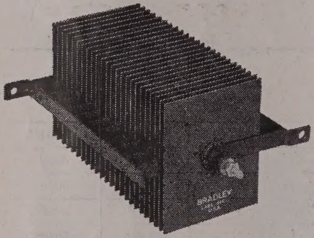
Our exclusive vacuum process insures low cost rectifiers with uniformity of rating. Power conversion is predictable, accurate and efficient.

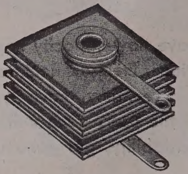
On any rectification application involving special problems, consult Bradley. Our engineers can quickly specify the right rectifier for your requirements.

HIGH CURRENT USES



SE11X Series

These large power stacks provide good efficiency and stability. Plate sizes up to 5" x 6". Rated up to thousands of amperes.

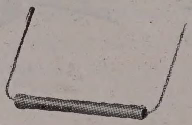


ELECTRONIC APPLICATIONS

BRADLEY RS MINIATURE RECTIFIERS replace most rectifier tubes in radio, television, amplifier and other DC power requirements. Rated 130 Max. RMS volts input, 380 volts peak inverse Max.

HIGH VOLTAGE USES

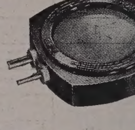
SE8 Series



These rectifiers are designed to provide maximum rating and efficiency with minimum size. One model — SE8L, rated 1.5 ma — is smallest completely sealed rectifier in class.

PHOTOELECTRIC CELLS

Bradley Luxtron^R photocells convert light directly into electric energy to operate meters and meter relays. No external power source is required. Luxtron photocells are rugged, true to rating, and assure stability of calibration. No current drain when not in operation. Wide range of models, sizes and shapes to meet any requirements involving the use of light.

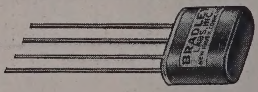


BRADLEY COPPER OXIDE RECTIFIERS

INSTRUMENT RECTIFIERS

Bradley Copper Oxide Instrument Rectifiers have vacuum-processed gold contacts for maximum efficiency and minimum temperature error. Precision made to meet the most rigid matching and balancing requirements, yet low in cost. Universal type rectifier shown for all replacements or AC meter conversions. Rated up to 12 volts AC, 5 ma DC.

HERMETICALLY SEALED RECTIFIERS



CX 23 Series. Miniature Hermetically Sealed Rectifiers. Modulators and bridges with matched sections for detecting phase differentials in AC currents and small DC potentials applied to balanced AC circuits. Maximum 2 volts continuous as modulators, 6 volts as bridges. Size 5/16"x 11/16"x 3/4".

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COPPER OXIDE RECTIFIERS
PHOTO ELECTRIC CELLS
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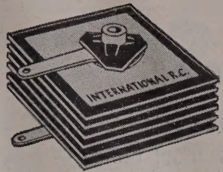
FOR UNSURPASSED PERFORMANCE

MINIATURE RECTIFIERS



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Peak Inverse Volts: 380

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ONLY 2 SOLDERING OPERATIONS REQUIRED

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Current (ma)	65	75	100	150	200	250

Type No.	RS300	RS350	RS400	RS500	RS1000
Current (ma)	300	350	400	500	1000

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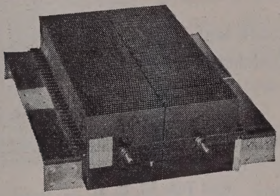
POWER RECTIFIERS



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PARTIAL LIST OF POWER RECTIFIERS

TYPE NO.	DC VOLTS	DC AMPS	SIZE PLATE
D507	0—15	0.5	1¼" Sq.
D510	0—15	3.0	3" Sq.
D513	0—15	14.0	6¼" x 7¼"
D517	15—30	3.0	3" Sq.
D520	15—30	14.0	6¼" x 7¼"
D521	95	5.0	4⅜" Sq.

WRITE FOR BULLETINS C-349 and C-848.

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From ¼" to 9/16" O.D. or built to Your Specifications

SOME TYPICAL UNITS AVAILABLE

Type No.	Volts R.M.S.	Current (ma)	O.D.	Overall Length
D322	625	10	9/16"	1⅝"
D375	2800	5	9/16"	6"
D400	1750	5	9/16"	2½"

For Radar, Oscilloscope and other High Voltage Supplies

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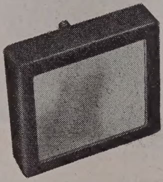
Unmounted cells available



DP5—Hermetically Sealed (front view)

Rear View—DP-5

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LONG LIFE

STABLE CHARACTERISTICS

Output up to 600 microamperes at 100 foot-candles illumination and 100 ohms external resistance.

MOUNTED CELLS

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B 10M	1.17	350
DP5	2.25	750

*At 100 ft-candles and 100 ohms external resistance.

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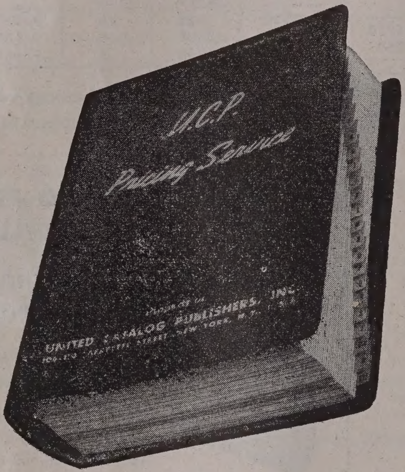
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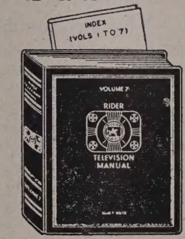

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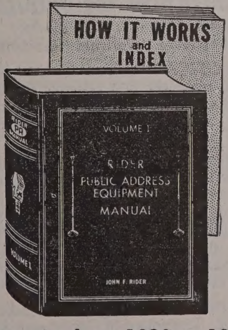

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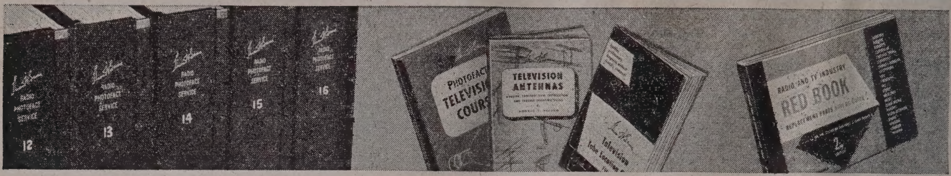

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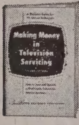

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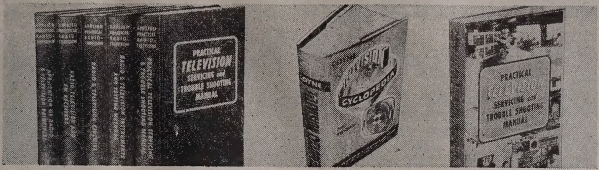
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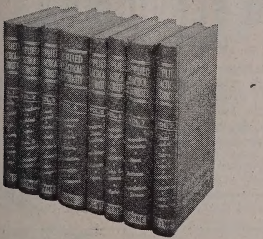

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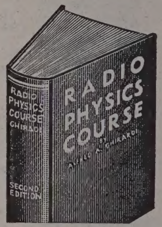

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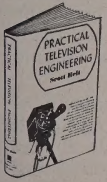

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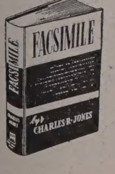

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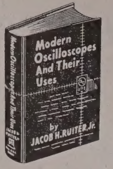

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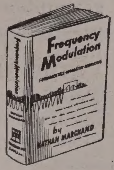

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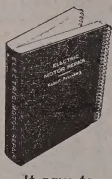

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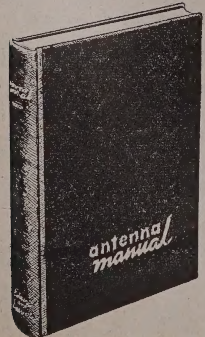

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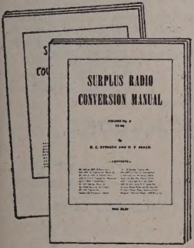

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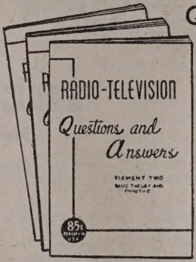

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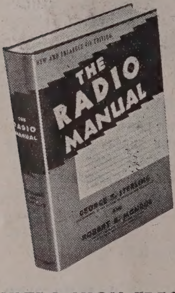

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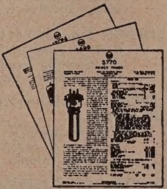

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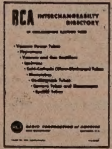

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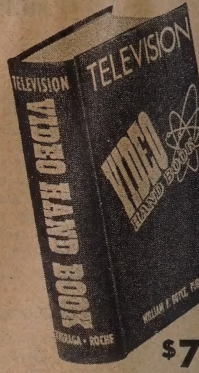

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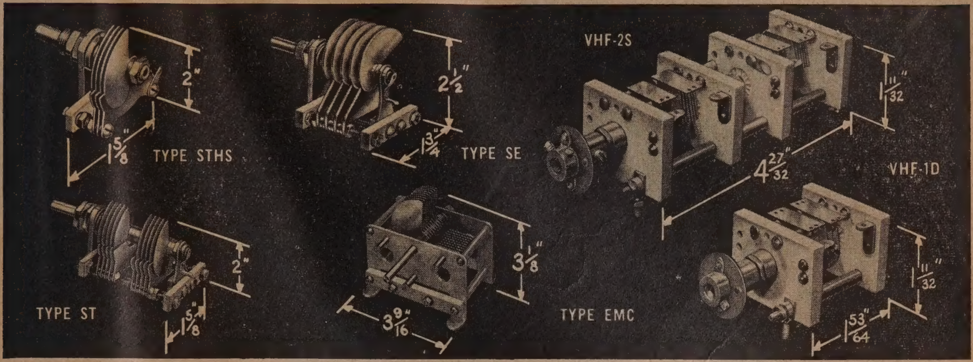

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25	3.25	4	.018″	1 3/16″	**STHS- 25**	
50	3.5	7	.018″	1 3/16″	**STHS- 50**	
			SPLIT STATOR DOUBLE BEARING MODELS			
50–50	5–5	11–11	.026″	2¾″	**STD- 50**	$
100–100	5.5–5.5	14–14	.018″	2¾″	**STHD-100**	
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50	7	11	.026″	2¼″	**ST- 50**	
75	8	15	.026″	2¼″	**ST- 75**	
100	9	20	.026″	2¼″	**ST-100**	
140	10	27	.026″	2¾″	**ST-140**	
150	10.5	29	.026″	2¾″	**ST-150**	
200	12.0	27	.018″	2¼″	**STH-200**	
250	13.5	32	.018″	2¾″	**STH-250**	
300	15.0	39	.018″	2¾″	**STH-300**	
335	17.0	43	.018″	2¾″	**STH-335**	

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TYPE SE — All models have two rotor bearings, the front bearing being insulated to prevent noise. A shaft extension at each end, for ganging, is available on special order. On models with single shaft extension, the rotor contact is through a constant impedance pigtail. The SEU models (illustrated) are suitable for high voltages as their plates are thick polished aluminum with rounded edges. Other SE condensers do not have polished edges on the plates. Steatite insulation.

15 Mmf.	7 Mmf.	6	.055″	2¼″	**SEU- 15**	$
20	7.5	7	.055″	2¼″	**SEU- 20**	
25	8	9	.055″	2¼″	**SEU- 25**	
50	9	11	.026″	2¼″	**SE- 50**	
75	10	15	.026″	2¼″	**SE- 75**	
100	11.5	20	.026″	2¼″	**SE-100**	
150	13	29	.026″	2¾″	**SE-150**	
200	12	27	.018″	2¼″	**SEH-200**	
250	14	32	.018″	2¾″	**SEH-250**	
300	16	39	.018″	2¾″	**SEH-300**	
335	17	43	.018″	2¾″	**SEH-335**	

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Capacity	Minimum Capacity	No. of Plates	Length	Catalog Symbol	Net
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250	11	15	2 15/16″	EMC- 250	
350	12	20	2 15/16″	EMC- 350	
500	16	29	4⅜″	EMC- 500	
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SINGLE SPACED MODELS

Two section VHF-2S, price $

Maximum capacity per section stator to stator	22.5 mmf.
Minimum capacity per section stator to stator	3.0 mmf.
Net change	19.5 mmf.

Single section VHF-1S, price $

Maximum capacity stator to stator	22.5 mmf.
Minimum capacity stator to stator	3.0 mmf.
Net change	19.5 mmf.

HRO-50

(including coils
A, B, C, D,)
HRO-50TS or
RS Speaker Extra

Latest and Finest Version of the World-Famous HRO Series!

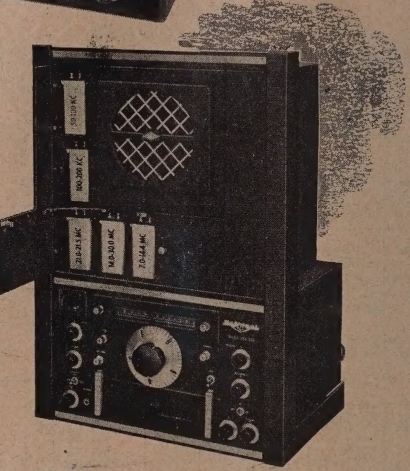
Compare the characteristics and features of the new HRO-50 and see why, once again, the HRO sets the standard of receiver performance! You'll appreciate the convenience of the new HRO-50, too — the new edge-lighted, direct reading dial and the insulated, heavy-duty, built-in power supply section. For thrilling performance, be sure to see and try the new HRO-50!

COVERAGE: 50-430 kc., 480 kc.-35 mc. Voice, CW, NFM (with adaptor).

FEATURES: Sensitivity of 1 mv. or better at 6 db. sig./noise. Selectivity variable from 13 kc. overall to app. 1200 cps. at 40 db. Negligible drift after warm-up. Micrometer dial for logging. Provision for crystal calibrator unit. Variable ant. trimmer. Lively S-meter. Min. tubes in front end and high freq. osc. Osc. circuits not disabled when receiver in send position. High-fidelity push-pull audio with phono jack. BFO switch separated from BFO freq. control. Dimmer illumination control. Accessory socket for Select-O-Ject.

CONTROLS: Bandswitch, Oscillator, Tone, Ant. Trimmer, Dimmer, AVC, Limiter, AF Gain, Calibration, CWO, Phasing, Selectivity, On-Off, RF Gain, AM-NFM-PHONO.

TUBE COMPLEMENT: 6BA6, 1st r.f.; 6BA6 2nd r.f.; 6BE6, mixer; 6C4 h.f. oscillator; 6K7, 1st i.f.; 6K7 2nd i.f.; 6H6 det. & a.v.c.; 6H6, a.n.l.; 6SJ7, 1st audio; 6SN7, phase splitter and S-meter amp.; 6V6GT (2) p.p. audio; 5V4G, rect.; 6J7, b.f.o.; OB2, volt. reg. Accessories: Crystal Calibrator, 6AK6; NFM Adaptor, 6SK7, i.f. amp., 6H6, ratio det.; Select-O-Ject, 12AT7 (2).



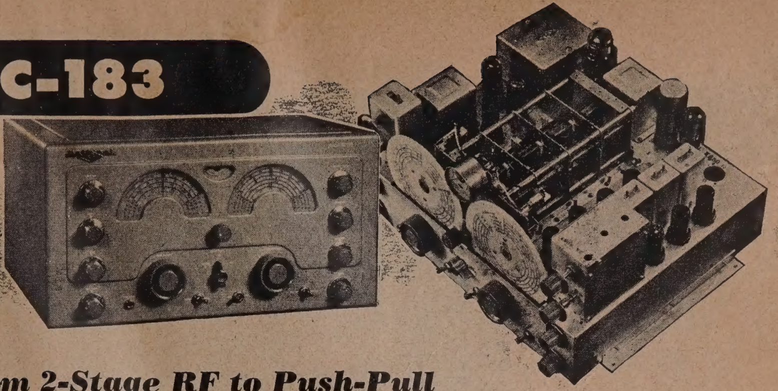
HRO-50C
(HRO-50 receiver with rack, speaker and 10-coil compartment. Coils A, B, C, D included.)

SIZE: Table 19¾" wide x 10⅛" high x 16½" deep. Rack: 19" wide x 10½" high x 17 7/16" from rear of front panel incl. 1⅛" handle.

Write for list of accessories.

NATIONAL COMPANY, Inc.

NC-183



From 2-Stage RF to Push-Pull Audio . . . Designed to Out-Perform!

Also available in rack model at same price.

COVERAGE: Continuous from 540 kcs. to 31 mcs. plus 48 to 56 mcs. for 6-meter reception.

FEATURES: Two tuned R.F. stages. Voltage regulated osc. and BFO. Main tuning dial covers range in five bands. Bandspread dial calibrated for amateur 80, 40, 20, 11-10 and 6-meter bands. Bandspread usable over entire range. Six-position crystal filter. New-type noise limiter. High fidelity push-pull audio. Accessory socket for NFM adaptor or other unit, such as crystal calibrator.

CONTROLS: CWO Switch, CWO pitch, Tone, AF Gain, Main Tuning, Bandspread, Ant. Trimmer, Bandswitch, Send-Receive, Phono-Radio, Selectivity, Phasing, Limiter, RF Gain.

TUBE COMPLEMENT: Uses 2-6SG7 R.F.; 16SA7 1st det.; 1-6J5 osc.; 2-6SG7 I.F.; 1-6H6 2nd det.; 1-6SJ7 B.F.O.; 1-6AC7 A.V.C.; 1-6H6 noise limiter; 1-6SJ7 A.F.; 1-6J5 phase inv.; 2-6V6GT aud. out.; 1-VR-150 volt. reg.; 1-5U4G rect.

NC-183TS or RS Speaker Extra

NC-125

Moderate-Priced Receiver with Built-In Selecto-O-Ject

(less speaker)

COVERAGE: 560 kcs. to 35 mc. in 4 bands. Voice or CW.

FEATURES: Edge-lighted direct-reading scale with amateur, police, foreign, ship frequencies clearly marked. Sensational National Select-O-Ject built-in. Exceptional sensitivity on all bands. Lively S-meter reads S9 to 50 mv. signal. AVC, ANL, jack for phono or NFM adaptor, volt. reg., stabilized osc., audio essentially flat to 10,000 c.p.s.

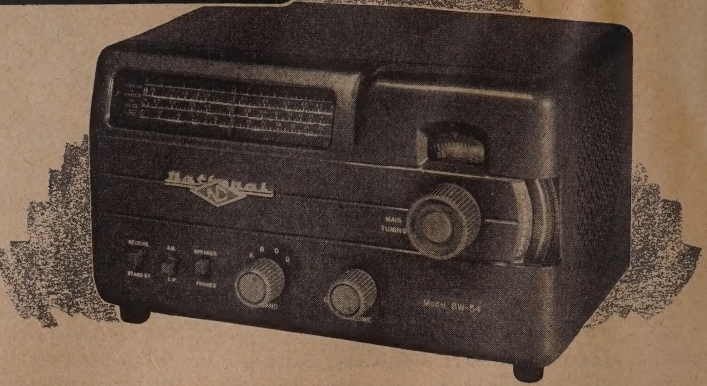
CONTROLS: Main Tuning, Bandspread, Freq. (SOJ), Boost (SOJ), Send-Receive, Pitch, CWO-MVC-AVC-ANL, AF Gain, Tone, Trimmer, Bandswitch, RF Gain.

TUBE COMPLEMENT: 6SG7 RF amp, 6SB7-Y osc.-mixer, 6SG7 1st IF, 6SG7 2nd IF, 6H6 2nd det-AVC-ANL, 6SL7GT phase shifter, 6SL7GT boost-reject aud. amp., 6SL7GT 1st aud.-CWO, 6V6GT aud. output, OD3/VR-150 volt. reg., 5Y3GT rect.

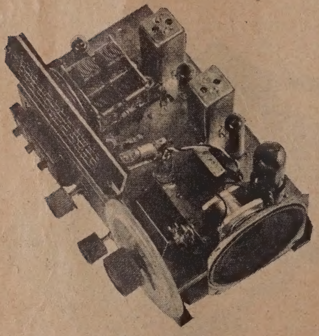
NC-125 TS Speaker Extra

MALDEN, MASS.

SW-54



Sleek Low-Priced Beauty is Most Compact General Coverage Receiver Ever Built!



USES MINIATURE TUBES AND UNIQUE BANDSPREAD DIAL

New miniature tubes make possible new sensitivity and performance. Unique plastic bandspread dial is adjustable to assure complete logging accuracy.

Here is National's latest engineering triumph! A complete superheterodyne receiver covering all major broadcast and shortwave bands that is smaller than the average table radio! New design makes possible a standard of performance never before achieved in so compact a receiver!

COVERAGE: Entire frequency range from 540 kc. to 30 mc. Voice, music or code.

FEATURES: Sensitive and selective superhet circuit. Slide rule general coverage dial with police, foreign, amateur and ship bands clearly marked. Separate bandspread and logging scale usable over entire range.

CONTROLS: Main tuning, Bandspread, On-Off and Volume, Receive-Standby, Bandswitch, AM-CW, Speaker-Phones.

TUBE COMPLEMENT: 12BE6, converter; 12BA6, CW osc. — IF amp.; 12AV6, 2nd det.-1st aud. — A.V.C.; 50C5, audio output; 35Z5, rectifier.

SIZE: 11″ wide, 7″ high, 7″ deep.

(Complete with built-in speaker and power supply)

NATIONAL COMPANY, Inc.

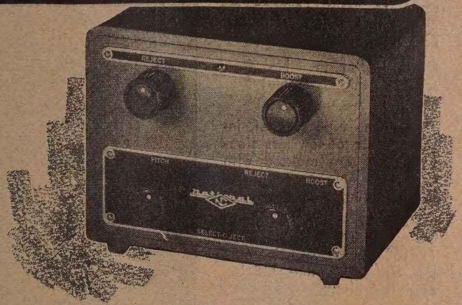
HFS

Most popular and versatile VHF design in the field!

Here is the perfect answer to the need for compact, dependable and versatile VHF reception. Can be used as a complete receiver in itself or as a VHF converter with any receiver tuning to 10.7 mcs. As converter, makes features of connected receiver usable on VHF. Covers entire high frequency spectrum from 27 mcs to 250 mcs — receives AM, FM and CW with amazing selectivity and sensitivity.

Two-gang Main Tuning Capacitor, panel-controlled Antenna Trimmer Capacitor and 6 sets of plug-in coils tune the receiver in six bands. Power furnished by separate unit. Power supply listed below is excellent where 115-230 V, 50-60 cycle AC is available. Also operates with combination of "B," and storage batteries or 6 volt vibrator-type supply. Wt. 25 lbs. Power Supply, 15 lbs. Complete with built in speaker. Power supply extra.

SELECT-O-JECT



Boosts or Rejects Any Selected Frequency 38db!

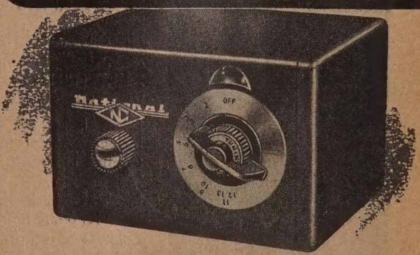
Set SELECT-O-JECT for REJECT, tune by ear and — presto! — an annoying heterodyne or other unwanted signal practically disappears without materially affecting the wanted signal! Set SELECT-O-JECT for BOOST, tune — and presto! — a selected signal rises above background noise and interfering signals! Can also be used as audio oscillator having over 100 to 1 frequency range with a single rotation of the tuning knob! Excellent as a code practice oscillator! Effective on any frequency from 80 c.p.s. to 9,000 c.p.s.!

TV BOOSTER

Makes the Difference Between A Picture and No Picture!

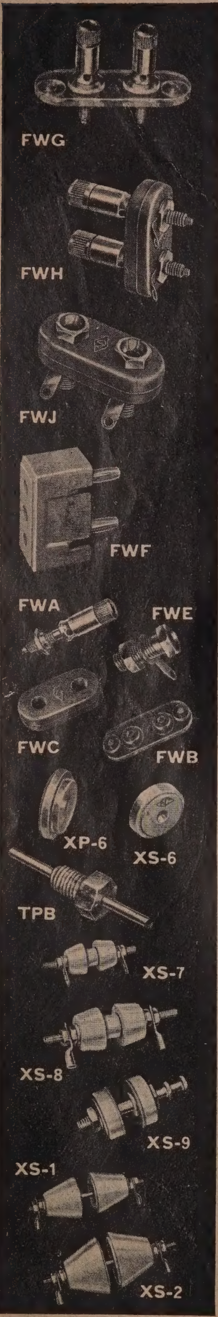
Adds a stage of RF amplification to average TV set. If signal is low, but perceptible, this booster will aid materially in increasing brightness and definition. Utilizes turret tuner for exceptionally high gain and uniform bandwidth on all channels. Housed in smart metal cabinet finished in special wear-resistant mahogany enamel.

Model TVB-2B



MALDEN, MASS.

POPULAR National COMPONENTS



FWG **Net $**
A Victron terminal strip for high frequency use. The binding posts take banana plugs at the top, and grip wires through hole at the bottom, simultaneously, if desired.

FWH **Net $**
The insulators of this terminal assembly are moulded R-39 and have serrated bosses that allow the thinnest panel to be gripped firmly, and yet have ample shoulders. Binding posts same as FWG above.

FWJ **Net $**
This assembly uses the same insulators as the FWH above, but has jacks. When used with the FWF plug (below), there is no exposed metal when the plug is in place.

FWF **Net $**
This moulded R-39 plug has two banana plugs on ¾" centers and fits FWG, FWH or FWJ above. Leads may be brought out through the top or side.

FWA, Post **Net, each $**
Brass Nickel Plated

FWE, Jack **Net, each $**
Brass Nickel Plated

FWC, Insulator
Net, per pair $
R-39 Insulation.

FWB, Insulator
Net, each $
Polystyrene insulation.

XS-6 **Net, each $**
A low-loss steatite bushing for ½" holes. Passes 6-32 screw.

XP-6 **Net, box of ten $**
Same as above but polystyrene.

TPB **Net, per dozen $**
A threaded polystyrene bushing with removable .093 conductor moulded in, ¼" diam., 32 thread.

XS-7, (⅜" Hole) **Net $**
XS-8, (½" Hole) **Net $**
XS-1, (1" Hole) **Net $**
XS-2, (1½" Hole) **Net $**

Prices listed are per pair, including metal fittings and steatite insulators.

XS-9 **Net $**
Feed-through insulator. Hole size 13/64". Insulators are adjustable on silver-plated terminal stud for different partition thicknesses. Ceramic insulators are of high grade materials designed for high frequency equipment.

AA-3 **Net $**
A low-loss steatite spreader for 6 inch line spacing. (600 ohms impedance with No. 12 wire.)

AA-5 **Net $**
A low-loss steatite aircraft-type strain insulator.

AA-6 **Net $**
A general purpose strain insulator of low-loss steatite.

GS-1, ½" x 1⅜" **Net $**
GS-2, ½" x 2⅞" **Net $**
GS-3, ¾" x 2⅞" **Net $**
GS-4, ¾" x 4⅞" **Net $**
GS-4A, ¾" x 6⅞"
Net $

Cylindrical low-loss steatite standoff insulators with nickel plated caps and bases.

GSJ, (not illustrated)
Net $
A special nickel plated jack top threaded to fit the ¾" diameter insulators GS-3, GS-4 & GS-4A.

GS-10, ¾" high
Net, box of ten $

GS-10S (not illustrated) but same as GS-10 except includes threaded stud in top end. **Net, box of ten $**

GS-5, 1¼" high **Net $**
GS-6, 2" high **Net $**
GS-7, 3" high **Net $**

These cone type standoff insulators are of low loss steatite. They are molded with a tapped hole in each end for mounting as follows:

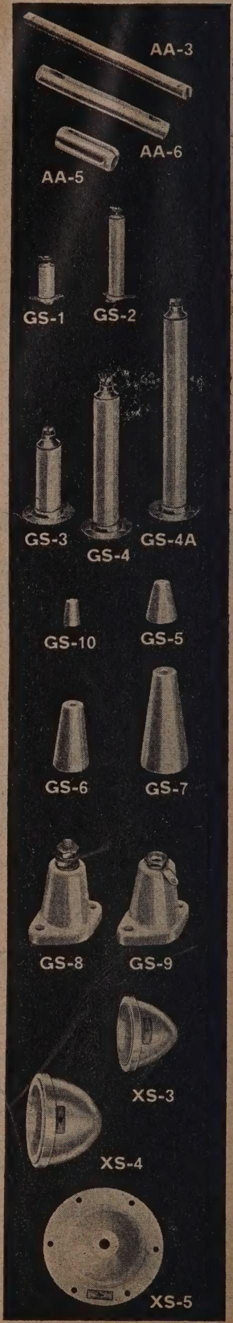
GS-5, 8-32 tap 7/16" deep; GS-6 & GS-7, 10-24 tap 11/16" deep; GS-10, 6-32 tap ¼" deep and GS-10S as noted above.

GS-8, with terminal **Net $**
GS-9, with jack **Net $**
These low-loss steatite standoff Insulators are also useful as lead-through bushings.

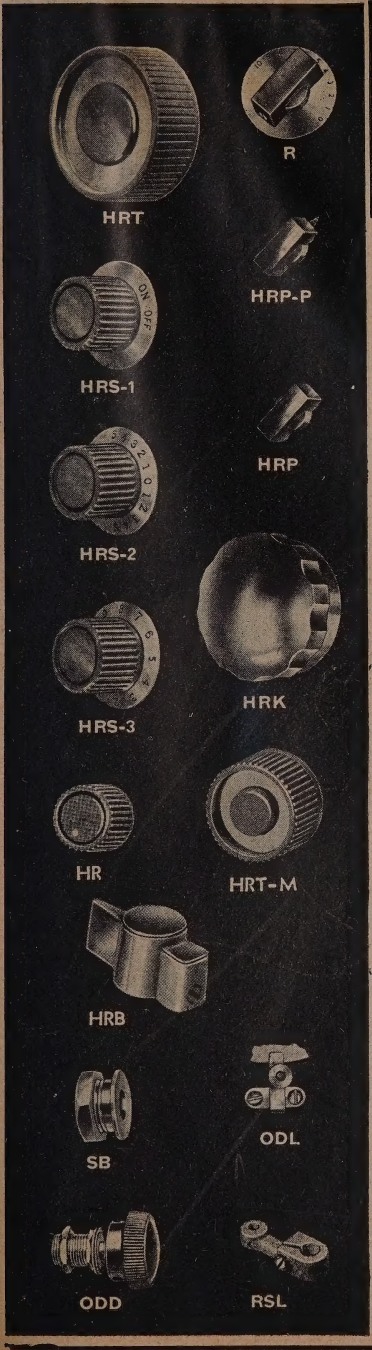
XS-3, (2¾" hole) **Net $**
XS-4, (3¾" hole) **Net $**
Prices are per pair and include nickel plated spindles, lugs and hardware. These low-loss steatite bowls are ideal for lead-in purposes at high voltages.

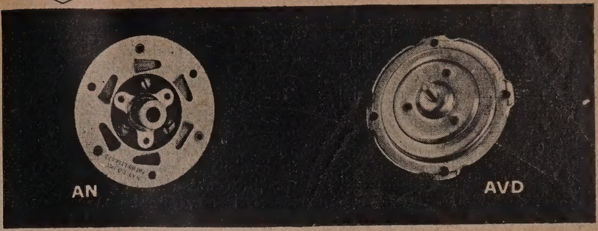
XS-5, Without Fittings
Net, each $

XS-5F, With Fittings
Net, per pair $
These big low-loss bowls have an extremely long leakage path and a 5¼" flange for bolting in place. Insulation steatite. Fittings include nickel plated brass spindles, lugs, nuts and washers.



POPULAR National COMPONENTS





HRT (gray or black) **Net $**

The HRT knob is 2⅛" in dia. and fits ¼" shafts. This knob has a chrome appearance circle and combined with the HRS series shown below gives the new look to panel layouts.

HRS (gray or black) **Net $**

The HRS series knobs are a popular easy to grip knob. They are molded of high quality plastic and have 1⅜" dia. chrome plated bevel skirts fit ¼" shafts available in the following scales:

HRS-1	ON-OFF	through 30°
HRS-2	5-0-5	through 180°
HRS-3	0-10	through 300°
HRS-4		Single etched line
HRS-5	0-10	through 180°

HR (gray or black) **Net $**

An HRS type knob without the chrome plated skirt but with a white dot for spotting relative control settings.

HRB **Net $**

Ideal for bandswitching or other applications where a switch is turned to several index positions, the new HRB lever knob has just the right feel — a bright zinc alloy die casting.

SB **Net $**

A nickel plated brass bushing ½" dia. (Fits ¼" shaft).

ODL **Net $**

A locking device which clamps the rim of O, K, L and M Dials. Brass, nickel plated.

ODD **Net $**

Vernier pinch drive for O, L, or other plain dials.

RSL (fits ¼" shaft) **Net $**
Rotor shaft lock for TMA, TMC and similar condensers.

AN Vernier Mechanism **Net $**

A vernier mechanism ratio 5-1 has an insulated output shaft coupling for ¼" shafts. Drive Shaft fits 3/16" knob.

AVD Vernier Mechanism **Net $**

Similar to AN-Output shaft coupling is non insulated.
For commercial uses many variations available. Write for further particulars.

R **Net $**

This small dial has a 1⅝" dia. scale calibrated 0-10 in 180° for increased reading with clockwise rotation. Black bakelite knob. Fits ¼" shaft.

HRP-P **Net $**

Black bakelite knob 1¼" long and ½" wide. Equipped with pointer. Especially suitable for use on wafer and other rotary switches on laboratory equipment and the like. (Fits ¼" shaft).

HRP **Net $**

The type HRP knob has no pointer but is otherwise the same as the knob above. Recommended for uncalibrated or hard-tuning controls. (Fits ¼" shaft).

HRK **Net $**

Black bakelite knob 2⅜" dial — extremely rugged. This is the knob used on National type O and type L dials.

HRT-M **Net $**

This is a smaller version of the HRT and was designed originally for use on the NC-57 Receiver — now available in choice of gray or black — is 1-7/16" in diameter.

POPULAR National COMPONENTS

N Dial Net $

AD Dial Net $

The four-inch N and AD Dials have engine divided and die stamped scales respectively. The N Dial has a decimal vernier; the AD Dial employs a pointer. The planetary drive has a ratio of 5 to 1, and is contained within the body of the dial. 2, 3, 4, 5 or blank scale. Fits ¼" shaft. **Specify scale.**

B Dial Net $

"Velvet Vernier" Dial, Type B, has a compact veriable ratio 6 to 1 min., 20 to 1 max. drive that is smooth and trouble free. The case is black bakelite. 1 or 5 scale. 4" dia. Fits ¼" shaft. **Specify scale.**

BM Dial Net $

The BM Dial is a smaller version of the B for use where space is limited. The drive ratio is fixed. Although small in size, the BM Dial has the same smooth action as the larger units. 1 or 5 scale. 3" dia. Fits ¼" shaft. **Specify scale.**

AM Dial Net $

The original "Velvet Vernier" mechanism in a metal skirted dial 3" in dia. ratio 5 to 1. It is available with 2, 3, 4, 5 or 6 scale and fits ¼" shaft.

P Dial Net $

The new P dial is the same as the AM except direct drive.

Type O, 3½" dia., scale 2, with HRK knob, fits ¼" shafts. **Net $**

Type L, same as O except 5" dia., scale 2 only. **Net $**

Type K, same as O except less knob, complete with ODD vernier drive, scale 2 only. **Net $**

Type M, same as K except 5" dia., scale 2 only. **Net $**

The dials at the right are for individual calibration: all four employ the noted 5:1 drive ratio Velvet Vernier mechanism and are of excellent quality.

MCN Dial Net $

The MCN dial has been scaled down to lend itself ideally to mobile installations and small converters and tuners. It may also be mounted on the standard 3½" rack panel where such mounting may be desirable. The dial provides three calibrating scales and a 0-100 logging scale. On the rear side of the dial, the mechanism extends ¼" below the dial frame. 2¾" H. x 3⅞" W.

SCN Dial Net $

The SCN dial provides the same dial scales as the ACN dial but in a reduced size. It is used where economy of panel-mounting space is desirable and where a smaller dial would be out of proportion with the size of the panel. 4-7/16" H. x 6¼" W.

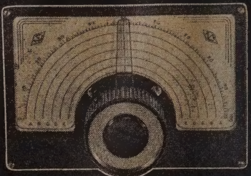
ICN Dial Net $

The ICN dial meets those hundreds of requests from amateurs the world over for an illuminated ACN dial. Two dial lights mounted on the top corners of the dial provide efficient and even illumination on all bands. The dial window has been blanked out in semi-circular shape to prevent shadow casting. Dial scales are the same as those used on the ACN dial. 5⅛" H. x 7¼" W.

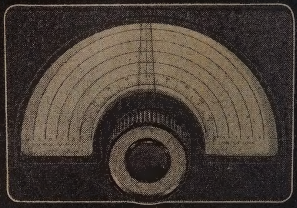
ACN Dial Net $

The ACN is the original of this type dial, a National design for the benefit of experimenters who "build their own" and desire direct calibration 5" H. x 7¼" W.

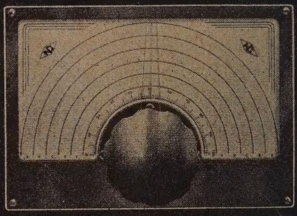
MCN



SCN



ICN



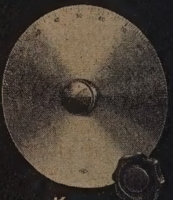
ACN

DIAL SCALES

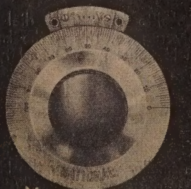
Scale	Divisions	Rotation	Direction of Condenser Rotation for increase of dial reading
1	0–100–0	180°	Either
2	0–100	180°	Counter Clockwise
3	100–0	180°	Clockwise
4	150–0	270°	Clockwise
5	200–0	360°	Clockwise
6	0–150	270°	Counter Clockwise

AM

O
L



K
M



N
AD

B

BM

P

POPULAR National COMPONENTS

XLA

XLA Net $
A low-loss socket for the 6F4 and 950 series acorn tubes for frequencies as high as 600 Mc. Conventional by-pass condensers may be compactly mounted between the contact terminals and the chassis. Low contact resistance, short and direct leads and low and constant inductance are features.

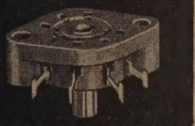
TURRET SOCKET ASSEMBLIES

TSA-1

TSA-2

TSA-1, TSA-2 Designed for our 7-pin and 9-pin miniature tube sockets. Permits compact sub-assembly wiring at base of socket. Cadmium-plated brass center support has a standard length of two inches. Silver-plated brass terminal studs. Available either with holes through which leads can be drawn, or with solid studs. Center supports of varying lengths and other types of terminals can be supplied to manufacturers in quantity.

XOA-7 (Axial)
XOA-C-7


XOR-7 (Radial)
XOR-C-7

XOA-7 (mica-filled bakelite) Net $

XOA-C-7 (ceramic) Net $

XOR-7 (mica-filled bakelite) Net $

XOR-C-7 (ceramic) Net $
These high quality sockets for the 7 pin miniature tubes have silver plated beryllium copper contacts that correctly grip the tube pins close to the base of the tube to provide the short leads and low inductance so necessary in ultra-high frequency design.

A novel feature of these new sockets is the interchangeability of the contacts, which are easily removed for replacement. This permits the use of a mixture of axial (XOA) and radial (XOR) type contacts in the same socket to obtain the shortest possible leads, or minimum size in tight places. The above sockets all mount with two 4-40 screws on .875" centers. Chassis cutout should be ¾" dia. Shields for use with these sockets are on page 21.

XOA-C-9

XOA-C-9 (ceramic) Net $

XOR-C-9 (ceramic) Net $
These sockets are for the new 9-pin miniature tubes. The XOR-C-9 (not illustrated) has radial contacts. Both have all of the features described above for the 7-pin types and they also mount with 4-40 screws. Mounting center dimension is 1⅛", the chassis cutout should be 13/16" dia.

CIR SERIES SOCKETS

CIR-5

CIR-8

CIR-8E

Any Type Net $
Always a popular National component, type CIR Sockets feature low-loss steatite insulation, a contact that grips the tube prong for its entire length, and a metal ring for six position mounting.
XC-4, 5, 6, 7S, 7L and CIR-4, 5, 6, 7S and 7L all have 1-27/32" mounting centers. CIR-8E has slotted holes in plate but will mount on 1-27/32" center. CIR-8 and XC-8 have 1½" mounting centers.

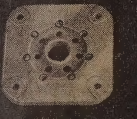
XC SERIES SOCKETS

XC-5

XC-8

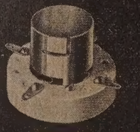
XC-4 ....Net $
XC-5 ....Net $
XC-6 ....Net $
XC-7S ....Net $
XC-7L ....Net $
XC-8 ....Net $

National wafer sockets have exceptionally good contacts with high current capacity together with low loss steatite insulation. All types have a locating groove to make tube insertion easy. The XC-6 is ideal for use with AR-17 coils shown on page 24.


HX-29

HX-29 Net $
A low-loss wafer socket with steatite insulation for the popular 829 and 832 tubes.

JX-51 Net $
A low loss steatite wafer socket for the 813 and other tubes having the Giant 7-pin base. (not illustrated)


XM-10

XM-10 Net $
A heavy duty metal shell socket for tubes having the XU 4-pin base.

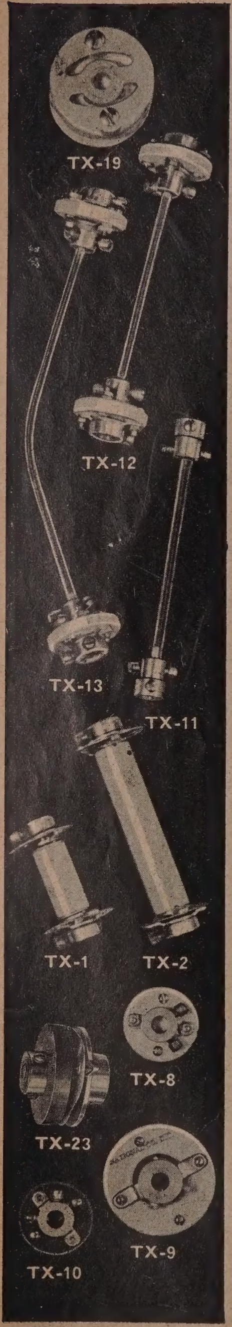
XM-50 Net $
(see XM-10 for style)
A heavy duty metal shell socket for tubes having the Jumbo 4-pin base ("fifty watters").

HX-100 Net $
A low loss wafer socket suitable for the type 4-125-A, 4-250-A and other tubes using the Giant 5-pin base. Shield grounding clips are supplied which mount on the chassis with the socket mounting screws to ground the tube shield at three points. Air holes are provided in the socket to permit forced air cooling.

HX-100S

HX-100S Net $
Same as above with standoff insulators as illustrated.

POPULAR National COMPONENTS



SHAFT COUPLINGS

TX-19 Net $
A steatite insulated flexible coupling for ¼″ shafts. Conservatively rated at 5000 volts peak. Diameter 1⅜″, length 1″. Length and flashover voltage can be increased by turning collars outboard.

TX-11 Net
The flexible shaft of this coupling connects shafts at angles up to 90 degrees, and eliminates misalignment problems. Fits ¼″ shafts. Length 4¼″.

TX-12, Length 4⅝″ Net $
TX-13, Length 7⅛″ Net $
These couplings use flexible shafting like the TX-11 above, but are also provided with steatite insulators at each end.

TX-1, Leakage path 1″ Net $
TX-2, Leakage path 2½″ Net $
Flexible couplings with glazed steatite insulation which fit ¼″ shafts.

TX-23 Net $
A deluxe insulated flexible coupling designed for coupling ¼″ shafts. Will handle a maximum radial misalignment of 1/16″ also 2 degrees maximum angular misalignment.

TX-24 Net $
Same as TX-23, shaft size 5/32″.

TX-25 Net $
Same as TX-23, non-insulated.

TX-8 Net $
A non-flexible rigid coupling with steatite insulation. 1″ diam. Fits ¼″ shaft.

TX-10 Net $
A very compact insulated coupling free from backlash. Insulation is canvas bakelite. 1-1/16″ diam. Fits ¼″ shaft.

TX-10F (Not illustrated) Net $
A new version of the TX-10 which employs thin canvas bakelite strips for flexibility.

TX-22 (Not illustrated) Net $
A non-insulated coupling identical to TX-10 except of all metal construction. Makes good electrical connection between coupled shafts.

TX-9 Net $
This small insulated flexible coupling provides high electrical efficiency when used to isolate circuits. Insulation is steatite. 1⅝″ diam. Fits ¼″ shaft.

TX-21 (Not illustrated) Net $
Similar to TX-10 except 13/16″ long and couples ¼″ shaft to 5/32″ shaft.

SAFETY GRID AND PLATE CAPS

SPP-9 Net $
Ceramic insulation. Fits 9/16″ diameter.

SPP-3 Net $
Ceramic insulation. Fits ⅜″ diameter. National Safety Grid and Plate Caps have a ceramic body which offers protection against accidental contact with high voltage caps on tubes.

GRID AND PLATE GRIPS

Type 12, for 9/16″ Caps	Net $
Type 24, for ⅜″ Caps	Net $
Type 8, for ¼″ Caps	Net $

National Grid and Plate Grips provide a secure and positive contact with the tube cap and yet are released easily by a slight pressure on the ear.

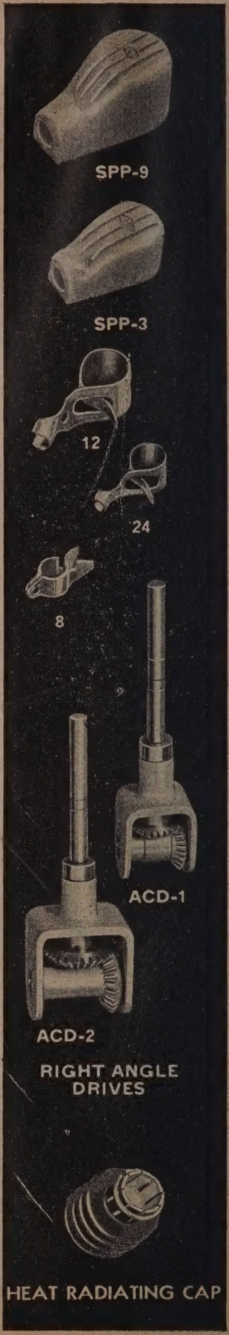
RIGHT ANGLE DRIVES

ACD-1	Net $
ACD-2	Net $
ACD-3	Net $

These sturdy drives were developed for use with the new National AMT condensers (see page 26). They are as compact as the torque requirements will allow and have nickel plated cast frames and bronze gears which operate smoothly without chatter or binding. The ACD-1 has 32 pitch gears and a ¼″ dia. dial shaft and drives ¼″ shafts. ACD-2 has 24 pitch gears (for heavier service) and ¼″ dia. shaft driving ¼″ shafts. ACD-3 is the same as ACD-2 except that it drives ⅜″ diameter shafts.

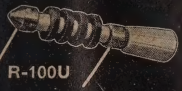
HEAT RADIATING CAPS. Designed to government specifications. Aluminum contact fingers are integral with radiating fins. Tension on fingers maintained by an encircling steel spring. 6/32″ tapped center hole for attaching grid ribbon or other lead. Crimped beryllium copper, silver-plated grid ribbon 3¼″ long, supplied with each cap. Special lengths can be supplied to manufacturers in quantities.

Type No.	Price	Hole Size For Lead or Cap		Heat Radiating Connectors To Fit the Following Tubes
		Max.	Min.	
HC-26		.051	.045	3C24, HK24, 24G, 25T
HC-27		.062	.058	UH50, 304B, 829B, 832A, 834
HC-28		.072	.062	35T, 35TG, 75TH, 8001
HC-29		.126	.120	152TH
HC-30		.365	.350	4-125A, 250R, 250TH, 25TL, 802, 804, 807, 814, 815, 828
HC-31		.128	.116	304TH, 304TL
HC-32		.573	.558	100R, 450TH, 803, 805, 806, 808, 809, 810, 811, 812, 813, 833A, 866, 1500T, 2000T, 8000, 80003, 80005, HF100, ZB60, HF60, 111H, 211H, 203H, HF175, 5311, 5332
HC-33		.807	.793	WL460, WL463, WL468, HF200, HF201, HF300



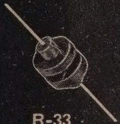
POPULAR National COMPONENTS

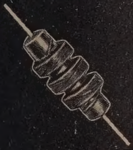
R-100

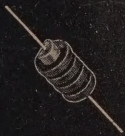

R-100U

R-100S

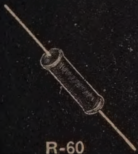
R-100ST


R-33




R-50

R-33G


R-60

R-100 ....Net $
R-100U ....Net $
R-100S ....Net $
R-100ST ....Net $

These RF chokes are identical electrically, but differ in mounting provisions. The R-100 employs pigtail leads; the R-100U has pigtail leads and a removable stand-off insulator; the R-100S has cotter-pin lug terminals and a non-removable stand-off insulator; the R-100ST has a 6-32 threaded stud at each end. These chokes are available in 2.5, 5 and 10 millihenry sizes and are rated at 125 milliamperes.

R-33 Net $

The R-33 series chokes are 2-section RF chokes available in 10, 50, 100 and 750 microhenry sizes. Also available in this series is a single layer solenoid choke of 1 microhenry inductance. All are rated at 33 milliamperes. The chokes are wound on a ⅝" long form and range in diameter up to 5/16" maximum.

R-50 Net $
R-50-1 Net $

The R-50 series chokes are 3 and 4-section RF chokes and available in 0.5, 1, 2.5, and 10 millihenry sizes. They are rated at 50 milliamperes. The chokes are wound on a 1" long form and have a maximum diameter of 15/32". The 10 millihenry R—50-1 choke is wound on an iron core.

R-33G Net $

The R-33G choke is a 2-section 750 microhenry RF choke hermetically sealed in glass with a current rating of 33 milliamperes. The choke body is 1" long by ⅝" diameter.

R-60 Net $

The R-60 choke is a high current RF choke (500 milliamperes) available in 2 and 4 microhenry sizes. The choke is 1⅛" long by 5/16" diameter.

R-300 ....Net $
R-300U ....Net $
R-300S ....Net $
R-300ST ....Net $

These RF chokes are similar in size to R-100 series but have higher current capacity. The R-300U is provided with a removable stand-off insulator at one end. The R-300S has a non-removable stand-off insulator and cotter-pin lug terminals. The R-300ST has a 6-32 threaded stud at each end. Inductance values of 0.5, 1.0, 2.5 and 5.0 millihenries are available with a current rating of 300 milliamperes. R-300, R-300U, R-300S and R-300ST are identical electrically.

R-152 Net $

For use in the range between 2 and 4 Mc. Ideal for high power transmitter stages operated in the 80 meter amateur band. Inductance 4 m.h., DC resistance 10 ohms, DC current 600 ma. Coils honeycomb wound on steatite core.

R-154 Net $
R-154U Net $

For the 20, 40 and 80 meter bands, Inductance 1 m.h., DC resistance 6 ohms, DC current 600 ma. Coils honeycomb wound on steatite core. The R-154U does not have the third mounting foot and the small insulator, but is otherwise the same as R-154. See illustration.

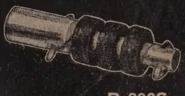
R-175 Net $

The R-175 Choke is suitable for parallel-feed as well as series-feed in transmitters with plate supply up to 3000 volts modulated or 4000 volts unmodulated. Unlike conventional chokes, the reactance of the R-175 is high throughout the 10 and 20 meter bands as well as the 40 and 80 meter bands. Inductance 225 µh, distributed capacity 0.6 mmf., DC resistance 6 ohms, DC current 800 ma., voltage breakdown to base 12,500 volts.

Manufacturers: We have facilities for quantity production of RF chokes of practically any type. Send us your specifications.

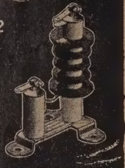
R-300

R-300U

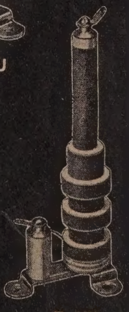

R-300S

R-300ST

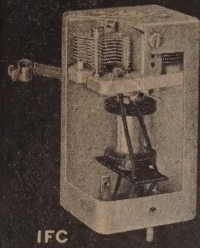
R-152


R-154

R-154U

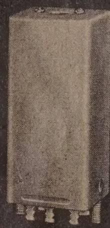

R-175

POPULAR National COMPONENTS



IFC

IFCO

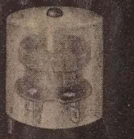


IFL

IFM

IFN

IFO



OSR

XR-50

AR-5

AR-2

I. F. TRANSFORMERS

IFC, Transformer, **Net $**

IFCO, Oscillator, **Net $**

Litz coils wound on a polystyrene form and ceramic insulated air-dielectric trimming condensers make these transformers inherently stable and exceptionally retentive of tuning. The 4½" x 2⅜" x 2" shield can has two 6-32 spade bolts for mounting. Available for either 175 KC or 450-550 KC. Specify frequency.

IFL FM Discriminator **Net $**

IFM IF Transformer **Net $**

IFN IF Transformer **Net $**

IFO FM Ratio Discriminator **Net $**

IFL, IFM, IFN and IFO transformers operate at 10.7 Mc. and are designed for use in FM Superheterodyne receivers. Coils are precision wound on grooved polystyrene forms and tuning is accomplished by movable iron cores. Bandwidth is not affected by tuning slug position. The transformer cans are 1⅜" square and stand 3⅛" above the chassis. Two 6-32 spade bolts are provided for mounting.

The IFL transformer is a 10.7 Mc. FM discriminator transformer suitable for use in conventional FM receiver discriminator circuit and is linear over a band of ±100 Kc.

The IFM transformer is a 10.7 Mc. IF transformer with a 150 Kc. bandwidth at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFM Transformer and 6SG7 tube.

The IFN transformer is a 10.7 Mc. IF transformer with a 100 Kc. pass band at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFN Transformer and 6SG7 tube.

The IFO transformer is a 10.7 Mc. FM discriminator transformer of the ratio type and is linear over a band of ±100 Kc.

IFJ, with variable coupling **Net $**

IFK, with fixed coupling **Net $**

15 Mc. IF transformers suitable for ultra high frequency superheterodynes. They are made in two models with and without variable coupling. Approximate stage gain of 10 is obtained with IFJ or IFK Transformer and 6AB7 tube.

SA:4842 **Net $**

A 456 kc. discriminator transformer for narrow band frequency modulation. This unit is the nucleus of the NFM adapter described by Harrington and Bartell in November 1947 QST. Two slug-tuned secondaries are employed and discrimination is accomplished by resonating one at approximately 10 kc. above, the other at approximately 10 kc. below the center frequency of the i.f. channel.

CD-1, ¼ pint can **Net $**

Liquid Polystyrene Cement — is ideal for windings as it will not spoil the properties of the best coil form.

COILS AND COIL FORMS

AR-2 H.F. Coil **Net $**

AR-5 H.F. Coil **Net $**

The AR-2 and AR-5 coils are high Q permeability tuned RF coils on low loss mica-filled bakelite forms. The AR-2 coil tunes from 75 Mc. to 220 Mc. with capacities from 100 to 10 mmfd. The AR-5 coil tunes from 37 Mc. to 110 Mc. with capacities from 100 to 10 mmfd. The inductive windings supplied may be replaced by other windings as desired to modify the tuning range.

XR-50 **Net $**

These mica-filled bakelite coil forms may be wound as desired to provide a permeability tuned coil. The form winding length is 11/16" and the form winding diameter is ½ inch. The iron slug is ⅜" dia. by ½" long.

XR-51 same but with brass slug

OSR **Net $**

A shielded oscillator coil which tunes to 100 kc. with .00041 mfd. Two separate inductances, closely coupled. Excellent for interruption-frequency oscillator in superregenerative receivers.

CERAMIC SLUG-TUNED COIL FORMS

XR-70 (grooved for #19 wire, with iron slug) **Net $**

XR-71 (same, brass slug) **Net $**

XR-72 (not grooved, winding length 1", with iron slug) **Net $**

XR-73 (same, brass slug) **Net $**

XR-60 (grooved for #26 wire, with iron slug) **Net $**

XR-61 (same, brass slug) **Net $**

XR-62 (not grooved, winding length 1¼", with iron slug) **Net $**

XR-63 (same, brass slug) **Net $**

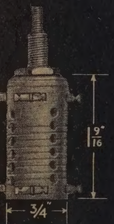
High-grade ceramic coil forms conforming to JAN specifications. May be wound as desired to provide a permeability-tuned coil. Extra lugs provided.

IFJ

IFK

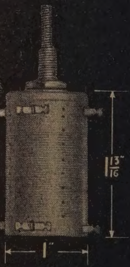
SA-4842

CD-1



XR-70 XR-71

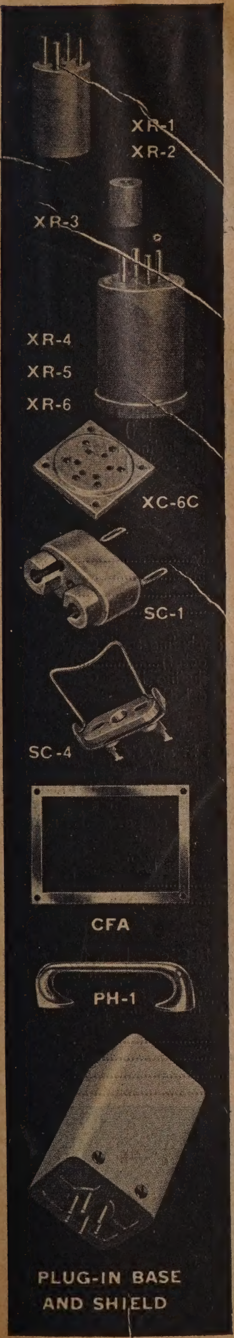
XR-72 XR-73



XR-60 XR-61

XR-62 XR-63

POPULAR National COMPONENTS



Coil Forms molded of R-39 mica-filled bakelite permitting them to be grooved and drilled. Coil Form diameter 1", length 1½".

XR-1, Four Prong Net $

XR-2, Without Prongs Net $

XR-3, molded of R-39 Diameter 9/16", length ¾" without prongs. Net $

XR-4, Four Prong Net $

XR-5, Five Prong Net $.

XR-6, Six Prong Net $
Molded of R-39, permitting them to be grooved and drilled. Coil Form Diameter 1½", length 2¼". A special socket is required for the XR-6.
National type **XC-6C** Net $

SC, Crystal Sockets Net $
The SC-1, SC-2, and SC-3 are crystal mounting sockets for crystal holders with mounting pins spaced 0.5000", 0.486", and .750" respectively and pin diameters of ⅛" and 3/32" and ⅛" respectively, steatite insulation. Single 4-36 or 4-40 screw mounting for SC-1 and SC-2; single 6-32 screw mounting for SC-3.

SC-4 Ceramic crystal socket with clamp. Pin spacing .500". Pin dia. 1/32". Net $

CFA Net $
The National chart frame is supplied with a celluloid sheet to cover he chart size 2¼" x 3¼" with sides ¼" wide. Durable finish.

PH-1 An attractive and rugged pull handle of cast zinc alloy chrome plated, with 10-32 Tapped Holes on 3¾" mounting centers. Net $.

PH-2 Same as PH-1 but with black or gray finish. Net $
The plug in base and shield includes the low loss R-39 base which is ideal for mounting condensers and coils when it is desirable to have them shielded and easily removable. Shield is 2" x 2⅜" x 4½".

PB-10-5 Net $
5 Prong base and shield

PB-10-6 Net $
6 Prong base and shield

PB-10-A-5 Net $
5 Prong base only

PB-10-A-6 Net $
6 Prong base only

RZ Coil Shield Net $
1⅜" square x 4" high.
RS Coil Shield Net $
1-7/16" x 1⅞" x 3½" high.

RO Coil Shield Net $
2" x 2⅜" x 4⅛" high. National Coil Shields are formed from a single piece of pure aluminum. They are mechanically strong and have ample thickness to mount small parts on the walls, and include spade belts, for chassis mounting.

T-78 Tube Shield Net $.
National Tube Shield type T-78 is a three-piece pure aluminum shield suitable for shielding glass tubes with ST-12 bulb, such as the 6C6 and 6D6 tubes.

JS-1 Jack Shield Net $
For shielding small standard jacks mounted behind a panel, or on the ends of extension coils. Indispensable for reducing hum pickup.

XOS Tube Shields Net $
The XOS tube shield is a two-piece shield for the miniature Button 7 and 9 pin base tubes. The shield is available in three sizes corresponding to the tube body heights XOS-1 for 1-5/16", XOS-2 for 1½", XOS-3 for 2"

The shield contains a spring which centers tube in shield and holds tube and shield firmly in place.

SHIELDS 7-pin SOCKETS

XOS-1 fit 1-5/16" tube body $
XOS-2 fit 1½" tube body
XOS-3 fit 2" tube body

SHIELDS 9-pin SOCKETS

XOS-4 fit 1-5/16" body
XOS-5 fit 1½" tube body
XOS-6 fit 2" tube body

FXT Fixed tuned exciter tank similar in general construction to National I.F. transformers, this unit has two 25 mmf., 2000 volt air condensers and an unwound XR-2 Coil form.

FXT (Without plug-in base) Net $

FXTB-5 (With 5 prong base) Net $

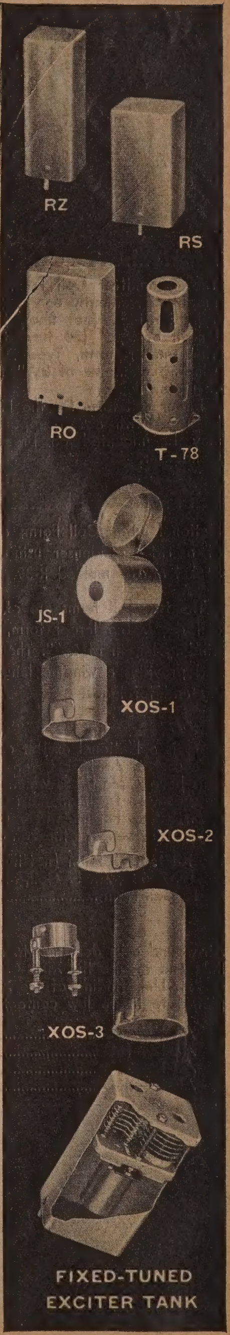
FXTB-6 (With 6 prong base) Net $

Paint (not illustrated)

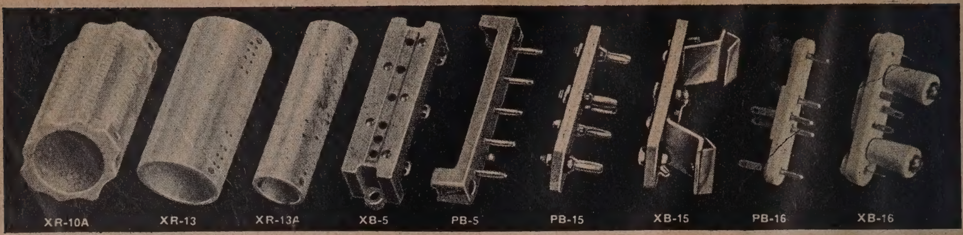
CP-1, dark gray Net $

CP-2, black Net $
A high quality air-drying paint that may be applied with a brush.

CP-3, light gray, matches newest National receivers—for spraying and baking. Net $



POPULAR National COMPONENTS



TRANSMITTER COIL FORMS

The Transmitter Coil Forms and Mounting are designed as a group, and mount conveniently on the bars of a TMA condenser. The larger coil form, Type XR-14A, (not illustrated) has a winding diameter of 5", a winding length of 3¾" (30 turns total) and is intended for the 80 meter band. The smaller form, Type XR-10A, has a winding length of 3¾" and a winding diameter of 2½" (26 turns total). It is intended for the 20 and 40 meter bands.

Either coil form fits the PB-15 plug. For higher frequencies, the plug may be used with a self-supporting coil of copper tubing. The XB-15 Socket may be mounted on breadboards or chassis, as well as on the TMA Condenser.

SINGLE UNITS	
XR-10A, Coil Form only	Net $
XR-14A, Coil Form only	Net $
PB-15, Plug only	Net $
XB-15, Socket only	Net $
ASSEMBLIES	
UR-10A, Assembly (including small Coil Form, Plug and Socket)	Net $
UR-14A, Assembly (including large Coil Form, Plug and Socket)	Net $

BUFFER COIL FORMS

National Buffer Coil Forms are designed to mount directly on the tie bars of a TMC condenser using the PB-5 Plug and XB-5 Socket. Plug and Socket are of molded R-39.

The two coil forms are of steatite, unglazed to provide a tooth for coil dope. The larger form, Type XR-13, is 1¾" in diameter and has a winding length of 2¾". The smaller form, Type XR-13A, is 1" in diameter and provides a winding length of 2¾". Both forms have holes for mounting and for leads.

SINGLE UNITS	
XR-13, Coil Form only	Net
XR-13A, Coil Form only	Net $
PB-5, Plug only	Net $
XB-5, Socket only	Net $
ASSEMBLIES	
UR-13A, Assembly (including small Coil Form, Plug and Socket)	Net $
UR-13, Assembly (including large Coil Form, Plug and Socket)	Net $

EXCITER COILS

There is a National exciter coil for every application. AR-15 coils are mounted on 5 pin bases which fit any standard 5 contact tube socket. AR-16 coils are mounted on the well known National PB-16 plug which fits the National XB-16 socket. The AR-17 coils have 6 pin bases which fit standard 6 contact tube sockets and the link windings of this series have center taps which may be grounded for harmonic reduction. All center link models are center tapped for use in balanced circuits. Insulation polystyrene and steatite. For use where plate power input does not exceed 50 watts. Available with fixed or swinging end or center links for all amateur bands, 6 through 80 meters.

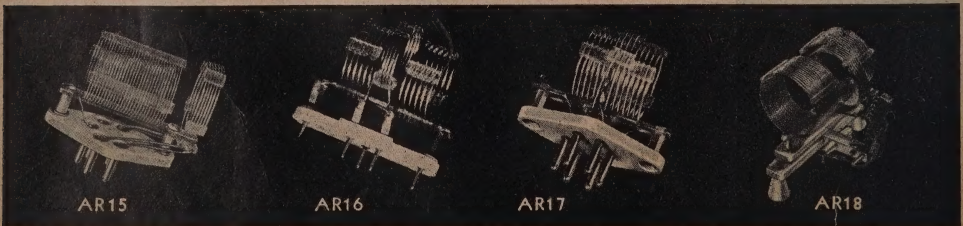
The XR-16 Coil Form (not illustrated) fits the PB-16 Plug-in Base; it has a winding length of 1¾", diameter 1¼"

AR-15, AR-16, AR-17 Coil, any type	Net $	PB-16 Plug-in Base	Net $
XR-16 Coil Form	Net $	XB-16 Socket for PB-16	Net $

500 WATT COILS

Air-wound coils designed to mount on the split stator models of National AMT condensers. The AR18-C coils have fixed center links and require the XB18-C socket. The AR18-S coils are designed to accommodate the swinging link furnished with the XB18-S socket. Link winding of the XB18-S has a center tap which may be grounded for harmonic reduction. Plugs and jacks are silver plated to insure low contact resistance. Insulation, steatite. The sockets (not illustrated) are 7¼" in length.

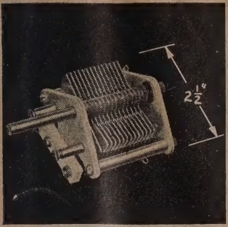
AR-18— 6C ....$
AR-18—10C ....
AR-18—20C ....
AR-18—40C ....
AR-18—80C ....
AR-18— 6S ....
AR-18—10S ....
AR-18—20S ....
AR-18—40S ....
AR-18—80S ....
XB—18S ....
XB—18C ....



POPULAR National COMPONENTS

TYPE TMS TRANSMITTING CONDENSERS

This is a condenser designed for transmitter use in low power stages. It is compact, rigid, and dependable. Provision has been made for mounting either on the panel, on the chassis, or on two stand-off insulators. Insulation is steatite. Voltage ratings listed are conservative.

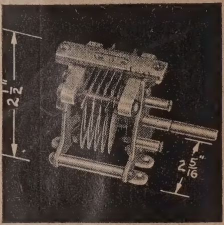


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
100 Mmf.	9.5	3″	.026″	1000v.	9	TMS-100	$
150	11	3″	.026″	1000v.	14	TMS-150	
250	13.5	3″	.026″	1000v.	22	TMS-250	
300	15	3″	.026″	1000v.	27	TMS-300	
35	8	3″	.065″	2000v.	7	TMSA-35	
50	11	3″	.065″	2000v.	11	TMSA-50	
DOUBLE STATOR MODELS							
50–50 Mmf.	6–6	3″	.026″	1000v.	5–5	TMS-50D	$
100–100	7–7	3″	.026″	1000v.	9–9	TMS-100D	
50–50	10.5–10.5	3″	.065″	2000v.	11–11	TMSA-50D	

TYPE TMK TRANSMITTING CONDENSERS

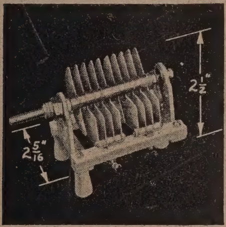
This is a new condenser for exciters and low power transmitters. Special provision has been made for mounting AR-16 coils in a swivel plug-in mount on either the top or rear of the condenser. For stand-off or panel mounting-steatite insulation.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
35 Mmf.	7.5	2 7/32″	.047″	1500v.	7	TMK-35	$
50	8	2⅜″	.047″	1500v.	9	TMK-50	
75	9	2 11/16″	.047″	1500v.	13	TMK-75	
100	10	3″	.047″	1500v.	17	TMK-100	
150	10.5	3⅝″	.047″	1500v.	25	TMK-150	
200	11	4¼″	.047″	1500v.	33	TMK-200	
250	11.5	4⅞″	.047″	1500v.	41	TMK-250	
DOUBLE STATOR MODELS							
35–35 Mmf.	7.5–7.5	3″	.047″	1500v.	7–7	TMK-35D	$
50–50	8–8	3⅝″	.047″	1500v.	9–9	TMK-50D	
100–100	10–10	4¼″	.047″	1500v.	17–17	TMK-100D	
Swivel Mounting Hardware for AR 16 Coils						SMH	$



TYPE TMH TRANSMITTING CONDENSERS

A condenser that features very compact construction. Excellent power factor, and aluminum plates .0400" thick with polished edges. It mounts on the panel or on removable stand-off insulators. Steatite insulators have long leakage path. Stand-offs included in listed price.

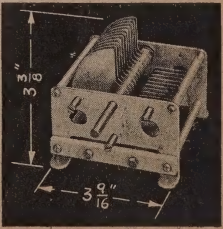


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50 Mmf.	9	3¾″	.085″	3500v.	15	TMH-50	$
75	11	3¾″	.085″	3500v.	19	TMH-75	
100	12.5	5⅛″	.085″	3500v.	25	TMH-100	
150	18	6½″	.085″	3500v.	37	TMH-150	
35	11	5⅛″	.180″	6500v.	17	TMH-35A	
DOUBLE STATOR MODELS							
35–35 Mmf.	6–6	3¾″	.085″	3500v.	9–9	TMH-35D	$
50–50	8–8	5⅛″	.085″	3500v.	13–13	TMH-50D	
75–75	11–11	6½″	.085″	3500v.	19–19	TMH-75D	

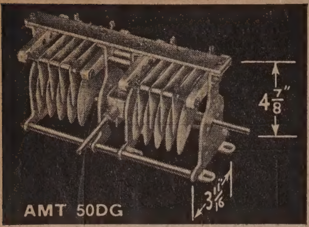
TYPE TMC TRANSMITTING CONDENSERS

A condenser designed for use in the power stages of transmitters where peak voltages do not exceed 3000 volts. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are aluminum with buffed edges. Insulation is steatite. The stator in the split stator models is supported at both ends.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50 Mmf.	10	3″	.077″	3000v.	7	TMC-50	$
100	13	3½″	.077″	3000v.	13	TMC-100	
150	17	4⅝″	.077″	3000v.	21	TMC-150	
250	23	6″	.077″	3000v.	32	TMC-250	
300	25	6¾″	.077″	3000v.	39	TMC-300	
DOUBLE STATOR MODELS							
50–50 Mmf.	9–9	4⅝″	.077″	3000v.	7–7	TMC-50D	$
100–100	11–11	6¾″	.077″	3000v.	13–13	TMC-100D	
200–200	18.5–18.5	9¼″	.077″	3000v.	25–25	TMC-200D	



POPULAR National COMPONENTS

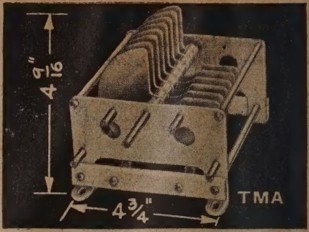


TYPE AMT

A larger and sturdier model of the TMK condenser. The frame is extremely rigid, with mounting feet a part of the end plates. Heavy steatite insulation.

The solid aluminum tie bar across the top of the condenser acts as a mounting for AR-18 series coils in the double stator models.

The double stator models are available in either standard end drive (D series) or center-drive (DG series) with 1/4" dia. shaft extension.



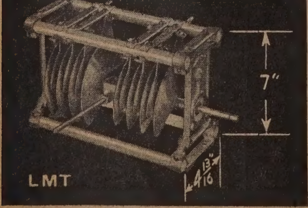
TYPE TMA

This is a larger model of the popular TMC. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are of heavy aluminum with rounded and buffed edges. Insulation is steatite located outside of the concentrated field.

Maximum Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50 Mmf.	13	4 3/4"	.177"	6000 v.	9	AMT-50	$
100	20	6 3/4"	.177"	6000 v.	17	AMT-100	
300	19.5	4 9/16"	.077"	3000 v.	23	TMA-300	
50	15	4 9/16"	.171"	6000 v.	7	TMA-50A	
100	19.5	6 7/8"	.171"	6000 v.	15	TMA-100A	
150	22.5	6 7/8"	.171"	6000 v.	21	TMA-150A	
230	33	9 5/16"	.171"	6000 v.	33	TMA-230A	
100	30	9 1/4"	.265"	9000 v.	23	TMA-100B	
150	40.5	12 1/2"	.265"	9000 v.	33	TMA-150B	
50	21	7 1/8"	.359"	12,000 v.	13	TMA-50C	
100	37.5	12 7/8"	.359"	12,000 v.	25	TMA-100C	
75	25	18 1/16"	.719"	20,000 v.	17	TML-75E	
150	60	18 1/16"	.469"	15,000 v.	27	TML-150D	
100	45	13 5/8"	.469"	15,000 v.	19	TML-100D	
50	22	8 5/16"	.469"	15,000 v.	9	TML-50D	
245	54	18 1/16"	.344"	10,000 v.	35	TML-245B	
150	45	13 5/8"	.344"	10,000 v.	21	TML-150B	
100	32	10 15/16"	.344"	10,000 v.	15	TML-100B	
75	23.5	8 5/16"	.344"	10,000 v.	11	TML-75B	
500	55	18 1/16"	.219"	7,500 v.	49	TML-500A	
350	45	13 5/8"	.219"	7,500 v.	33	TML-350A	
250	35	10 15/16"	.219"	7,500 v.	25	TML-250A	
DOUBLE STATOR MODELS D—End drive DG—Center drive							
50–50	13–13	9 3/8"	.177"	6000 v.	18	AMT-50D	
100–100	20–20	13 3/8"	.177"	6000 v.	34	AMT-100D	
50–50	13–13	9 3/8"	.177"	6000 v.	18	AMT-50DG	
100–100	20–20	13 3/8"	.177"	6000 v.	34	AMT-100DG	
200–200	15–15	6 7/8"	.077"	3000 v.	16–16	TMA-200D	
180–180	10–10	12 3/4"	.140"	4000 v.	24–24	TMA-180D	
50–50	12.5–12.5	6 7/8"	.155"	6000 v.	8–8	TMA-50DA	
100–100	17–17	9 5/16"	.155"	6000 v.	14–14	TMA-100DA	
60–60	19.5–19.5	12 1/2"	.249"	9000 v.	15–15	TMA-60DB	
40–40	18–18	12 7/8"	.343"	12,000 v.	11–11	TMA-40DC	
30–30	12–12	18 1/16"	.719"	20,000 v.	7–7	TML-30DE	
60–60	26–26	18 1/16"	.469"	15,000 v.	11–11	TML-60DD	
100–100	27–27	18 1/16"	.344"	10,000 v.	15–15	TML-100DB	
60–60	20–20	13 5/8"	.344"	10,000 v.	9–9	TML-60DB	
200–200	30–30	18 1/16"	.219"	7,500 v.	21–21	TML-200DA	
100–100	17–17	10 15/16"	.219"	7,500 v.	11–11	TML-100DA	

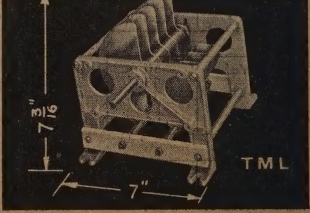
TYPE LMT

A heavy duty transmitting condenser that completely eliminates troublesome closed loops, vastly simplifying the problem of unwanted harmonics. The rotor shaft is completely insulated from the end plates. Long leakage path (higher safety factor). Plates and parts are extra heavy with highly polished rounded edges to prevent flash-over. Adjustable stator plate mounting and end bearings. Available in single-stator, double-stator, or double-stator right angle center drive models. Same capacities and prices as National TML Condenser.

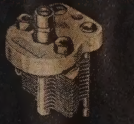


TYPE TML

is a heavy duty job throughout. The frame structure (rugged aluminum castings with dural tie bars) and precision bearings assure permanent rotor alignment. All plates are extra thick with rounded and polished edges. This, plus specially treated steatite insulators and a husky self-cleaning rotor contact, provides high flashover, current and voltage ratings.

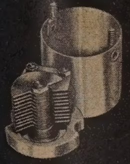


POPULAR National COMPONENTS



PSR

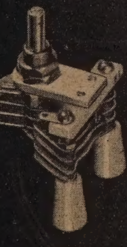
M30



W100

NC-600U

TU BY



STN

MINIATURE CONDENSERS:

Type PS variable condensers are compact silver plated units of soldered construction for use as semi-fixed bandsets or padders. Base is steatite — bearing is "snug" but smooth. PSR models are screwdriver adjust type; PSE have ¼" diameter shafts both ends; PSL are similar to PSR but include rotor shaft lock.

Type M-30 **Net $**
The M-30 is a tiny (13/16" x 9/16" x ½") mica trimmer — 30 mmf. max. — steatite base.

Type W-75, 75 mmf. **Net $**

Type W-100, 100 mmf. **Net $**
Small air-dielectric padding condensers having a very low temperature coefficient. They are mounted in 1¼" diameter aluminum shields and have ¼" hex heads for socket-wrench adjustment.

The UM condensers are low-loss, aluminum plate staked construction miniature variables designed for UHF converters, VFOs and the like — minimum capacity is exceptionally low. The UMs can be mounted in PB-10 or RO shield cans and have ¼" dia. shafts front and rear for ganging (see pages 21, 23 and 24 for shield cans and couplings). Plates: straight-line-cap., 180° rotation. Dimensions: Base 1" x 2¼", mtg. holes on ⅝" x 1-23/32" centers, 2-5/16" max. length.

The UMB-25 and UMB-50 are differential (balanced stator) models. UM-10D and UMA-25 are double-spaced and the latter is bolted construction for experimental capacity reduction. Hardware for panel or chassis mounting is supplied with all UM condensers.

Capacity	Catalog Symbol			Net
25 mmf.	PSR-25	PSE-25	PSL-25	$
50	PSR-50	PSE-50	PSL-50	
75	PSR-75	PSE-75	PSL-75	
100	PSR-100	PSE-100	PSL-100	

Capacity	Minimum Capacity	No. of Plates	Air Gap	Catalog Symbol	Net
15 mmf.	1.5	6	.017"	UM-15	$
35	2.5	12	.017"	UM-35	
50	3	16	.017"	UM-50	
75	3.5	22	.017"	UM-75	
100	4.5	28	.017"	UM-100	
10	1	8	.042"	UM-10D	
25	3.4	14	.042"	UMA-25	
BALANCED STATOR MODEL					
25	2	4-4-4	.017"	UMB-25	$
50	5	8-8-8	.017"	UMB-50	

NEUTRALIZING CONDENSERS:

NC-600U **Net $**
With standoff insulator

NC-600 **Net $**
Without insulator

For neutralizing low power beam tubes requiring from .5 to 4 mmf., and 1500 max. total volts such as the 6L6. The NC-600U is supplied with a GS-10 standoff insulator screwed on one end, which may be removed for pigtail mounting.

"TU BY" CONDENSERS

Tubular condensers providing short r.f. path between plate and cathode for tubes having the plate connection at the top. Design reduces harmonics and helps eliminate parasitics. 3,000 volts or 1,500 volts. 15 mmfd. **Net $**

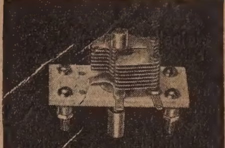
STN **Net $**
The Type STN has a maximum capacity of 18 mmf. (3000 V), making it suitable for such tubes as the 809. It is supplied with two standoff insulators.

NC-800A **Net $**
The NC-800A disk-type neutralizing condenser is suitable for the T40, 35TG, 808 and similar tubes. It is equipped with a clamp for locking. The chart below gives capacity and air gap for different settings.

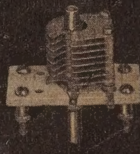
NC-75 **Net $**
For 812, 75TH and similar tubes.

NC-150 **Net $**
For RK36, 100TH, HK354, 250TH, etc.

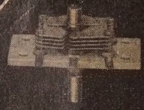
NC-500 **Net $**
For WE-251, 304TH, 833A and the like. These large disk-type neutralizing condensers are for the higher powered tubes. Disks are aluminum, insulation steatite.



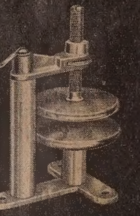
UM



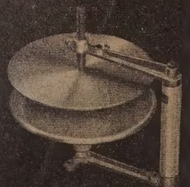
UMA-25



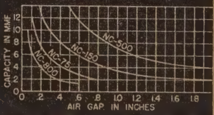
UMB-25



NC-800A



NC-75
NC-150
NC-500



POPULAR National COMPONENTS

PRECISION CONDENSERS

Originally developed for the famous HRO and NC-100 receivers, National PW and NPW condensers and drive units are well known to professional and amateur radio men throughout the world. Sturdily constructed of the finest materials and carefully adjusted by skilled hands, they have become "standard specifications" for applications requiring smooth, precise control and high re-set accuracy.

The Micrometer Dial reads direct to one part in 500. Division lines are approximately 1/4" apart. The drive, at the mid-point of the rotor, is through an enclosed preloaded worm gear with 20 to 1 ratio. Each rotor is individually insulated from the frame, and each has its own individual rotor contact. Stator insulation is steatite. Plate shape is straight-line frequency when the frequency range is 2:1.

PW Condensers are available in 1, 2, 3 or 4 sections, in either 160 or 225 mmf per section. Larger capacities cannot be supplied.

PW-1R	Single section right	**Net $**
PW-1L	Single section left	**Net $**
PW-2R	Double section right	**Net $**
PW-2L	Double section left	**Net $**
PW-2S	Single section each side	**Net $**
PW-3R	Double section right; single left	**Net $**
PW-3L	Double section left; single right	**Net $**
PW-4	Double section each side	**Net $**
NPW-3	Three sections, each 225 mmf.	**Net $**

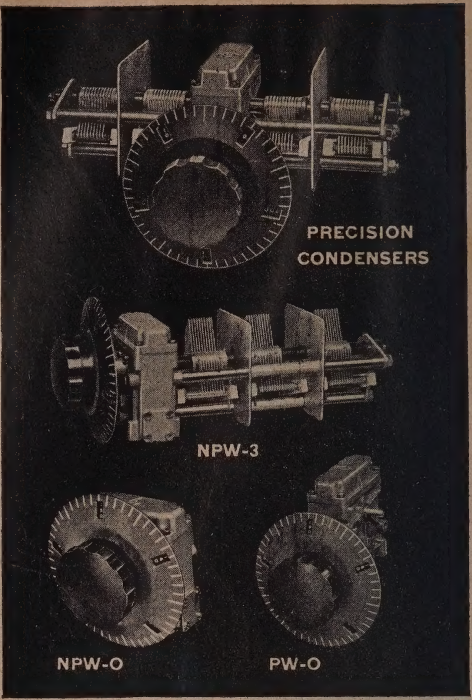
Similar to PW models, except that rotor shaft is perpendicular to panel.

NPW-O **Net $**

Uses parts similar to the NPW condenser. Drive shaft perpendicular to panel. One TX-9 coupling supplied.

PW-O **Net $**

Uses parts similar to the PW condenser. Drive shaft parallel to panel. Two TX-9 couplings supplied.



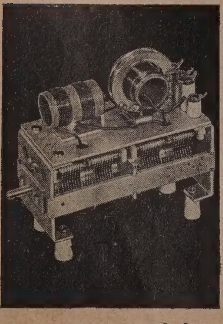
PW-D **Net $**

The Micrometer Dial used on the condensers and drives above is available separately. It revolves ten times in covering the complete range and as there is no gear reduction unit furnished, the driven shaft will revolve ten times, also. The PW-D dial fits a shaft 5/16" in diameter.

MULTI-BAND TANK ASSEMBLIES

The unique MB-150 Multi-Band Tank tunes all amateur bands from 80 through 10 meters with 180° rotation of the shaft; the coils are never changed. The unit is built around a circuit which tunes to two harmonically unrelated frequencies at the same time. Thus, it becomes possible to cover a wide frequency range and yet maintain a reasonably constant L/C ratio. 3" wide x 8 1/4" high (including the GS-10 standoffs) x 9" long overall including the 1/4" dia. shaft and output terminals.

MB-40L



Features of the MB-150:

(1) For use as the all-band plate tank in push-pull or single-ended stages running up to 150-watts input (1500 volts peak). It is ideal for a pair of 807s or 809s or a single 829B.

(2) Separate link coupling coil has special clips which adjust to match impedances up to 600 ohms directly. Output couples into a higher powered amplifier, an antenna or an antenna tuning network.

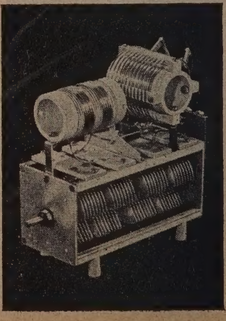
(3) Fast band changing is accomplished without handling coils, thus removing one of the danger points in the amateur station.

MB-150 Multi-Band Tank Assembly **Net $**

MB 40L LOW-POWER MULTI-BAND TANK

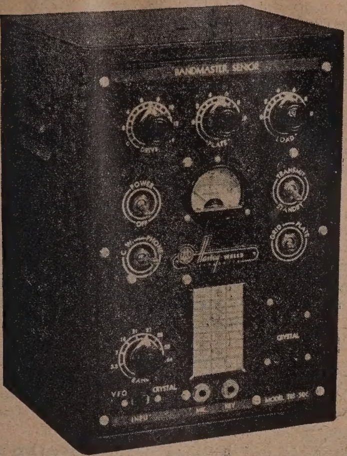
Same principle as the famous MB-150. Logical application as grid circuit for tubes having MB-150 in plate circuit. Will handle 40 watts input if link kept loaded **Net $**

MB-150



Harvey-WELLS ELECTRONICS, INC.
SOUTHBRIDGE, MASS.

BANDMASTER TRANSMITTERS



The World's Most Versatile Transmitter

40 to 50 Watts - 8 Bands - Phone or CW — *No Plug-In Coils*
80, 40, 20, 15, 11, 10, 6 and 2 Meters *(completely wired and tested — not a kit)*

100% BREAK-IN OPERATION
FOR MOBILE OR FIXED OPERATION

FOR *NOVICE OR EXPERT*

BANDMASTER Sr. $111.50

A complete ready to go transmitter including the new crystal-oscillator-vfo switching circuit. Phone or CW — Eight bands — 80, 40, 20, 15, 11, 10, 6 and 2 Meters. Ideal for either mobile or fixed station use. Will operate from A.C. power packs up to 450 volts at 275 ma., vibrator supply or dynamotor supply for portable mobile operation. Employs Pi antenna matching network. Power input to final is 50 watts with 450 volt power supply on Bands 1 through 7, 30 watts on Band 8. No tuning adjustments are necessary except those required to resonate the final output to the antenna. May be mounted on rack panel with power supply. For use with carbon microphone. No plug in coils.

CONTROLS: Band Switch, Excitation Control, Antenna Loading, Amplifier Tuning, Power-on Switch. Carrier-on Switch, Meter Switch. Antenna network will match non-reactive feeder of approximately 50-500 ohms. Frequency calibration chart on front panel as well as two scale grid and plate DC milliammeter.

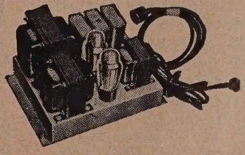
TUBES: 6AQ5 Crystal Oscillator, 6AQ5 Buffer-Multiplier, 807 Final Amplifier, 2—6L6G Class B Modulators. In sturdy steel cabinet, 8″ wide by 12″ high by 8″ deep.

BANDMASTER DELUXE

$137.50

The last word in a versatile small transmitter for ham or commercial use. Used extensively in foreign countries for important commercial applications. Has built-in three tube preamplifier for use with crystal mike, and ALL the features of the Bandmaster Sr.

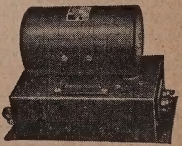
POWER SUPPLIES AND ACCESSORIES



APS-50

Delivers 425 v. at 275. ma. and 6.3 v. at 4 amps. May be mounted on rack panel. For 110 Volt A.C. 50-60 cycles.

$39.50



DPS-50

A dynamotor supply for portable operation. Delivers 300 Volts 250 ma.*

For 6 Volt operation $87.50
For 12 Volt operation 54.50
(400 Volts 250 ma.)

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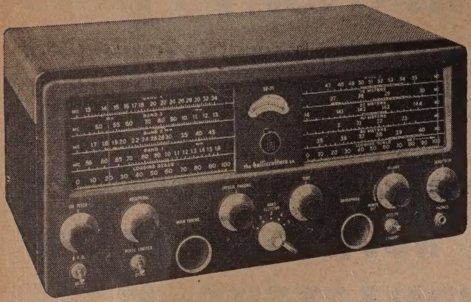
Net

hallicrafters RADIO

New SX-71 Communications Receiver



From the Hams at Hallicrafters to Hams everywhere comes this top-performing receiver in the medium price class. A new type of receiver—the first of its kind on the market—value-packed with features specifically asked for by the Hams. Extra sensitivity, selectivity, and stability, definitely superior image rejection with double superheterodyne circuit, plus built-in Narrow Band FM reception. Extra wide dials for main and bandspread tuning. Surpasses in Ham performance many receivers priced much higher.

PERFORMANCE: Continuous AM reception from 538 kc to 35 Mc, and 46 to 56 Mc. Built-in limiter and balanced detector stages for hiss-free NBFM reception. Double conversion (2075 and 455 kc i-f channels) gives image rejection of better than 150 to 1 at 28 Mc. Temperature compensated, voltage regulated. One r-f, two conversion, and 3 i-f stages yield high gain for sensitivity in the order of .7 microvolts with 50 milliwatts output. Audio peaked for communications frequencies, with 3 watt output.

CONTROLS: Band Selector 538-1650 kc, 1600-4800 kc, 4.6-13.5 Mc, 12.5-35 Mc, 46-56 Mc. Separate Main and Bandspread tuning controls; bandspread dial calibrated for 80, 40, 20, 10, and 6 Meter Bands. BFO Pitch, 3-position Selectivity, Crystal Phasing, Tone, AF Gain, and RF Gain controls. ANL, BFO, and Receive/Send switches. "S" meter adjustment on rear.

PHYSICAL DATA: Gray steel cabinet with satin chrome trim. Piano hinge top. Size 18½ in. wide by 8⅞ in. high by 12 in. deep.

EXTERNAL CONNECTIONS: Use doublet or single wire antenna. 500 ohm output for separate speaker. Phone jack. Socket for external power supply. Connections for remote control. Power cord. For 105-125 volts 50/60 cycle AC.

11 TUBES PLUS VOLTAGE REGULATOR AND RECTIFIER: 6BA6 r-f Amp., 6C4 Osc., 6AU6 Mixer, 6BE6 2nd Conv., three 6SK7 i-f Amps., 6H6 ANL, and delayed AVC, 6SC7 BFO and a-f Amp., 6AL5 Det., 6K6GT Output, VR-150 Reg., and 5Y3GT Rect.

SX-71. Ship wt. approx. 33 lbs..................Net **$199.50**

R-46 Speaker. Matches SX-71. 500-ohm input 10-in. PM type. 15 in. wide, 10⅞ in. high, by 10⅞ in. deep.
Ship. wt. 25 lbs..Net **$19.95**

New S-76 Communications Receiver

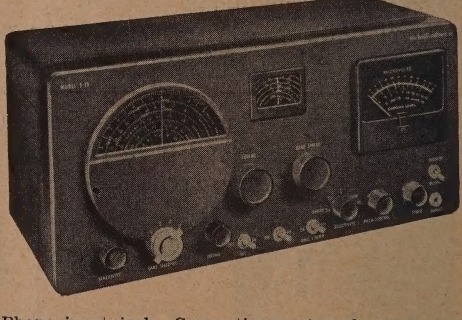
A new double conversion receiver just introduced as the lower-priced running mate to the already famous SX-71. The only double superhet with 50 kc second i-f and the only set now known with a giant sized 4-inch "S" Meter. Another new Hallicrafters engineering triumph . . . a special value leader in the moderate price range.

PERFORMANCE: Continuous coverage 538-1580 kc and 1.72-32 Mc. Double conversion almost completely eliminates images. 50 kc second i-f gives excellent "skirt" selectivity with "nose" selectivity variable from 5.6 kc down to 500 cycles. Temperature compensated, voltage regulated. One r-f, two conversion, and two i-f stages. 2½ watts output, with audio peaked for communications frequencies.

CONTROLS: Band Selector 538-1580 kc, 1.72-4.9 Mc, 4.6-13 Mc, 12-32 Mc; Separate Main and Bandspread tuning; bandspread calibrated for 80, 40, 20, 11, 10 meters; five-position Selectivity with phono switch built-in; BFO Pitch; full range Tone; AVC, BFO, ANL, Rec./Standby switches. "S" Meter adjustment on rear.

PHYSICAL DATA: Satin black steel cabinet with chrome trim. Piano hinge top. Size 18½" wide, 8⅞" high, 9" deep.

EXTERNAL CONNECTIONS: Use doublet or single wire antenna. 500 or 3.2 ohm outputs. Phone jack. Phono input jack. Connections external power and for remote control. Mounting holes provided for coax connector. For 105-125 volts 50/60 cycle AC.



9 TUBES PLUS REGULATOR AND RECTIFIER: 6CB6 r-f Amp., 6AU6 1st Conv., 6C4 Osc., 6BA6 1st i-f, 6BE6 2nd Conv., 6BA6 2nd i-f, 6AL5 Det., ANL, 6SC7 BFO, 6K6GT Output, VR-150 Reg., 5Y3GT Rect.

S-76. Ship. wt. approx. 46 lbs..................Net **$169.50**

hallicrafters RADIO

S-40B and S-77 Communications Receiver

Offers superior performance in the medium price range, born of Hallicrafters long experience in high-quality communications equipment. Complete in itself, with built-in PM speaker.

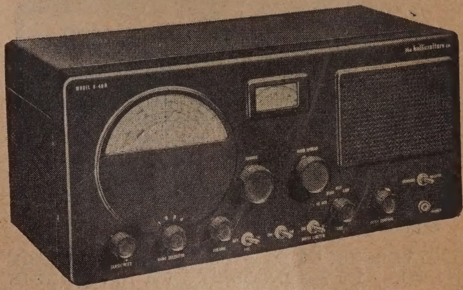
PERFORMANCE: AM reception 540 kc to 43 Mc. Temperature compensated oscillator. One RF and two IF stages. Audio response to 10,000 cycles.

CONTROLS: Band Switch 540-1700 kc, 1700-5300 kc, 5.3-15.7 Mc, 15.7-43.0 Mc. Main tuning Mc: band-spread dial has arbitrary scale. AF and RF Gain controls; AVC, BFO, and Noise Limiter switches; three-position Tone, BFO Pitch, and Receive/Standby controls. Settings for Broadcast Band marked in color for simplified use by others in your family.

PHYSICAL DATA: Satin black steel cabinet with chrome trim. Top opens on piano hinge. Size 18½ in. wide by 8⅞ in. high by 9½ in. deep.

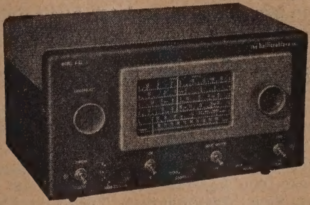
EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone jack. Socket for external power supply. Remote control connections. S-40B uses 105-125 v. 50/60 cycle AC only. S-77 uses 105-125 v. DC or 50/60 cycle AC.

7 TUBES PLUS RECTIFIER: (in S-40B) 6SG7 RF Amp., 6SA7 Conv., two 6SK7 IF Amps., 6H6 ANL and AVC, 6SL7 BFO and Det., 6F6G Output, 5Y3GT Rectifier. Comparable AC/DC type tubes used in S-77.



UNIVERSAL MODEL S-40BU: Same as above, only for 115/250 volts, 25/60 cycle AC.

S-40B	Ship. wt. 32 lbs.	Amateur Net	**$99.95**
S-40BU	Ship. wt.	Amateur Net	**$109.95**
S-77	Ship. wt.	Amateur Net	**$99.95**



S-53A Communications Receiver

Unquestionably the finest small communications receiver built. Several steps better than the S-38B, but not as good as the S-40B. Complete in itself, with built-in PM speaker.

PERFORMANCE: Coverage 540-1600 kc, 2.6-31 Mc plus 48-54.5 Mc. Two stages IF amplification.

CONTROLS: Main tuning in Mc; separate band-spread dial with logging scale plus Mc calibration for 48-54.5 Mc band: Receive/Standby switch, band switch 540-1630 Kc, 2.5-6.3 Mc, 6.3-16 Mc, 14-31 Mc, and 48-54.5 Mc; AM/CW; RF Gain, Noise Limiter, AF Gain, Two-position Tone; Speaker/Phones switch on rear.

PHYSICAL DATA: Satin black steel cabinet with brushed chrome trim. Top opens on piano hinge. Size 12⅞ in. wide by 7 in. high by 7¾ in. deep.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone tip jacks. Phonograph input jack. 105-125 v. 50/60 cycle AC line.

7 TUBES PLUS RECTIFIER: 6C4 Osc., 6BA6 Mixer, two 6BA6 IF Amps., 6H6 Det. AVC and ANL, 6SC7 BFO and FM Amp., 6K6GT Output, 5Y3GT Rectifier.

UNIVERSAL MODEL S-53AU: Same as above, only for 115/250 volts, 25/60 cycle AC.

S-53A	Ship. wt. 19 lbs.	Amateur Net	**$79.95**
S-53AU	Ship. wt.	Amateur Net	**$88.95**

S-38B Communications Receiver

The lowest priced communications receiver on the market . . . with many features found in much higher priced sets, Standard Broadcast plus three Short-Wave bands. Built-in PM speaker.

PERFORMANCE: Continuous AM reception 540 kc to 32 Mc. Maximum sensitivity and selectivity from expertly engineered chassis.

CONTROLS: Main Tuning in Mc; separate band-spread dial with arbitary scale; Speaker/Phones, AM/CW switches; Band Switch 540-1650 kc, 1.65-5 Mc. 5-14.5 Mc, 13.5-32 Mc; AF Gain, Receive/Standby.

PHYSICAL DATA: Steel cabinet in black wrinkle finish with brushed chrome trim. Size 12⅞ in. wide by 7 in. high by 7¼ in. deep.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone tip jacks. 105-125 v. DC or 50/60 cycle AC.

4 TUBES PLUS RECTIFIER: 12SA7 Conv., 12SK7 IF Amp. and BFO, 12SQ7 Det. and AVC, 35L6GT Output, 35Z5GT Rectifier.

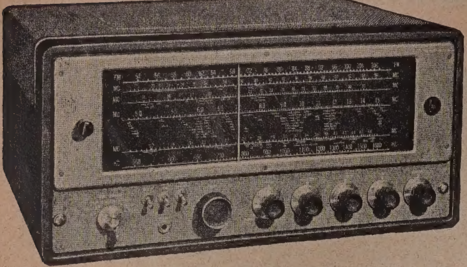
220-VOLT LINE CORD: Available separately. Works for AC or DC.

S-38B	Ship. wt. 14 lbs.	Amateur Net	**$49.50**

* Net

hallicrafters RADIO

SX-62 FM/AM All-Wave Radio



SWL VERSION OF FAMOUS SX-42 . . . COVERAGE 540 KC — 109 MC INCLUDING FM . . . BUILT-IN CRYSTAL CALIBRATOR.

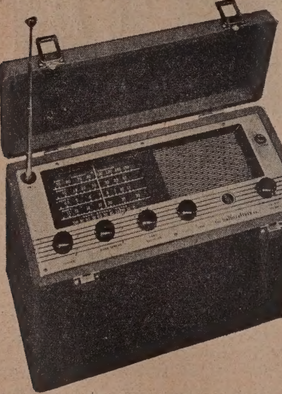
Having basically the same chassis as Hallicrafters best communications receiver, the SX-62 provides communications-receiver performance in simplified form. A single tuning control covers the wide-vision dial. Only one band lights up at a time — you always know just where you are tuning.

In addition a crystal calibration oscillator is built in. A flip of the switch at any time will put test signals at 500 KC intervals across the dial. You just tune in the nearest one of these signals and then use the calibration-reset control to adjust the dial pointer to the exact frequency.

Continuous AM reception from 540 KC to 109 MC; FM reception 27-109 MC. Temperature-compensated oscillator with voltage regulator. Two RF and three IF stages; dual IF channels (455 KC and 10.7 MC). Audio flat 60-15,000 cycles; 8-watt push-pull output. CONTROLS: Band Selector — #1 540-1620 KC, #2 1.62-4.9 MC, #3 4.9-15 MC; #4 15-32 MC, #5 27-56 MC, #6 54-109 MC; Receive/Standby, Crystal calibration On/Off, Noise Limiter, Tuning, AF Gain, Phono/FM/AM/CW, six-position Selectivity, four-position Tone, RF Gain, and Calibration Reset. PHYSICAL DATA: Gray steel cabinet with satin chrome trim. Top opens on piano hinge. Size 20 in. wide by 10¼ in. high by 16 in. deep. EXTERNAL CONNECTIONS: Doublet or single wire antenna. 500 and 5000 ohm outputs. Phone jacks. Phonograph jack. Socket for external power. Remote standby connections. 105-125 volt 50-60 cycle AC line. 14 TUBES PLUS VOLTAGE REGULATOR AND RECTIFIER: two 6AG5's RF amps., 7F8 Conv., 6SK7 IF Amp., 6SG7 IF Amp., 7H7 IF Amp., 7H7 Limiter and AM Det., 6H6 Discriminator, 7A4 BFO, 6H6 ANL, 6SL7 AF Amp., two 6V6's Push-pull Output, 6C4 Calibration Osc., VR-150 Regulator, 5U4G Rectifier.

SX-62. Ship. wt. 65 lbs.....................Amateur Net **$289.50**

New S-72 Portable Communications Receiver



You'll always be in touch with the outside world wherever you go with this Hallicrafters extra-sensitive all-wave portable receiver. Super-powered for superb performance with latest circuits and devices for maximum efficiency on AC, DC or battery operation. Designed both for the person who wants better than average reception even in weak signal areas and for the Radio Amateur.

PERFORMANCE: Covers standard broadcast band and three short-wave bands—540 kc to 30.5 Mc. One stage of tuned r-f amplification. Operates from built-in antennas—loop for broadcast and 27 in. whip for short-wave. Automatic Noise limiter. Image ratio 140 to 1 at 11 Mc, 18 to 1 at 30 Mc. Overall sensitivity 1.8 microvolts at 30 Mc, ranging to 6 microvolts at 1.7 Mc. Broadcast Band sensitivity with loop antenna 16 microvolts per meter.

CONTROLS: Band selector switch gives four tuning ranges: 540-1600 kc, 1500-4400 kc, 4.3—13 Mc, and 12—31 Mc. Sensitivity control. Turns on AVC when advanced to full "On" position, at the same time turning off BFO. Volume control combined with main OM/Off switch. Main tuning knob; separate bandspread control. Tone control combined with fine tuning control.

PHYSICAL DATA: Sturdy plywood cabinet, finished in handsome brown leatherette. Space for headphones. Size 14 in. wide, 12¼ in. high, by 7¼ in. deep. Carrying weight approx. 15 lbs., incl. batteries.

EXTERNAL CONNECTIONS: Phone jack on panel. Provision for attaching supplementary antenna if desired. Power cord for 105-125 volts DC or 60 cycle AC fits inside set when not in use. Automatic change-over from battery to electric power protects batteries. Power consumption on battery operation 100 ma. at 7.5 V. and 30 ma. at 90 V. Average battery pack lasts 50 to 100 hours depending upon length of continued use. Takes RCA VS018, Burgess G6M60, General 60B6F65 and similar battery packs.

8 TUBES PLUS RECTIFIER: 1T4 r-f Amp., 1R5 Osc., 1U4 Mixer, two 1U4 i-f Amps., 1U5 Det. and a-f Amp., 1U5 BFO and Automatic Noise Limiter, 3V4 Output, plus long-life Selenium Rectifier.

S-72. Less Battery. Ship. wt. 16 lbs..........Net **$109.95**

LONG-WAVE MODEL — S-72L. Covers airways radio ranges, airport control towers, and marine beacons. Same as S-72 only range 175-400 kc and 535-12,300 kc. ....Net **$119.95**

hallicrafters RADIO

HT-18 Variable Frequency Oscillator

Modernize your present transmitter with this famous Hallicrafters exciter. Crystal or VBO, NBFM or CW on 5 Bands with all coils, speech amplifier, and power supply built in. Features never before available in one low-priced unit. Low frequency drift, low FM distortion, low hum level, excellent keying. Output 2.5 ta 4.5 watts. Consists of an oscillator (crystal controlled or VFO), a frequency modulator with speech amplifier, and a buffer-output tube.

CONTROLS: Operation Switch has three crystal positions plus VBO and NBFM; Band Selector switch —80, 40, 20, 15, 10 Meters; Check switch turns on oscillator for spotting signals on receiver. Plate switch controls all "B" power and makes connections for remote control. Power switch is in 115-volt line. Deviation Control adjusts for 0.4 ratio on all bands. Tuning control operates osc. gang and calibrated dial.

PHYSICAL DATA AND CONNECTIONS: Satin black steel cabinet with brushed chrome trim; size 12⅞" wide, 7" high by 7¾" deep. Connections for microphone, keying (osc. keying), remote control, and 72-ohm output. Line Cord for 115 v. 50/60 cycle AC.

TUBES: Three 6BA6-Osc., Freq. Modulator, Speech Amp., 6L6 Buffer, VR-105 Voltage Reg., 5Y3GT Rectifier.

HT-18 Ship. wt. 24 lbs............Amateur Net **$110.00**

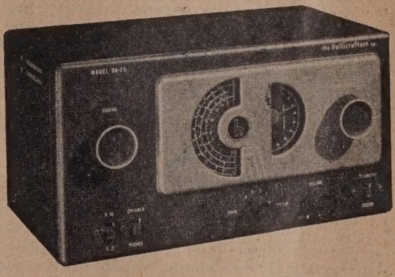
SR-75 Transceiver

A completely new type of unit—a small transceiver for the novice class and/or beginning amateur; can also be used later as exciter unit. Receives on 540 kc through 32 Mc, transmits on 10, 11, 20, 40, or 80 meter bands. 10 watts input to final amp.

Receiving section is substantially same as our S-38B. Bandspread tuning, Speaker/phones switch, BFO switch, Rec./Standby switch; four tubes plus rectifier.

Transmitting section uses electron coupled Xtal oscillator plus output tube of receiver. Oscillator keying, through relay, so completely isolated. Voltage doubler rectifier to increase plate voltage.

CONTROLS: Main Tuning in Mc; separate electrical bandspread; AM/CW, Speaker/phones, and Receive/Standby switches; Volume control with power switch. Xmtr controls on rear; tuning, coupling adj., doubler coil switch (10 meters) and adjustment power switch with interlock.



PHYSICAL DATA AND CONNECTIONS: Satin black steel cabinet with brushed chrome trim; size 12⅞" wide, 7" high by 7¾" deep. Connections for keying, headphone tip jacks, tuning meter or bulb, and output. Line cord for 115 volts 50/60 cycle AC or DC. Shipped with coils, less crystals.

SR-75 Ship. wt. 16 lbs............Amateur Net **$89.95**

Hallicrafters Precision-Built Television

with the *dynamic tuner*

The Dynamic Tuner — a rotary-type tuner — uses flat tuning coils that are precision-printed by a special photo-etch process. Because wire stretches as it is wound, and because coil forms vary, NO OTHER TUNING SYSTEM can even approach the absolute accuracy of precision photo-printed coils.

The heart of the Dynamic Tuner lies in the 12 channel strips. Each strip has been prepared by photographically printing the desired pattern on copper and then etching away the unwanted metal. Every chassis coming off the line is "hot" in sensitivity; variations in tuning alignment are practically eliminated.

Only Hallicrafters has the Dynamic Tuner, to bring you the clearest picture in television. "City Clear," even in weak signal areas.

See your Classified Telephone Directory for your nearest Hallicrafters TV dealer.

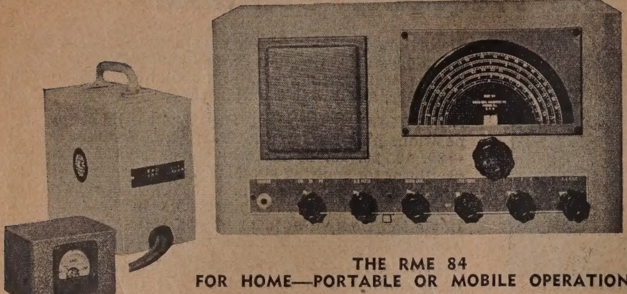
SINCE 1933

RME

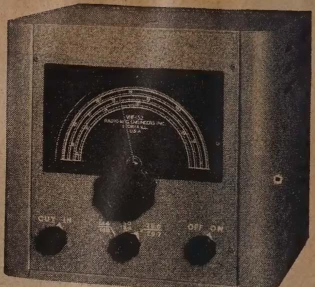
FINE COMMUNICATIONS EQUIPMENT

RADIO MFG. ENGINEERS, INC.

Peoria 6, Illinois U. S. A.



THE RME 84
FOR HOME—PORTABLE OR MOBILE OPERATION



RME 84 at right, VP-2—6 volt power pack with cable attached, optional for RME 84 in center, CM-1—Carrier Level "S" Meter with cord and plug, optional for RME 84 at left.

The Coverage Is Complete .540 to 44 Megacycles

An important feature is the continuous coverage ranging from 540 kc to 44 megacycles. This coverage, in addition to providing for the regular broadcast band, takes in the 80, 40, 20, 15 and 10 meter amateur bands. The calibration is made on a 7 inch diameter scale. In addition, a smooth-running vernier dial gives band spread on any setting of the main scale. The vernier scale makes five complete revolutions for the 180 degree rotation of the tuning condenser.

Seven Tubes Have Been Chosen For The RME 84

1. A 7B7 loctal radio frequency amplifier is ahead of the first detector.
2. A 7S7 loctal is used as a first detector and radio frequency oscillator.
3. A 7B7 serves as the first IF operating at 455 kc.
4. A 7B7 second IF further amplifies the signal.
5. A 7K7 loctal acts as second detector and first audio amplifier.
6. Another 7K7 provides the beat frequency and acts as noise limiter.
7. The 6G6G provides the final audio frequency output.
8. A 5Y3GT is the power rectifier tube.

Portability Built Into The RME 84

Conscious of the fact that many thousands of amateurs want a receiver for portable operation, the new RME 84 is equipped with a special socket connection making possible connections to either a B battery and an A battery supply or a similar source of power such as an external vibropack. 135 volts of B and 6 volts of A battery will operate the RME 84 at full power. The drain on the B battery is only 32 milliamperes at 135 volts and the 6 volt A battery provides 1.5 amps, including the two dial lights.

The new noise limiter, of the series type, performs exceptionally well. Also made available for future use with the RME 84 is a signal strength meter to be connected through the special socket located on the rear of the chassis apron.

SENSITIVITY: The average sensitivity of the RME 84 is of the order of 2 microvolts over the entire range of the instrument.

RME 84, CODE HANDY, complete for 115 volt, 60 cycle operation and for use with external battery supply. May also be had for 230 volt, 25 cycle operation at additional cost. **f.o.b. Peoria, Illinois, Net Selling Price** **$110.00**

VP-2, CODE HOMER, A 6 volt power pack with cable attached, optional equipment for RME 84. **f.o.b. Peoria, Illinois, Net Selling Price** **$32.00**

CM-1, CODE HURST, Carrier Level "S" Meter with cord and plug, optional equipment for RME 84. **f.o.b. Peoria, Illinois, Net Selling Price** **$16.00**

VHF-152A
3 BAND CONVERTER

Reception on the new high frequencies, 50 to 54 mc. and 144 to 148 mc. bands, and better reception on the 26.95 to 29.7 mc band, using the double detection system, image free, at a cost which any amateur can afford—that is what the new VHF-152 is designed to give. . . . Every owner of a communications receiver can, with the acquisition of this new converter, do a much better job of working high frequency signals than is possible with most any higher priced, specially designed receiver.

This converter provides an order of stability at 50 mc. much higher than most communications receivers have when operating at 5 mc. New engineering design and construction make this possible.

Miniature tubes are used, a 6AK5 rf amplifier and a 6J6 mixer and oscillator complete the converter proper. The built-in power supply uses a 5Y3GT rectifier tube and a VR150 voltage regulator. The three bands are calibrated to cover the full sweep of a seven-inch diameter scale, indirectly illuminated. . . . The tuning mechanism is of the same sturdy, positive construction characteristic of all RME units. Smooth, velvety operation of the large knob makes operation a pleasure.

The sensitivity of the VHF-152 is of the order of 2 microvolts. Its output frequency is 7000 kc.

Separate connections are provided for the 10, 6 and 2 meter antennas and for the antenna used with the receiver. Each band has its own especially designed antenna input circuit of approximately 300 ohms impedance. The input of the receiver is changed from the VHF-152 output to the receiver antenna by a front panel switch. Another front panel switch selects the 10, 6 or 2 meter band for VHF-152 operation.

Interconnecting plug and cord are also furnished, which permanently connect the VHF-152 direct to the input terminals of the receiver.

The cabinet is designed to match the RME-45 and 50 communications receivers, both in streamlined appearance and in two tone gray and black crinkle finish.

Dimensions are as follows: 11" high, 12" wide, 11" deep, with hinged lid. Standard operation is for 115 volt, 50-60 cycle power source.

Complete with tubes, interconnecting plug and cord. **CODE: HAMPY, f.o.b. Peoria, Illinois, Net Selling Price** **$97.00**

VHF-152A CONVERTER, same as above, but designated as TYPE S, housed in two tone gray cabinet to match the RME-84 receiver, cabinet size 10¼" wide, 10¼" deep, 9¼" high. **CODE: HARMS** **$97.00**

SINCE 1933

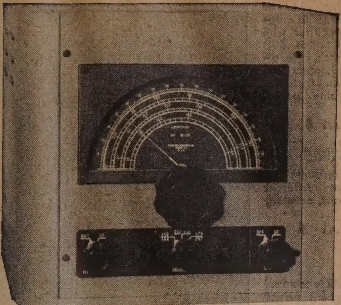
TIME WILL TELL

RME

FINE COMMUNICATIONS EQUIPMENT

RADIO MFG. ENGINEERS, INC.

Peoria 6, Illinois U. S. A.



THE HF 10-20 CONVERTER

For 10-11-15 and 20 Meters

Because of the double conversion system, the HF 10-20 provides outstanding and imageless reception on 10-11-15 and 20 meters. And it's an especially vital adjunct to those receivers that tune only up to 18 mc. or possess inadequate bandspread. The HF 10-20 provides an average of 7.8 linear inches of calibrated bandspread on each of the three bands. Images are non-existent. The output (I. F. frequency) of the HF 10-20 is 7 mc. It can be used with any all-wave or amateur receiver. Features include provision for separate antennae, self-contained power supply, antenna selector switch, band selector and high gain. The increase in gain, depending on the receiver and receiving conditions, is approximately 30 DB over the entire range of frequencies covered.

Tubes used are a 6BA6 RF amplifier and a 6J6 twin triode mixer. Built-in power supply uses a 5Y3GT rectifier and a VR150 voltage regulator.

Model HF 10-20 Converter, Standard Model, CODE HORN, in cabinet to match RME 45 and 50 Receivers in appearance. Dimensions: 11″ high, 12″ wide, 11″ deep.

Net Price $92.00

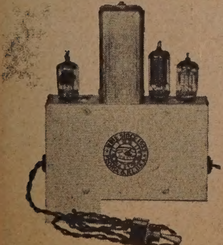
Model HF 10-20 Type "S" Converter, CODE HILL, in cabinet to match RME 84 in appearance. Dimensions: 9⅛″ high, 10¼″ wide, 10¼″ deep.

Net Price $92.00

THE NEW RATIO DETECTOR (NBF4)

For Optimum Narrow Band FM Performance

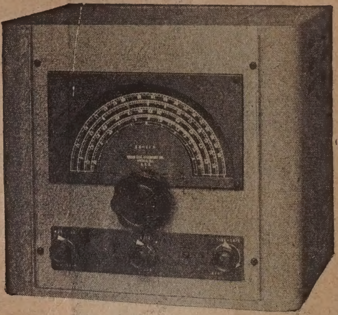
With this plug-in unit and an RME 45 receiver, the noise reducing advantages of NFM are fully realized.



NFM Signals that can't be heard with good AM communications receivers come in loud and clear against a noiseless background.

Equal sensitivity can be enjoyed on AM or NFM. It employs a highly efficient ratio-type detector and a limiter for noiseless reception of NFM signals. Only RME 45 and 50 receivers can employ the unit.

Net Price $24.50



THE DB22A PRESELECTOR

Coverage .54 to 44 Mc. — Average Gain 30 DB

Here's the new DB22A completely redesigned for greater efficiency and higher signal to noise ratio. It uses new 6BA6 miniatures. Image ratio is better than 50 DB with a communications receiver having a single stage of RF. It's calibrated, has smooth planetary tuning, self contained power supply, antenna by-pass switch, gain control and many other features.

Model DB22A Preselector, Standard Model, CODE BONET, in cabinet to match RME 45 and 50 Receivers in appearance. Dimensions: 11″ high, 12″ wide, 11″ deep.

Net Price $86.00

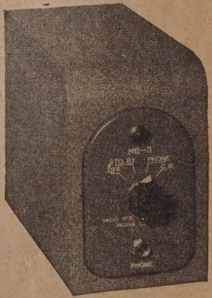
Model DB22A—Type "S" Preselector, CODE CLEAR, in cabinet to match RME 84 Receiver in appearance. Dimensions: 9⅛″ high, 10¼″ wide, 10¼″ deep.

Net Price $86.00

THE BOOMERANG (MB-3)

A Break-In & Monitoring Device for CW & Fone

The "Boomerang" is the solution to rapid and efficient break-in, and the avoidance of needless QRM. Dots and dashes are heard in the headphones or the speaker while sending—a great help in perfecting the fist and avoiding errors.



When the key is down, any signal normally going through the receiver is automatically suppressed. Raise the key and instantaneously the receiver functions.

The "Boomerang" can be used as a handy monitor for phone operation, as a code practice oscillator and a tone modulator. Tubes include a 7K7, a 6SL7 and a 6x4 rectifier. Cabinet is two-tone grey finish.

Net Price $33.00

SP-5 Special 3″ speaker with amplifier enclosed in housing for MB-3 "BOOMERANG." CODE: HIGH.

Net Price $15.50

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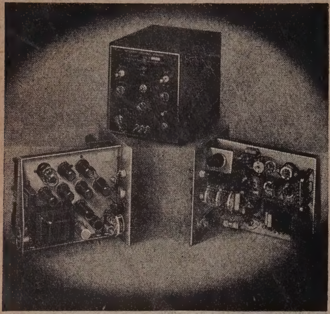
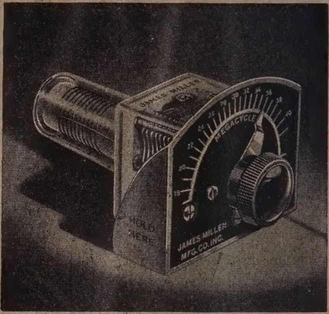




SECONDARY FREQUENCY STANDARD

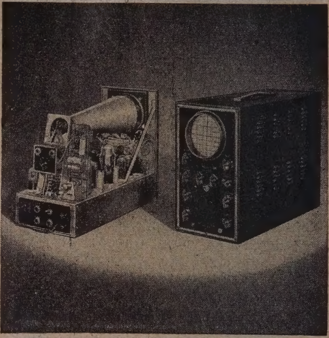
A precision frequency standard for both laboratory and production uses, adjustable output, provided at intervals of 10, 25, 100 and 1000 kc, with magnitude useful to 50 mc. Harmonic amplifier with tuned plate circuit and panel range switch. 800 cycle modulator with panel control switch. In addition to oscillators, multivibrators, modulators and amplifiers, a built-in detector with phone jack and gain control is incorporated. Self-contained power supply.

Model 90505, with tubes............ $

ABSORPTION WAVEMETERS

The 90600 series of absorption wavemeters are available in several styles and many different ranges. Most popular is kit of four units, covering range of 3.0 to 140 mc.

Model 90600...................... $



GRID DIP METER

The No. 90651 MILLEN GRID DIP METER is compact and completely self contained. The AC power supply is of the "transformer" type. The drum dial has seven calibrated uniform length scales from 1.5 MC to 300 MC with generous over laps plus an arbitrary scale for use with special application inductors. Internal terminal strip permits battery operation for antenna measurement.

No. 90651, with tube............... $

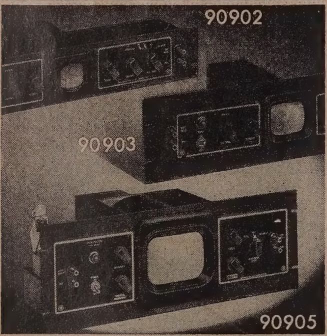
Additional Inductors for Lower Frequencies

No. 46702—925 to 2000 KC......... $
No. 46703—500 to 1050 KC.........
No. 46704—325 to 600 KC.........
No. 46705—220 to 350 KC.........

LABORATORY SYNCHROSCOPES

The 5" laboratory synchroscopes are available with and without detector-video strips.

Model P-4-2, with tubes............. $
Model P-4E-2, with tubes............



MINIATURE SYNCHROSCOPE

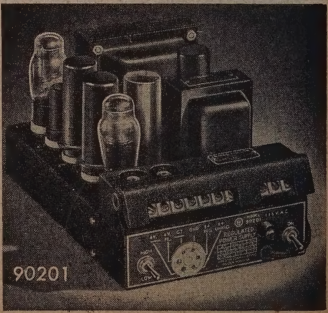
The compact design of the No. 90952, measuring only 7½" x 5⅝" x 13", and weighing only 17 lbs., makes available for the first time a truly DESIGNED FOR APPLICATION "field service" Synchroscope.

No. 90952, with tubes.............. $

CATHODE RAY OSCILLOSCOPES

The No. 90902, No. 90903 and No. 90905 Rack Panel Oscilloscopes, for two, three and five inch tubes, respectively, are inexpensive *basic units* comprising power supply, brilliancy and centering controls, safety features, magnetic shielding, switches, etc. As a transmitter monitor, no additional equipment or accessories are required. The well-known trapezoidal monitoring patterns are secured by feeding modulated carrier voltage from a pickup loop directly to vertical plates of the cathode ray tube and audio modulating voltage to horizontal plates. By the addition of such units as sweeps, pulse generators, amplifiers, servo sweeps, etc., all of which can be conveniently and neatly constructed on companion rack panels, the original basic 'scope unit may be expanded to serve any conceivable industrial or laboratory application.

No. 90902, less tubes............... $
No. 90903, less tubes...............
No. 90905, less tubes...............



'SCOPE AMPLIFIER—SWEEP UNIT

Vertical and horizontal amplifiers along with hard-tube, saw tooth sweep generator. Complete with power supply mounted on a standard 5¼" rack panel.

No. 90921, with tubes............... $

REGULATED POWER SUPPLIES

A compact, uncased, regulated power supply, either for table use in the laboratory or for incorporation as an integral part of larger equipments. 50 watts, with regulated voltage from 0 to 200 volts.

Model 90201, less tubes............. $

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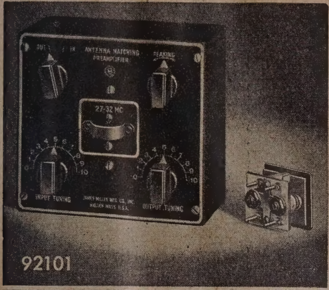
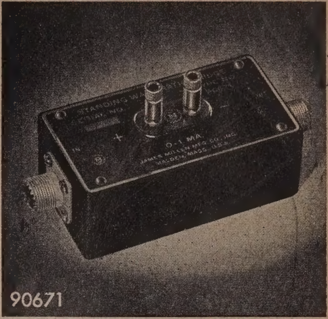

92101

R9'er MATCHING PREAMPLIFIER

The Millen 92101 is an electronic impedance matching device and a broad-band preamplifier combined into a single unit, designed primarily for operation on 6 and 10 meters. Coils for 20 meter band also available.

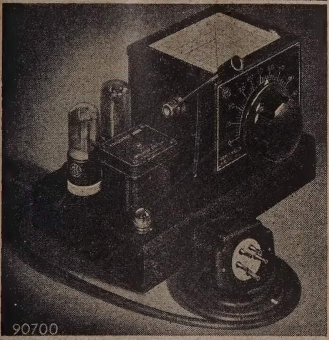
No. 92101, less tubes................ $


90671

STANDING WAVE RATIO BRIDGE

The Millen S.W.R. bridge provides easy and inexpensive measurement of standing wave ratio on antennas using co-ax cable. As assembled the bridge is set up for 52 ohm line. A calibrated 75 ohm resistor is mounted inside the case for substitution in the circuit when 75 ohm line is used.

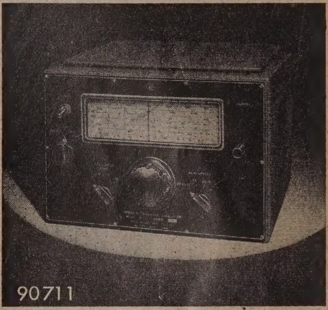
No. 90671....................... $


90700

FREQUENCY SHIFTER

A favorite frequency shifter, plugs in, in place of crystal, for instant finger-tip control of carrier frequency. Low drift, chirpless keying, vibration immune, big band spread, accurate calibration.

Model 90700, with tubes............ $


90711

VARIABLE FREQUENCY OSCILLATOR

The No. 90711 is a complete transmitter control unit with 6SK7 temperature-compensated, electron coupled oscillator of exceptional stability and low drift, a 6SK7 broad-band buffer or frequency doubler, a 6A67 tuned amplifier which tracks with the oscillator tuning, and a regulated power supply. Output sufficient to drive an 807 is available on 160, 80 and 40 meters and reduced output is available on 20 meters. Close frequency setting is obtained by means of the vernier control arm at the right of the dial. Since the output is isolated from the oscillator by two stages, zero frequency shift occurs when the output load is varied from open circuit to short circuit. The entire unit is unusually solidly built so that no frequency shift occurs due to vibration. The keying is clean and free from all annoying chirp, quick drift, jump, and similar difficulties often encountered in keying variable frequency oscillators.

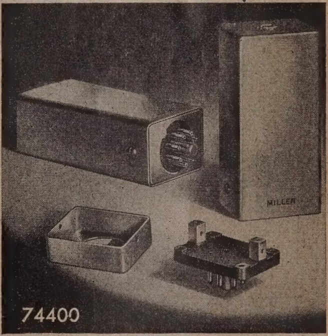
No. 90711, with tubes............... $

90800

50 WATT TRANSMITTER

Based on an original Handbook design, this flexible unit is ideal for either low power amateur band transmitter use or as an exciter for high power PA stages.

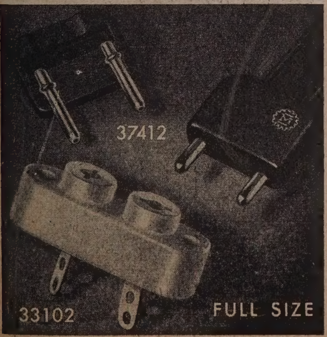
Model 90800, less tubes............. $


74400

OCTAL BASE AND SHIELD

Low loss phenolic base with octal socket plug and aluminum shield can 1 7/16 x 1 7/8 x 3 15/16.

No. 74400......................... $


37412

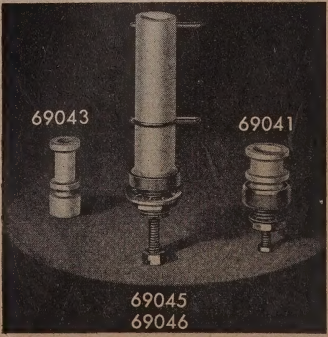
33102

FULL SIZE

TRANSMISSION LINE PLUG

An inexpensive, compact, and efficient polyethylene unit for use with the 300 ohm ribbon type polyethylene transmission lines. Fits into standard Millen No. 33102 (crystal) socket. Pin spacing 1/2", diameter .095".

No. 37412......................... $


69043

69041

69045

69046

PERMEABILITY TUNED CERAMIC FORMS

In addition to the popular shielded plug-in permeability tuned forms, 74000 series, the 69040 series of ceramic permeability tuned unshielded forms are available as standard stock items. Winding diameters and lengths of winding space are 13/32 x 7/32 for 69041–2; 1/4 x 3/8 for 69043–7–8; 1/2 x 1 1/16 for 69045–6; 3/16 x 3/16 for 69044.

No. 69041—(Copper Slug)............	$
No. 69042—(Iron Core)...............	
No. 69043—(Iron Core)...............	
No. 69044—(Copper Slug)............	
No. 69045—(Copper Slug)............	
No. 69046—(Iron Core)...............	
No. 69047—(Copper Slug)............	
No. 69048—(Iron Core)...............	

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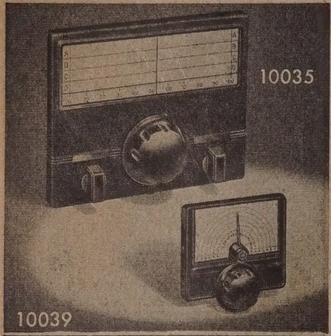
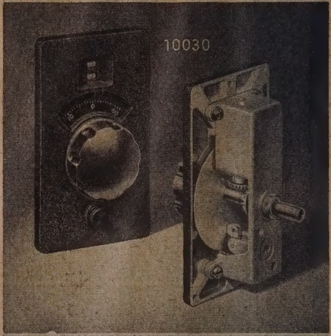


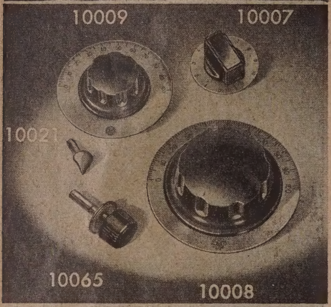


INSTRUMENT DIALS

The No. 10030 is an extremely sturdy instrument type indicator. Control shaft has 1 to 1 ratio. Veeder type counter is direct reading in 99 revolutions and vernier scale permits readings to 1 part in 100 of a single revolution. Has built-in dial lock and ¼" drive shaft coupling. May be used with multi-revolution transmitter controls, etc., or through gear reduction mechanism for control of fractional revolution capacitors, etc., in receivers or laboratory instruments.

The No. 10035 illuminated panel dial has 12 to 1 ratio; size, 8½" x 6½". Small No. 10039 has 8 to 1 ratio; size, 4" x 3¼". Both are of compact mechanical design, easy to mount and have totally self-contained mechanism, thus eliminating back of panel interference. Provision for mounting and marking auxiliary controls, such as switches, potentiometers, etc., provided on the No. 10035. Standard finish, either size, flat black art metal.

No. 10039........................ $
No. 10035........................
No. 10030........................



DIALS AND KNOBS

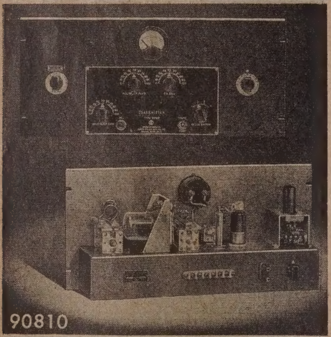
Just a few of the many stock types of small dials and knobs are illustrated herewith. 10007 is 1⅜" diameter, 10009 is 2½" and 10008 is 3½".

No. 10007........................ $
No. 10008........................
No. 10009........................
No. 10021........................
No. 10065........................

PANEL MARKING TRANSFERS

The panel marking transfers have ⅛" block letters. Special solution furnished. Must not be used with water. Equally satisfactory on smooth or wrinkle finished panels or chassis. Ample supply of every popular word or marking required for amateur or commercial equipment.

No. 59001, white letters.............. $



HIGH FREQUENCY TRANSMITTER

The No. 90810 crystal control transmitter provides 75 watt output (higher output may be obtained by the use of forced cooling) on the 20, 10–11, 6 and 2 meter amateur bands. Provisions are made for quick band shift by means of the new 48000 series high frequency plug-in coils.

No. 90810, less tubes and crystals...... $

HIGH FREQUENCY RF AMPLIFIER

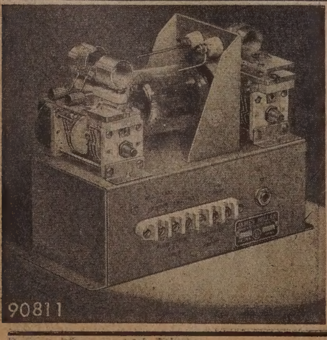
A physically small unit capable of a power output of 70 to 85 watts on 'phone or 87 to 110 watts on C-W on 20, 15, 11, 10, 6 or 2 meter amateur bands. Provision is made for quick band shift by means of the new No. 48000 series VHF plug-in coils. The No. 90811 unit uses either an 829-B or 3E29.

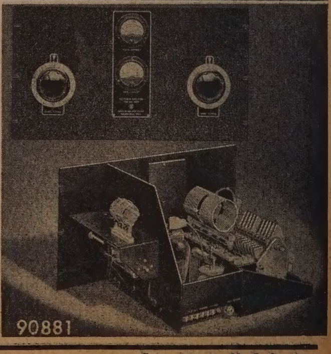
No. 90811 with 10 meter band coils, less tube.............................. $

HIGH VOLTAGE POWER SUPPLY

The No. 90281 high voltage power supply has a d.c. output of 700 volts, with maximum current of 250 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available so that this power supply is an ideal unit for use with transmitters, such as the Millen No. 90800, as well as general laboratory purposes. The power supply uses two No. 816 rectifiers and has a two section pi filter with 10 henry General Electric chokes and a 2-2-10 mfd. bank of 1000 volt General Electric Pyranol capacitors. The panel is standard 8¾" x 19" rack mounting.

No. 90281, less tubes................ $





RF POWER AMPLIFIER

This 500 watt amplifier may be used as the basis of a high power amateur transmitter or as a means for increasing the power output of an existing transmitter. As shipped from the factory, the No. 90881 RF power amplifier is wired for use with the popular RCA or G.E. "812" type tubes, but adequate instructions are furnished for readjusting for operation with such other popular amateur style transmitting tubes as Taylor TZ40, Eimac 35T, etc. The amplifier is of unusually sturdy mechanical construction, on a 10½" relay rack panel. Plug-in inductors are furnished for operation on 10, 20, 40 or 80 meter amateur bands. The standard Millen No. 90800 exciter unit is an ideal driver for the new No. 90881 RF power amplifier.

No. 90881, with one set of coils, but less tubes.............................. $

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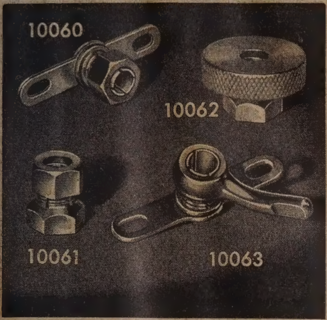


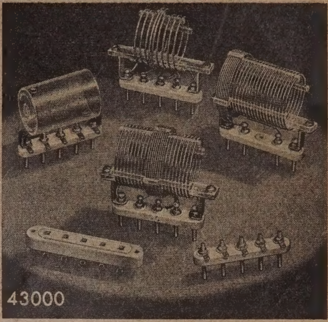
SHAFT LOCKS

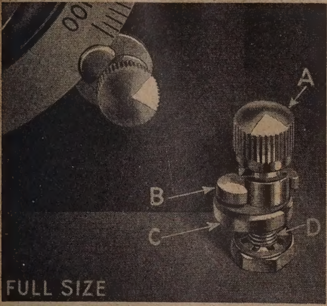
In addition to the original No. 10060 and No. 10061 "DESIGNED FOR APPLICATION" shaft locks, we can also furnish such variations as the No. 10062 and No. 10063 for easy thumb operation as illustrated above. The No. 10061 instantly converts any plain "¼ shaft" volume control, condenser, etc. from "plain" to "shaft locked" type. Each to mount in place of regular mounting nut.

No. 10060 .... $
No. 10061 ....
No. 10062 ....
No. 10063 ....

TRANSMITTING TANK COILS

A full line—all popular wattages for all bands. Send for special catalog.

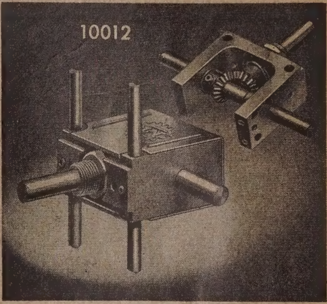




DIAL LOCK

Compact, easy to mount, positive in action, does not alter dial setting in operation! Rotation of knob "A" depresses finger "B" and "C" without imparting any rotary motion to Dial. Single hole mounted.

No. 10050 .... $



RIGHT ANGLE DRIVE

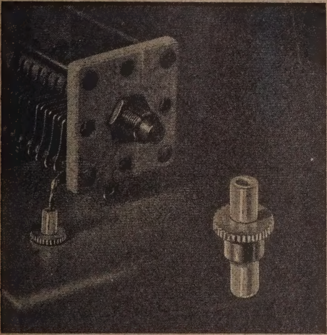
Extremely compact, with provisions for many methods of mounting. Ideal for operating potentiometers, switches, etc., that must be located, for short leads, in remote parts of chassis.

No. 10012 .... $

THRU-BUSHING

Efficient, compact, easy to use and neat appearing. Fits ¼" hole in chassis. Held in place with a drop of solder or a "nick" from a crimping tool.

No. 32150 .... $



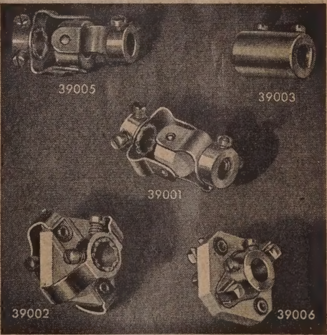
FLEXIBLE COUPLINGS

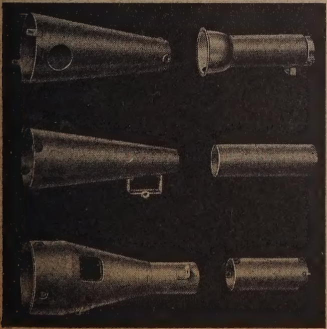
The No. 39000 series of Millen "Designed for Application" flexible coupling units include, in addition to improved versions of the conventional types, also such exclusive original designs as the No. 39001 insulated universal joint and the No. 39006 "slide-action" coupling (in both steatite and bakelite insulation).

The No. 39006 "slide-action" coupling permits longitudinal shaft motion, eccentric shaft motion and out-of-line operation, as well as angular drive without backlash.

The No. 39005 is similar to the No. 39001, but is not insulated and is designed for applications where relatively high torque is required. The steatite insulated No. 39001 has a special anti-backlash pivot and socket grip feature. All of the above illustrated units are for ¼" shaft and are standard production type units.

No. 39001 .... $
No. 39002 ....
No. 39003 ....
No. 39005 ....
No. 39006 ....





CATHODE RAY TUBE SHIELDS

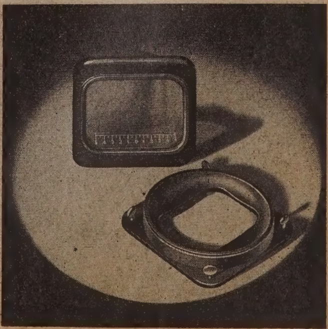
For many years we have specialized in the design and manufacture of magnetic metal shields of nicoloi and mumetal for cathode ray tubes in our own complete equipment, as well as for applications of all other principal complete equipment manufacturers. Stock types as well as special designs to customers' specifications promptly available.

No. 80045—Nicoloi for 5" tube....... $
No. 80043—Nicoloi for 3" tube.......
No. 80042—Nicoloi for 2" tube.......

BEZELS FOR CATHODE RAY TUBES

Five inch bezel is of cast aluminum with black wrinkle finish. Complete with neoprene cushion, green lucite filter scale and four screws for quick detachment from panel when inserting tube.

No. 80075—5" .... $
No. 80073—3" ....
No. 80072—2" ....



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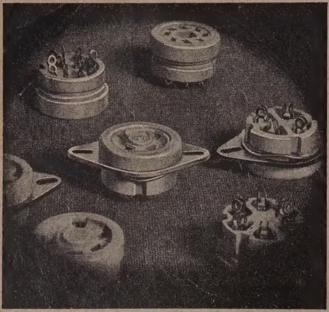
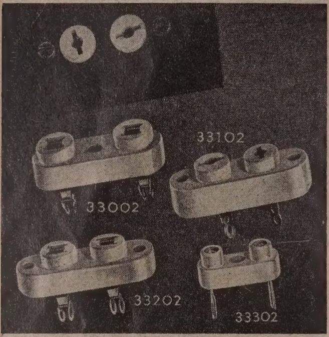
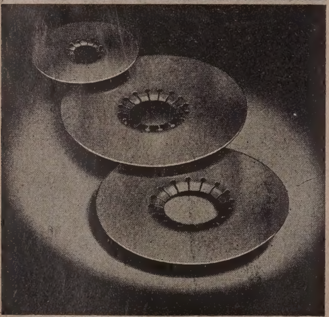
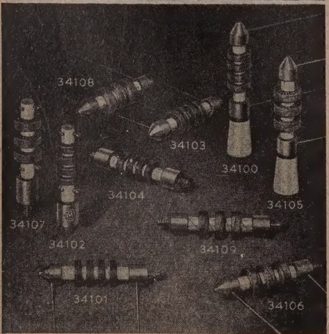








TUBE SOCKETS DESIGNED FOR APPLICATION

MODERN SOCKETS for MODERN TUBES! Long Flashover path to chassis permits use with transmitting tubes, 866 rectifiers, etc. Long leakage path between contacts. Contacts are type proven by hundreds of millions already in government, commercial and broadcast service, to be extremely dependable. Sockets may be mounted either with or without metal flange. Mounts in standard size chassis hole. All types have barrier between contacts and chassis. All but octal and crystal sockets also have barriers between individual contacts in addition.

The No. 33888 shield is for use with the 33008 octal socket. By its use, the electrostatic isolation of the grid and plate circuits of single-ended metal tubes can be increased to secure greater stability and gain.

The 33087 tube clamp is easy to use, easy to install, effective in function. Available in special sizes for all types of tubes. Single hole mounting. Spring steel, cadmium plated.

Cavity Socket Contact Discs, 33446 are for use with the "Lighthouse" ultra high frequency tube. This set consists of three different size unhardened beryllium copper multi-finger contact discs. Heat treating instructions forwarded with each kit for hardening after spinning or forming to frequency requirements.

Voltage regulator dual contact bayonet socket, 33991 black Bakelite insulation and 33992 with low loss high leakage mica filled Bakelite insulation.

No. 33004.................... $
No. 33005....................
No. 33006....................
No. 33007....................
No. 33008....................
No. 33888....................
No. 33087....................
No. 33002....................
No. 33102....................
No. 33202....................
No. 33302....................
No. 33446*...................
No. 33991....................
No. 33992....................

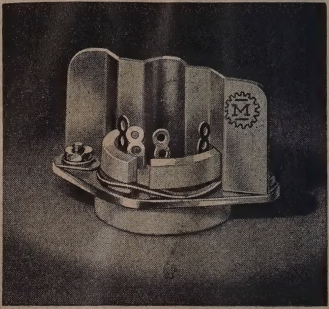
* For set of 3. Single discs $2.00 each.

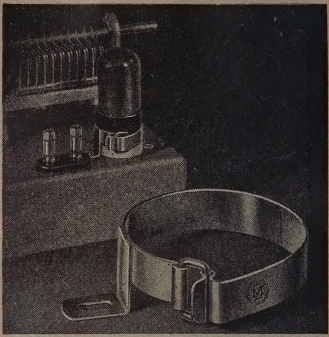
RF CHOKES

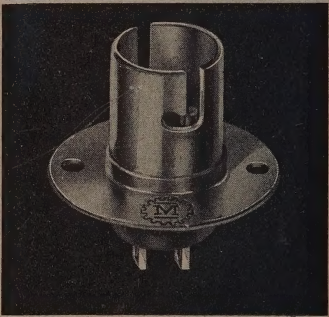
Many have copied, few have equalled, and none have surpassed the genuine original design Millen Designed for Application series of midget RF Chokes. The more popular styles now in constant production are illustrated herewith. Special styles and variations to meet unusual requirements quickly furnished.

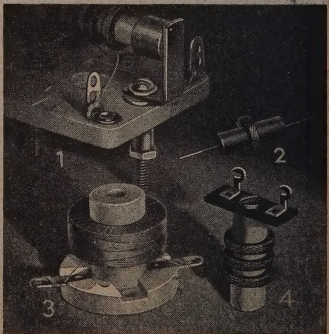
General Specifications: 2.5 mH, 250 mA for types 34100, 34101, 34102, 34103, 34104, and 1 mH, 300 mA for types 34105, 34106, 34107, 34108, 34109.

No. 34100.................... $
No. 34101....................
No. 34102....................
No. 34103....................
No. 34104....................









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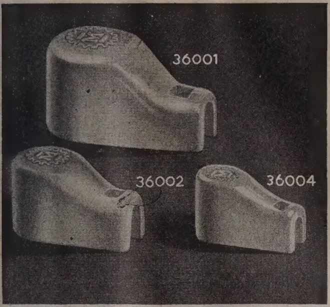
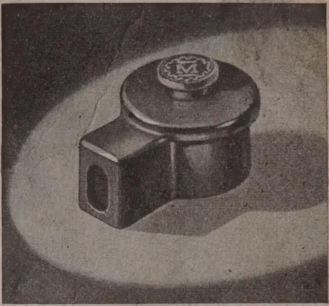
MALDEN · MASSACHUSETTS





CERAMIC PLATE OR GRID CAPS

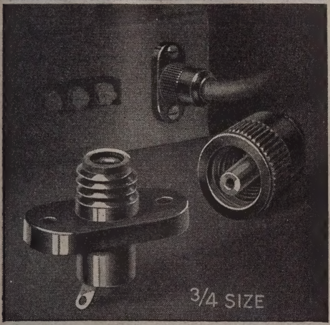
Soldering lug and contact one-piece. Lug ears annealed and solder dipped to facilitate easy combination "mechanical plus soldered" connection of cable.

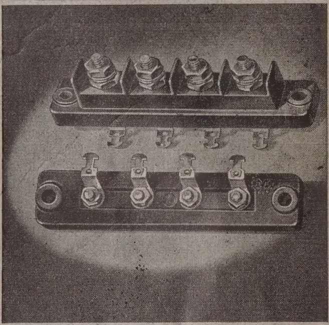
No. 36001—9/16″............ $
No. 36002—3/8″...............
No. 36004—1/4″...............

SNAP LOCK PLATE CAP

For Mobile, Industrial and other applications where tighter than normal grip with multiple finger 360° low resistance contact is required. Contact self-locking when cap is pressed into position. Insulated snap button at top releases contact grip for easy removal without damage to tube.

No. 36011—9/16″............ $
No. 36012—3/8″...............





SAFETY TERMINAL

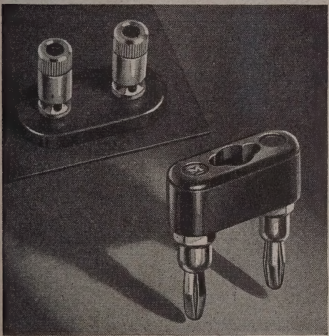
Combination high voltage terminal and thru-bushing. Tapered contact pin fits firmly into conical socket providing large area, low resistance connection. Pin is swivel mounted in cap to prevent twisting of lead wire.

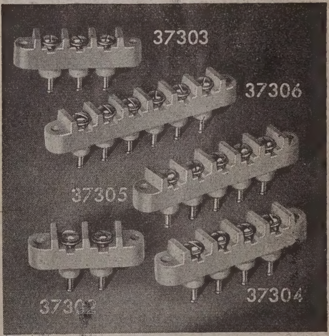
No. 37001, Black or Red......... $
No. 37501, Low loss.............

TERMINAL STRIP

A sturdy four-terminal strip of molded black Textolite. Barriers between contacts. "Non turning" studs, threaded 8/32 each end.

No. 37104.................... $





POSTS, PLATES and PLUGS

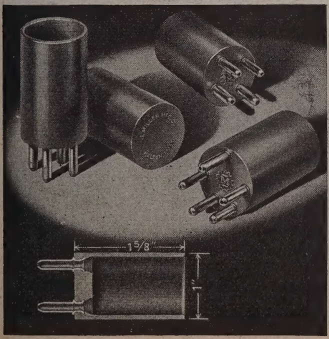
Designed for Application! Compact, easy to use. Made in black and red regular bakelite as well as low loss brown mica filled bakelite or steatite for R.F. uses. Posts have captive head.

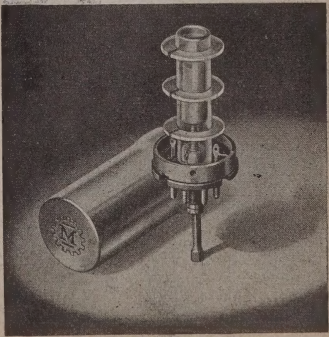
No. 37202 Plates (pr.)........... $
No. 37212 Plugs................
No. 37222 Posts (pr.)...........

STEATITE TERMINAL STRIPS

Terminal and lug are one piece. Lugs are Navy turret type and are free floating so as not to strain steatite during wide temperature variations. Easy to mount with series of round holes for integral chassis bushings.

No. 37302..................... $
No. 37303.....................
No. 37304.....................
No. 37305.....................
No. 37306.....................





MIDGET COIL FORMS

Made of low loss mica filled brown bakelite. Guide funnel makes for easy threading of leads through pins.

No. 45000..................... $
No. 45004.....................
No. 45005.....................

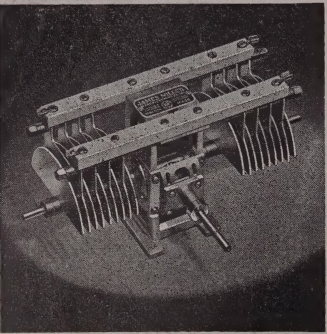
TUNABLE COIL FORM

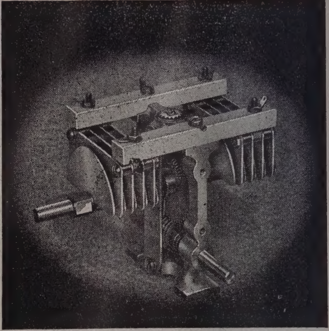
Standard octal base of low loss mica-filled bakelite, polystyrene 1/2″ diameter coil form, heavy aluminum shield, iron tuning slug of high frequency type, suitable for use up to 35 mc. Adjusting screw protrudes through center hole of standard octal socket.

No. 74001, with iron core........ $
No. 74002, less iron core.........

JAMES MILLEN

MALDEN · MASSACHUSETTS



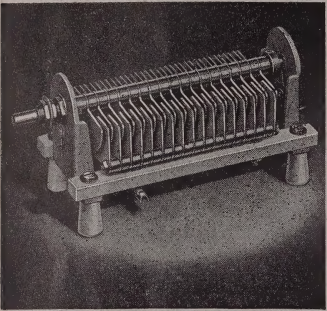


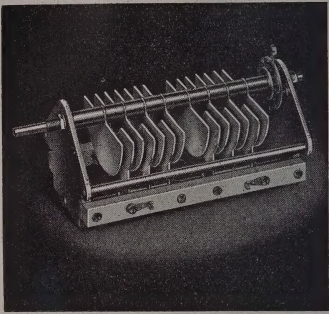
04000 and 11000 SERIES TRANSMITTING CONDENSERS

A new member of the "Designed for Application" series of transmitting variable air capacitors is the 04000 series with peak voltage ratings of 3000, 6000, and 9000 volts. Right angle drive, 1–1 ratio. Adjustable drive shaft angle for either vertical or sloping panels. Sturdy construction, thick, round-edged, polished aluminum plates with 1¾" radius. Constant impedance, heavy current, multiple finger rotor contactor of new design. Available in all normal capacities.

The 11000 series has 16/1 ratio center drive and fixed angle drive shaft.

Code	*Volts*	*Capacity*	*Price*
11035	3000	35	$
11050	3000	50	
11070	3000	70	
04050	6000	50	
04060	9000	60	
04100	6000	90	
04200	3000	205	

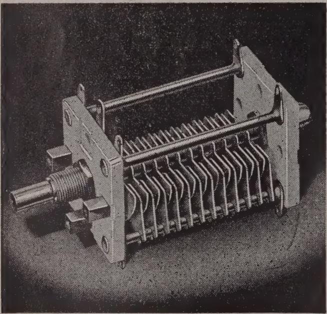


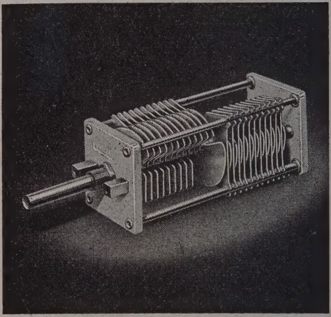


12000 and 16000 SERIES TRANSMITTING CONDENSERS

Rigid heavy channeled aluminum end plates. Isolantite insulation, polished or plain edges. One piece rotor contact spring and connection lug. Compact, easy to mount with connector lugs in convenient locations. Same plate sizes as 11000 series above.

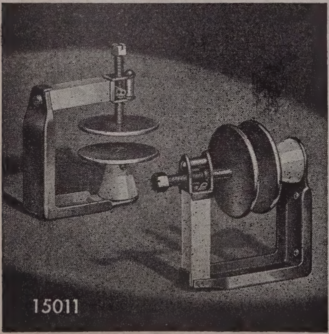
The 16000 series has same plate sizes as 04000 series. Also has constant impedance, heavy current, multiple finger rotor contactor of new design. Both 12000 and 16000 series available in single and double sections and many capacities and plate spacing.



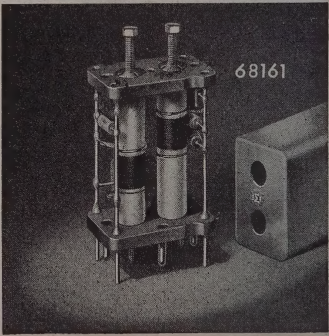


THE 28000–29000 SERIES VARIABLE AIR CAPACITORS

"Designed for Application," double bearings, steatite end plates, cadmium or silver plated brass plates. Single or double section .022" or .066" air gap. End plate size: 19/16" x 11/16". Rotor plate radius: ¾". Shaft lock, rear shaft extension, special mounting brackets, etc., to meet your requirements. The 28000 series has semi-circular rotor plate shape. The 29000 series has approximately straight frequency line rotor plate shape. Prices quoted on request. Many stock sizes.



15011



68161

NEUTRALIZING CAPACITOR

Designed originally for use in our own No. 90881 Power Amplifier, the No. 15011 disc neutralizing capacitor has such unique features as rigid channel frame, horizontal or vertical mounting, fine thread over-size lead screw with stop to prevent shorting and rotor lock. Heavy rounded-edged polished aluminum plates are 2" diameter. Glazed Steatite insulation.

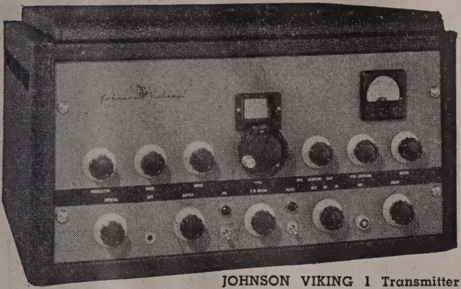
No. 15011.................... $

I.F. TRANSFORMERS

The Millen "Designed for Application" line of I.F. transformers includes air condenser tuned, and permeability tuned types for all applications. Standard stock units are for 456, 1600 and 5000 kc. B.F.O. also available.

E. F. JOHNSON Company WASECA, MINNESOTA

JOHNSON VIKING 1 150-WATT TRANSMITTER



JOHNSON VIKING 1 Transmitter

A completely self-contained, band-switching transmitter delivering full output throughout its range, consisting of the 160, 80, 40, 20, 15, and 10-meter bands, as well as adjacent frequencies.

TECHNICAL DESCRIPTION

RF section, a 6AU6 oscillator drives a 6AQ5 buffer which drives a Raytheon 4D32 final. An 829B can also be used with slightly less output. Audio section, a 6AU6 into a 6AU6 into push-pull 807 modulators. Frequency response has been limited to the range 300 to 3000 cycles. 5R4 HV rectifiers, 5Z4 LV rectifier, and 6AL5 bias rectifier complete the tube line-up. Dual power supplies for better regulation. Rotary variable inductor and variable condenser geared together give a uniform "Q" and better efficiency throughout the tuning range. Pi-section output tank will load into a wide variety of antennas and effectively reduce the harmonic content of the output.

features —

- **Amplitude Modulation**
- **Front Panel Band Switching**
- **100 Watts Phone Output**
- **115 Watts CW Output**
- **VFO Input Provision**
- **Dual Power Supplies**
- **Complete with Cabinet**
- **Pi-Network Coupling**

A FACTORY ENGINEERED TRANSMITTER

The JOHNSON Viking 1 is a factory-designed and engineered transmitter, not another collection of parts called a kit. Months were spent in its development by JOHNSON engineers and many of the parts were developed and manufactured especially for it. The whole job was done as though JOHNSON were going to put it in production. An elaborate instruction book was prepared, including detailed photographs and step-by-step instructions for the assembling and wiring.

WIDE FREQUENCY COVERAGE

Recognizing the fact that many of the varied activities for which the Viking 1 is suitable take place outside the amateur bands, such as MARS, emergency nets, etc., we list herewith its frequency range:

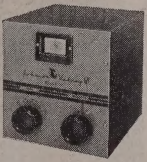
Band	Low Freq. Limit	High Freq. Limit
160	1.8 mc.	2.4 mc.
80	2.9	4.4
40	5.2	8.0
20	9.8	15.0
15	15.0	21.8
10	21.0	30.0

EVERYTHING NEEDED IS INCLUDED

No holes to drill, every part is furnished including the cabinet, wiring harness, screws, nuts, washers, solder terminals, wire, grommets, everything. Ask your Jobber for complete catalog.

Amateur Net, complete less tubes, crystals, key, mike **$209.50**

NEW JOHNSON VFO KIT
Model 122



Drives the Viking 1, with full excitation, on all amateur bands, 160 through 10 meters. These amateur bands accurately calibrated in frequency on 5" dial with 6:1 reduction for ease in setting. 6AU6 electron coupled oscillator and OA2 voltage regulator employed for very clean keying and overall stability.

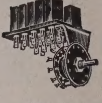
Two entirely separate oscillator tanks are used, with a multiplication of only four to cover 10 meter band, resulting in calibration accuracy, minimum drift, unusually clean keying. Only two controls used on VFO: frequency control and bandswitch. Keying can be done in three ways, keying of VFO alone, keying Viking 1 alone, or keying both simultaneously for perfect break-in.

All voltages supplied from VFO socket on Viking 1, with cables and plugs furnished.

Assembly of kit simple. Calibrated dial and calibration padders furnished. Frequency adjustment easy with variable padders and trimmers. All parts furnished, including cabinet, no holes to drill.

Cat. No. 240-122—Amateur Net, kit less tubes........ **$42.75**

INSTANT CRYSTAL SELECTOR

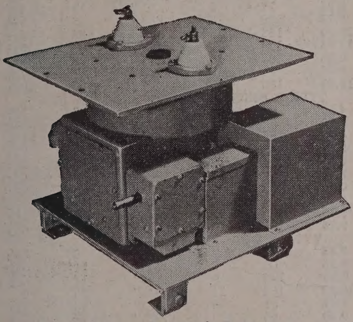


126-220-1

Ten frequencies with a twist of the knob with extra position for ECO. Accommodates all crystals with ½" spacing. With adaptors also takes ¾" spaced crystals.

Cat. No.	List Price
126-220-1—Instant Crystal Selector	**$5.80**
126-120-1—Crystal Mounting Board only	**3.10**

JOHNSON UNIVERSAL ROTOMATIC ANTENNA



Johnson Rotomatic Rotator

The Johnson Rotomatic rotator is strictly a de-luxe heavy duty unit. Gears are oversize, 1200 to 1 reduction and are continuously lubricated. All bearings are Oilite. Interference free 1/20 HP capacitor motor. Weatherproof assembly. Tilt base permits antenna adjustment from tower. Will support largest dual band assembly.

Engineered and built expressly for those who want the finest. Universal in application, Rotomatic rotators may be used with any beam. When used with a Johnson array, the maximum in efficiency, ease of erection and adjustment, and dependable long life is achieved.

Antenna changeover relay permits dual antennas with one feed line. Slip ring coupling affords excellent impedance matching and low standing wave ratio with a wide variety of lines.

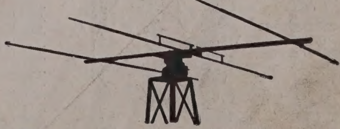
A Rotomatic rotator and beam antenna directs your signal where you want it. Makes your 100 watts as effective as a kilowatt.

Rotomatic Control Box

Selsyn indicator follows antenna rotation on lighted dial. Controls for power, antenna relay, motor reversing.

JOHNSON ANTENNA ASSEMBLIES

One piece galvanized steel boom and elements of large diameter heavy wall aluminum alloy to withstand severe wind and ice loads. All metal—no mounting insulators required. Special clamps permit any element spacing. Single or dual band parasitic arrays up to 4 element 10 meter and 3 element 20 may be used.



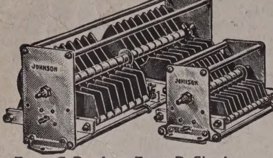
See Your Jobber or Write for Complete Data and Prices.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

E. F. JOHNSON Company WASECA, MINNESOTA

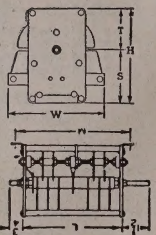
VARIABLE CONDENSERS

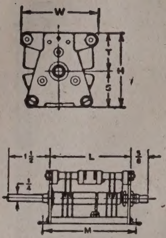
TYPES C AND D



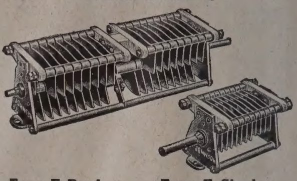
Type C Dual Type D Single

Type	T	S	W	H
C	$2\frac{5}{16}$	$3\frac{3}{32}$	$5\frac{1}{2}$	$5\frac{3}{8}$
D	$1\frac{27}{32}$	$2\frac{5}{32}$	$4\frac{1}{4}$	4





TYPES E AND F



Type E Dual Type F Single

Type	T	S	W	H
E	$1\frac{5}{16}$	$1\frac{9}{32}$	$2\frac{5}{8}$	$2\frac{19}{32}$
F	$1\frac{1}{32}$	$\frac{31}{32}$	$2\frac{1}{16}$	2

JOHNSON C and D condensers are sturdily constructed to give trouble-free operation under the most severe service. Only the finest materials are employed yet these units are lower in price than any other quality condensers.

All dual models have center rotor connections, to insure balanced operation at ultra-high frequencies. Heavy laminated phosphor bronze contact springs insure low resistance circuits.

Important features include: Heaviest aluminum plates of any similar condenser, .051″ thick—Steatite insulation—Large laminated rotor brushes—Center rotor contacts on all dual condensers—Heavy 5/16″ diameter aluminum tie rods for frame strength and rigidity—¼″ cadmium-plated steel shafts.

Supplied with single hole mounting brackets which fit either top or bottom of end plate so that stators may be mounted to top or bottom as preferred.

Panel space, Type C, 5½″ wide x 5⅜″ high; panel space, Type D, 4¼″ wide x 4″ high.

Mounting (M) dimension, on both C and D Types, ⅞″ more than L dimension.

TYPE C SINGLE SECTION

Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
250C70	**$16.50**	252	34	.175″	24	$6\frac{13}{16}$
500C70	**23.50**	496	56	.175″	47	$12\frac{3}{16}$
250C90	**19.50**	245	45	.250″	31	$12\frac{3}{16}$
350C90	**23.00**	337	63	.250″	43	$14\frac{27}{32}$
50C110	**11.75**	51	19	.350″	8	$4\frac{25}{32}$
100C110	**15.00**	103	30	.350″	17	$8\frac{19}{32}$
250C110	**23.25**	251	66	.350″	41	$18\frac{9}{32}$
50C130	**13.00**	51	24	.500″	10	$7\frac{11}{16}$
100C130	**17.00**	102	42	.500″	21	$13\frac{11}{32}$
TYPE C DUAL SECTION						
200CD45	**20.50**	204	21	.125″	15	$8\frac{19}{32}$
300CD45	**24.00**	290	26	.125″	21	$10\frac{5}{16}$
200CD70	**23.50**	198	27	.175″	19	$12\frac{3}{16}$
300CD70	**31.00**	305	37	.175″	29	$16\frac{25}{32}$
150CD90	**25.00**	147	30	.250″	19	$14\frac{27}{32}$
50CD110	**17.50**	50	18	.350″	8	$10\frac{5}{16}$
100CD110	**24.50**	103	32	.350″	17	$16\frac{25}{32}$
50CD130	**20.00**	51	24	.500″	10	$14\frac{27}{32}$
TYPE D SINGLE SECTION						
100D35	**8.75**	99	14	.080″	8	$2\frac{29}{32}$
250D35	**11.25**	252	24	.080″	20	$4\frac{25}{32}$
500D35	**14.75**	496	36	.080″	39	$6\frac{25}{32}$
100D45	**9.50**	104	19	.125″	12	$4\frac{25}{32}$
150D45	**11.00**	146	23	.125″	17	$4\frac{25}{32}$
50D70	**8.75**	51	17	.175″	7	$2\frac{29}{32}$
70D70	**9.75**	72	18	.175″	11	$4\frac{25}{32}$
100D70	**10.75**	98	23	.175″	15	$4\frac{25}{32}$
150D70	**12.50**	151	31	.175″	23	$6\frac{13}{16}$
250D70	**15.50**	244	45	.175″	37	$10\frac{5}{16}$
350D70	**19.00**	351	62	.175″	53	$13\frac{11}{32}$
50D90	**10.00**	53	20	.250″	10	$4\frac{25}{32}$
70D90	**11.00**	73	25	.250″	14	$5\frac{13}{16}$
100D90	**12.00**	99	30	.250″	19	$7\frac{11}{16}$
150D90	**14.25**	149	43	.250″	29	$10\frac{5}{16}$
TYPE D DUAL SECTION						
100DD35	**11.75**	95	13	.080″	8	$4\frac{25}{32}$
150DD35	**13.25**	147	15	.080″	12	$5\frac{13}{16}$
200DD35	**15.75**	202	19	.080″	16	$7\frac{11}{16}$
300DD35	**18.75**	291	24	.080″	23	$9\frac{15}{32}$
500DD35	**25.50**	496	38	.080″	39	$13\frac{11}{32}$
150DD45	**16.25**	155	24	.125″	18	$9\frac{15}{32}$
200DD45	**18.50**	198	27	.125″	23	$12\frac{3}{16}$
50DD70	**12.50**	52	15	.175″	8	$5\frac{13}{16}$
70DD70	**14.25**	72	17	.175″	11	$7\frac{11}{16}$
100DD70	**16.00**	97	22	.175″	15	$9\frac{15}{32}$
150DD70	**20.75**	151	31	.175″	23	$13\frac{11}{32}$
50DD90	**14.50**	52	19	.250″	10	$9\frac{15}{32}$
100DD90	**19.50**	97	30	.250″	19	$14\frac{27}{32}$

Designed as rugged, compact units for medium and low power transmitters, type E and F condensers are in a class by themselves. They have more capacity per cubic inch and occupy less panel space for their rating than any other condenser on the market. Their rapid adoption by manufacturers of high grade equipment and discriminating amateurs is ample proof of their excellence.

Points of superiority: Heavy aluminum plates, .032″ thick, with rounded edges for maximum voltage rating—Heavy aluminum tie rods ¼″ diameter for frame strength and rigidity—Steatite insulation—Stator mounted above to reduce capacity to ground—heavy phosphor bronze contact springs, cadmium plated—Center contact on dual models—Chassis or panel mounting—Stainless steel shafts.

In addition to mounting foot shown, removable single hole brackets are furnished so that condenser may be inverted from position shown, or other components mounted above.

Panel space, Type E, 2⅝″ wide x $2\frac{19}{32}$″ high; panel space, Type F, $2\frac{1}{16}$″ wide x 2″ high. Mounting (M) dimension, on both E and F Types, $\frac{7}{16}$″ more than L dimension.

TYPE E SINGLE SECTION

Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
250E20	**$ 6.20**	244	12	.045″	23	$2\frac{25}{32}$
350E20	**7.00**	353	15	.045″	33	$3\frac{17}{32}$
500E20	**8.10**	488	19	.045″	45	$4\frac{15}{32}$
100E30	**5.60**	100	11	.075″	15	$2\frac{9}{16}$
150E30	**6.30**	154	14	.075″	23	$3\frac{7}{16}$
250E30	**7.50**	251	20	.075″	37	$4\frac{15}{16}$
350E30	**8.90**	347	25	.075″	51	$6\frac{7}{16}$
35E45	**5.15**	38	9	.125″	9	$2\frac{5}{16}$
50E45	**5.50**	53	11	.125″	12	$2\frac{31}{32}$
70E45	**5.85**	74	13	.125″	17	$3\frac{9}{16}$
100E45	**6.35**	101	16	.125″	23	$4\frac{17}{32}$
150E45	**7.35**	145	20	.125″	33	$6\frac{3}{32}$
250E45	**9.35**	241	32	.125″	55	$9\frac{9}{16}$
TYPE E DUAL SECTION						
300ED20	**11.20**	312	13	.045″	29	$6\frac{21}{32}$
50ED30	**7.85**	52	8	.075″	8	$4\frac{3}{32}$
70ED30	**8.35**	72	8	.075″	11	$4\frac{17}{32}$
100ED30	**9.15**	99	10	.075″	15	$5\frac{3}{8}$
150ED30	**10.50**	153	13	.075″	23	$7\frac{1}{16}$
200ED30	**11.75**	196	15	.075″	29	$8\frac{3}{8}$
50ED45	**8.35**	52	10	.125″	12	$6\frac{5}{32}$
70ED45	**9.40**	74	12	.125″	17	$7\frac{7}{16}$
100ED45	**10.85**	100	15	.125″	23	$9\frac{9}{32}$
TYPE F SINGLE SECTION						
35F20	**4.50**	35	7	.045″	6	$1\frac{15}{32}$
50F20	**4.70**	54	8	.045″	9	$1\frac{5}{8}$
70F20	**4.90**	66	8	.045″	11	$1\frac{25}{32}$
100F20	**5.35**	106	10	.045″	17	$2\frac{1}{4}$
150F20	**6.05**	154	12	.045″	25	$2\frac{7}{8}$
250F20	**7.25**	252	17	.045″	41	$4\frac{3}{32}$
50F30	**5.10**	52	9	.075″	13	$2\frac{5}{16}$
70F30	**5.45**	67	11	.075″	17	$2\frac{23}{32}$
100F30	**6.10**	99	14	.075″	25	$3\frac{19}{32}$
150F30	**7.15**	148	18	.075″	37	$4\frac{7}{8}$
TYPE F DUAL SECTION						
50FD20	**7.65**	53	7	.045″	9	$3\frac{1}{2}$
70FD20	**8.15**	66	7	.045″	11	$3\frac{21}{32}$
100FD20	**8.95**	104	9	.045″	17	$4\frac{23}{32}$
150FD20	**10.30**	153	11	.045″	25	6
50FD30	**8.30**	51	8	.075″	13	$4\frac{27}{32}$
70FD30	**9.30**	66	10	.075″	17	$5\frac{23}{32}$
100FD30	**10.75**	99	13	.075″	25	$7\frac{7}{16}$

DEPARTURES FROM STANDARD

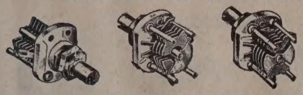
Special plate spacings, capacities, shaft extensions, insulation, mounting brackets, terminals, etc., can be furnished to specifications for commercial applications.

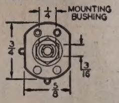
CONDENSERS FOR HIGHER VOLTAGES

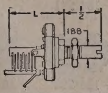
The JOHNSON line includes heavy duty pressurized or air dielectric fixed and variable condensers for high voltage commercial applications. Data sheets furnished on request.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

MINIATURE AIR VARIABLE CONDENSERS







[redacted]

The smallest air variables ever built. So small that miniature tubes are large in comparison. Extremely rugged for their size, they have proved invaluable for miniaturized equipment such as pack transmitters and receivers, test instruments, TV receivers and a multitude of VHF uses. Available in single, differential and butterfly types. Single hole mounting; flats on mounting bushing prevents turning. Split-sleeve rotor bearings — no shaft wobble. Improved stator terminal. Steatite insulation treated with DC-200 for maximum moisture resistance. Nickel-plated brass plates spaced .017". Voltage breakdown is 1250 V. peak.

Panel mounting space is ¾" by ⅝". Bushing threaded ¼ - 32. 3/16" shaft, slotted for screw driver adjustment. See knob page for 116-214-2 knob for these condensers.

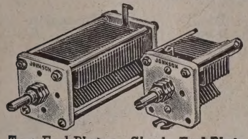
Special Types

Available with special features, such as locking bearing, .0135" air gap (permitting greater maximum capacity), or other variations, to manufacturers ordering in production quantities.

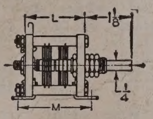
Cat. No.	List Price	Capacity Max.	Capacity Min.	Plates Per Sec.	L
		Single			
5M11	$1.45	5.0	1.5	5	39/64"
9M11	1.55	8.6	1.8	9	23/32"
15M11	1.75	14.2	2.3	15	29/32"
20M11	2.00	19.6	2.7	21	1 5/64"
		Differential			
6MA11	$2.10	5.0	1.5	5	39/64"
9MA11	2.30	8.6	1.8	9	23/32"
15MA11	2.60	14.2	2.3	15	29/32"
19MA11	3.00	19.6	2.7	21	1 5/64"
		Butterfly			
3MB11	$2.10	3.2	1.5	5	39/64"
5MB11	2.30	5.1	1.8	9	23/32"
9MB11	2.60	8.0	2.3	15	29/32"
11MB11	2.90	10.8	2.7	21	1 5/64"

L: Length Behind Panel

TYPE H CONDENSER



Two End Plates Single End Plate



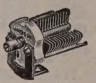
The Type H condenser was designed for aircraft transmitters and combines a minimum of weight and size with simple but rugged construction. Capacities and spacings are provided for low and medium power stages. Use of steatite for end plates avoids any possibility of "short circuit loops" and permits panel mounting with both rotor and stator insulated from ground. Has aluminum plates .020" thick. End plate 1½" square.

Mounting (M) dimension is 5/16" more than the L dimension.

TYPE H SINGLE SECTION

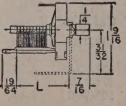
Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
		Single End Plate				
25H15	$2.70	25	4	.030"	6	11/16
35H15	2.80	35	4	.030"	8	13/16
50H15	2.95	49	4	.030"	11	⅞
70H15	3.20	69	6	.030"	15	1 3/16
100H15	3.50	97	7	.030"	21	1½
		Double End Plate				
150H15	5.00	146	9	.030"	31	2 13/32
250H15	6.60	242	13	.030"	51	3 13/32
70H30	5.75	74	13	.080"	35	4 13/32
		DUAL SECTION				
35HD15	4.70	31	6	.030"	7	1 11/16
50HD15	5.05	51	7	.030"	11	2 3/32
70HD15	5.55	71	8	.030"	15	2½
100HD15	6.25	99	10	.030"	21	3 3/32
35HD30	6.05	38	12	.080"	17	4 13/32
50HD30	7.15	55	15	.080"	25	6

TYPE J CONDENSER

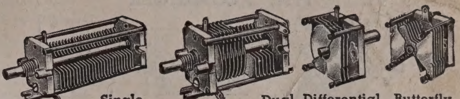


The Type J Condenser is a midget with big condenser characteristics. It has wider spacing, .025", than most small types, yet occupies little more space and is ideal for oscillator and low power stages. Steatite end plate is 1⅛" wide. Mounting brackets included.

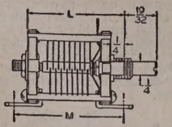
Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Plates Per Sec.	L
7J12	$1.95	8	2.6	3	19/32
15J12	2.10	17	3.3	6	23/32
25J12	2.30	29	3.6	10	⅞
50J12	2.70	52	4.9	19	1¼
75J12	3.15	73	6	26	1 17/32
100J12	3.75	102	7	36	1 31/32



JOHNSON TYPE "L" VARIABLES
(167 Series)



Single Dual Differential Butterfly



Perfected ceramic soldering assures absolute — and permanent — rigidity and strength, absolute — and permanent — maintenance of capacities. JOHNSON ceramic soldering leaves a bond which is stronger than the rugged end plates themselves. There are no eyelets, nuts or screws to work loose which would cause stator wobble and fluctuations in capacity.

Split sleeve tension bearing assures silent operation on highest frequencies.

Ceramic end plates, 1⅜" square with 2 mounting posts tapped for 6-32 screws on 1 3/32" centers.

Mounting (M) dimension is ½" more than L dimension.

Two sets of stator contacts. New, corrosion resistant, bright alloy plating has lower electrical resistance.

These new variables are ideal for peak efficiency even under the severest conditions of portable-mobile operation.

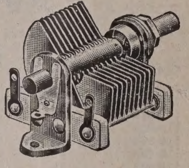
Other capacities and spacings on special order.

TYPE L SINGLE SECTION

Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	*Spacing	Plates Per Sec.	L
		Single End Plate				
10L15	$2.40	11	2.8	.030"	3	15/16
25L15	2.55	27	3.5	.030"	7	1 9/64
50L15	2.80	51	4.6	.030"	13	1 7/16
75L15	3.00	75	5.7	.030"	19	1¾
		Double End Plate				
100L15	4.85	99	6.8	.030"	25	2 7/32
200L15	6.10	202	11.6	.030"	51	3 33/64
		Dual Section				
25LD15	4.70	27	3.5	.030"	7	1 13/16
50LD15	5.45	51	4.6	.030"	13	2 27/64
100LD15	6.55	99	6.8	.030"	25	3⅝
		Differential				
10LA15	2.90	11	2.8	.030"	3	15/16
25LA15	3.10	27	3.5	.030"	7	1 9/64
50LA15	3.50	51	4.6	.030"	13	1 7/16
		Butterfly				
10LB15	3.35	10.5	2.8	.030"	5	1 3/64
25LB15	3.80	26	4.3	.030"	12	1 7/16
50LB15	4.40	51	6.8	.030"	23	1 15/16

* .020, .060, .080 spacing also available.

TYPE R VARIABLE CONDENSERS

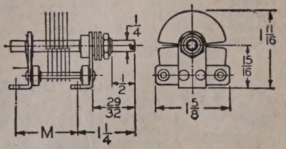


Here's the JOHNSON version of a highly popular standardized condenser widely used in compact portable and mobile equipment. Suited for aircraft, marine, police and fire equipment. Engineered for highly efficient, quiet operation in receivers, transmitters, laboratory and test equipment.

End plates of extra heavy nickel-plated brass. All-soldered and riveted construction, no eyelets. Steatite insulating bars stronger than ordinary.

Specifications

All plates are .0225" thick, of brass with the new bright alloy plating, far more corrosion resistant than cadmium. Spacing is ordinarily .0245", but available on special order in spacings up to .0715".



Availability

The JOHNSON "R" Condensers are supplied at present only on special order in production quantities. Write E. F. JOHNSON COMPANY for full details.

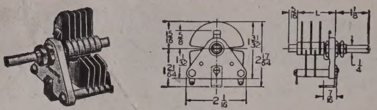
EXPLANATION OF CATALOG NUMBERS

The first part of the catalog number indicates the capacity per section in mmfd. The following letter indicates the frame size or type. A second letter D indicates a two-section type. The final number multiplied by 100 is the approx. peak breakdown voltage.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

E. F. JOHNSON Company WASECA, MINNESOTA

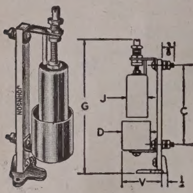
TYPE G CONDENSER



The Type G condenser is extremely popular as a neutralizing condenser for medium and low power stages. It is also widely used for grid and plate tuning at high and ultra-high frequencies. A wide range of capacities and spacing make it adaptable to many applications. It has a single end plate of steatite and low minimum capacity. .032" rounded aluminum plates, universal mounting bracket, locking nut, and front and rear shaft extensions are among the outstanding features.

Cat. No.	List Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
50G20	3.75	52	5	.045"	9	1 5/32
13G45	3.45	13	4.7	.125"	5	1 5/32
23G45	3.75	23	6.4	.125"	9	1 13/16
6G70	3.75	5.7	3.5	.225"	3	1 1/16
12G70	4.25	12	6	.225"	7	2⅝

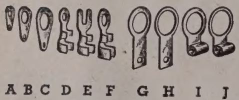
TYPE N CONDENSER



Small mounting space requirements, extremely high voltage rating in proportion to size, fine adjustment with uniform voltage breakdown rating throughout the full capacity range, and low cost, make these neutralizing condensers ideal for the modern transmitter. "Plates" are aluminum cups supported on a steatite frame with cast aluminum mounting bracket. Because of the design these condensers will withstand much higher voltage than conventional flat plate condensers of the same spacing The N375 has been improved and now features a bushing for the guide shaft for greater stability and a beaded lower cup for high voltage rating. Peak R.F. Breakdown Ratings at 2 Mc.; N125 8,500, N250 11,500, N375 14,500.

Cat. No.	List Price	Capacity Max.	Capacity Min.	D	C	G	V	Spacing
N125	$6.50	11.0	1.1	1⅜	3⅛	6 13/32	1 15/16	.125"
N250	7.50	10.6	1.4	1 47/64	3¾	7 17/32	2 9/32	.250"
N375	9.50	10.7	1.7	2⅜	5 19/32	8 23/32	2 15/16	.375"

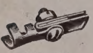
TINNED COPPER SOLDERING TERMINALS


A B C D E F G H I J

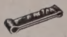
Available in ten sizes, JOHNSON soldering terminals meet the requirements of most applications. Composed of copper for low resistance, they are tinned to permit easy soldering.

Cat. No.	Illus.	List Price Per C	Size Hole	Length
110-880	A	$0.40	6-32	9/16"
110-881	B	.75	¼"	13/16"
110-882	C	1.50	⅜"	1"
110-883	D	2.75	10-32	15/16"
110-884	E	2.75	10-32	1"
110-885	F	4.00	¼"	1 1/16"
110-887	G	2.75	25/64"	1 9/32"
110-888	H	2.75	33/64"	1 9/32"
110-889	I	4.25	25/64"	1 1/32"
110-890	J	4.25	33/64"	1 1/32"

INDUCTOR CLIPS



235-804



235-860

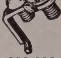
Clip No. 235-804 is plated phosphor bronze and is designed for making connections to the JOHNSON edgewise wound or similar inductors. No. 235-860 will take wire from No. 20 to No. 10 without danger of tilting and shorting adjacent turns.

Cat. No.	List Price
235-804	$0.30
235-860	.15

SCREW TERMINAL

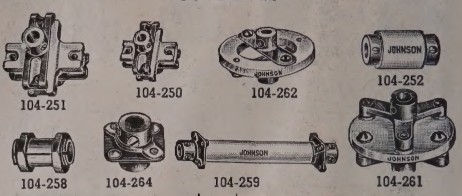
A convenient and substantial clip for use as antenna and ground connections and power terminals. Furnished complete with 2 screws.

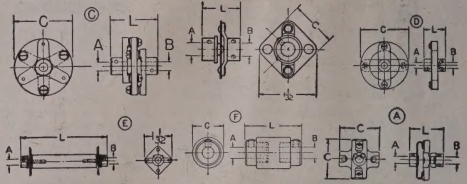
Cat. No. 110-112............................**List Price $0.07**



110-112

COUPLINGS





All JOHNSON insulated shaft couplings are characterized by best steatite insulation properly proportioned for electrical and mechanical strength, by accurate metal parts heavily plated, by advanced design, and by skillful manufacture.

The phosphor bronze springs of the -250 and -251 series couplings provide flexibility without backlash and adjust to minor shaft misalignments. Rigid types -252, -262 and -261 meet the requirements of accurate shaft alignment and high torque.

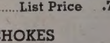
The -259 and -2593 are bar type couplings recommended for high voltages or very high frequencies.

The -264 is a small bakelite insulated flexible coupling for DC or low voltage RF applications.

Cat. No.	List Price	Modulated Peak Volt.	Dim. Dwg.	C	Dimension L	Dimension A	Dimension B
104-250	$1.00	4000	A	1 5/16	1⅛	¼	¼
104-2503	1.10	4000	A	1 5/16	1 3/16	¼	⅜
104-251	1.40	5000	A	2⅛	1 15/32	⅜	⅜
104-251A	1.40	5000	A	2⅛	1 15/32	¼	¼
104-251B	1.40	5000	A	2⅛	1 15/32	¼	⅜
104-252	.90	1000	F	11/16	1¼	¼	¼
104-258	.35			½	¾	¼	¼
104-259	1.50	8000	E		3⅜	¼	¼
104-2593	1.45	5000	E		2⅜	¼	¼
104-261	4.25	7500	C	2½	1 15/16	⅜	⅜
104-262	.85	5000	D	2	29/32	¼	¼
104 264	.60	400	B	1 1/32	23/32	¼	¼

PANEL BEARINGS

Nickel plated brass for ¼" shaft and up to ⅜" panels. Also with 3" and 6" nickel-plated brass shafts.

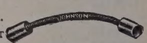


115-255, 256, 2562

Cat. No. 115-255	Panel bearing only	**List Price $0.20**
Cat. No. 115-256	Bearing and 3" shaft	**List Price .40**
Cat. No. 115-2562	Bearing and 6" shaft	**List Price .60**

FLEXIBLE SHAFTS

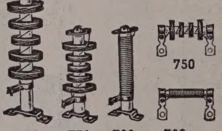
Phosphor bronze, non-rusting with ¼" hubs. Permit out of line or up to 90 degree angular control.



115-253, 254

Cat. No. 115-253	3" flexible shaft	**List Price $0.50**
Cat. No. 115-254	6" flexible shaft	**List Price .70**

RADIO FREQUENCY CHOKES



JOHNSON R.F. chokes have high reactance over the range for which they are designed. Coils are of enamelled silk-covered wire impregnated with high grade R.F. lacquer and are wound on steatite cores. Current ratings may be increased for intermittent use.

Cat. No.	List Price	Frequency	Current	Induct. (1 mc.)	Ohms DC	Lgth.
102-750	$1.75	1.7 to 30 mc.	150 ma	.83 mh	15	1½"
102-752	2.50	1.7 to 30 mc.	500 ma	1.0 mh	5.2	2⅞"
102-754	3.00	1.7 to 30 mc.	750 ma	1.9 mh	4	4 5/16"
101-760	.60	Ultra-high	250 ma	6.8 µh	.33	1½"
101-762	1.15	Ultra-high	1.5 a	19 µh	.30	2⅞"

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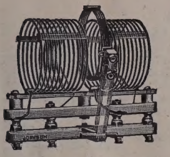
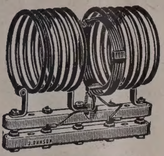
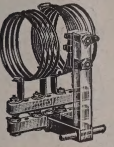
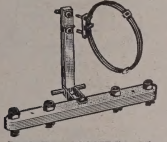
JOHNSON AIR-WOUND HAM INDUCTORS

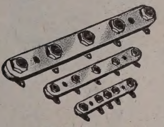
A Coil to Match Your Tube —
A Link to Match Your Line


Inductor 1000HCS40
Link 1000SL5


Inductor 500HCF20
Link 150/500FL5


Inductor 150H/LCS14
Link 150/500SL5


Jack Bar 1000JBS with 1000SLA Arm Assembly and 1000SL5 Link


Jack Bars
1000JBS, 500JBS, 150JBS

HCS—Inductors match high voltage, low current tubes — swinging link type.
LCS—Inductors match low voltage, high current tubes — swinging link type.
HCF—Inductors match high voltage, low current tubes — semi-fixed link.
LCF—Inductors match low voltage, high current tubes — semi-fixed link.

JOHNSON Air Wound Ham Inductors provide a degree of efficiency never before available in commercially produced coils for the amateur. This "broadcast" efficiency is possible because there is a model designed to match the impedance of each tank circuit—either high voltage low current or low voltage high current tubes.

Dimensions

Height is the height from the bottom of the plug bar. **Width** is the outside diameter across the winding.

SWINGING LINK INDUCTORS		SEMI-FIXED LINK INDUCTORS					
Catalog No.	**List Price**	**Catalog No.**	**List Price**	**Wire Size**	**Cap.* mmfds.**	**Ht.**	**Wth.**
1000HCS160	$11.50	——	—	10	99	5 11/16"	4 13/32"
1000LCS160	11.50	——	—	10	140	5 11/16"	4 13/32"
1000HCS80	10.25	1000HCF80	$ 9.90	10	46	5"	3 23/32"
1000LCS80	10.25	1000LCF80	9.90	10	73	5"	3 23/32"
1000HCS40	9.25	1000HCF40	8.90	10	24	5"	3 23/32"
1000LCS40	9.25	1000LCF40	8.90	8	55	5"	3 ¾"
1000HCS20	8.50	1000HCF20	8.50	8	19	4 ⅞"	3 ¾"
1000LCS20	8.50	1000LCF20	8.15	.250**	26	5 ⅛"	4"
1000H/LCS14	8.00	1000H/LCF14	7.65	.250**	19	4 ⅞"	3 ½"
1000H/LCS10	7.50	1000H/LCF10	7.15	.250**	18	4 ⅞"	3 ½"
500HCS160	6.25	——	—	14	100	4 7/32"	3 ⅛"
500LCS160	6.25	——	—	14	148	4 7/32"	3 ⅛"
500HCS80	5.75	500HCF80	5.60	14	45	3 21/32"	2 ⅝"
500LCS80	5.75	500LCF80	5.60	12	76	3 ¾"	2 21/32"
500HCS40	5.25	500HCF40	5.10	12	27	3 ¾"	2 21/32"
500LCS40	5.25	500LCF40	5.10	10	50	3 25/32"	2 23/32"
500HCS20	4.50	500HCF20	4.35	6	25	3 13/16"	2 13/16"
500LCS20	4.50	500LCF20	4.35	6	37	3 13/16"	2 13/16"
500H/LCS14	3.50	500H/LCF14	3.35	6	19	3 11/16"	2 9/16"
500H/LCS10	3.25	500H/LCF10	3.10	6	19	3 9/16"	2 5/16"
500H/LCS6	3.25	500H/LCF6	3.10	6	18	3 9/16"	2 5/16"
150HCS160	5.50	——	—	18	102	4 3/16"	3 1/16"
150LCS160	5.50	——	—	16	151	4 7/32"	3 3/32"
150HCS80	5.00	150HCF80	4.85	16	51	4 7/32"	2 19/32"
150LCS80	5.00	150LCF80	4.85	16	68	4 7/32"	2 19/32"
150HCS40	4.50	150HCF40	4.35	14	28	3 23/32"	2 ⅝"
150LCS40	4.50	150LCF40	4.35	12	57	3 ¾"	2 21/32"
150HCS20	4.00	150HCF20	3.85	12	21	3 ½"	2 13/32"
150LCS20	4.00	150LCF20	3.85	12	32	3 ½"	2 13/32"
150H/LCS14	3.25	150H/LCF14	3.10	8	19	3 21/32"	2 ½"
150H/LCS10	3.00	150H/LCF10	2.85	8	19	3 21/32"	2 ½"
150H/LCS6	3.00	150H/LCF6	2.85	8	16	3 13/32"	2"

*Total circuit capacity required to effect resonance at low frequency end of band. Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

**.250 diameter copper tubing.

JACK BAR ASSEMBLIES

		List Price
Cat. No. 150JBS	150 W. 3¾" x 9/16" x ⅜"	$1.45
Cat. No. 500JBS	500 W. 5¾" x ⅝" x ⅜"	2.00
Cat. No. 1000JBS	1000 W. 7½" x ⅞" x ½"	3.00

SWINGING LINK ARM ASSEMBLIES

Cat. No.	List Price
150/500SLA—Arm Assembly for 150/500 Watt Inductors	**$1.70**
1000SLA—Arm Assembly for 1000 Watt Inductors	**2.10**

BRACKETS

Cat. No.	List Price
150/500FLB—150/500 Watt Bracket for Semi-Fixed Link Inductor	**$0.45**
1000FLB—1000 Watt Bracket for Semi-Fixed Link Inductor	**.80**

Heavier Windings

Efficiency is further increased because coil windings are a wire-size larger than on most available inductors—resulting in less heating, lower loss and consequently higher efficiency.

JOHNSON Ham Inductors are built to give many years of efficient service. Coil windings are Formex-coated for better insulation and color preservation and JOHNSON quality is apparent in the Steatite jack and plug bars and the crystal clear polystyrene coil supports and spacers. All JOHNSON inductors are conservatively rated.

The JOHNSON Inductors and "plug-in" Link Assemblies fit all conventional inductor assemblies.

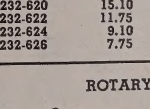
"PLUG-IN" LINKS

Cat. No.	No. Turns	List Price
150/500SL12	12	$3.00
150/500SL5	5	1.90
150/500SL2	2	1.60
1000SL10	10	3.10
1000SL5	5	2.40
1000SL2	2	1.80

SEMI-FIXED LINKS

Cat. No.	No. Turns	List Price
150/500FL12	12	$2.20
150/500FL5	5	1.40
150/500FL2	2	1.20
1000FL10	10	2.10
1000FL5	5	1.60
1000FL2	2	1.30

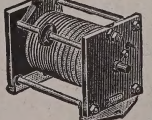
EDGEWISE WOUND "HI-Q" INDUCTORS



Edgewise wound, ¼" copper strip, "bright alloy" plated, and Mycalex supporting insulation are the distinguishing features of these inductors. Widely used commercially, they will safely handle more than 1000 watts in continuous service. Write for information on other types for industrial and broadcast applications.

Cat. No.	List Price	Inductance μh	Winding L x ID
232-610	$11.60	31	7 13/16" x 2½"
232-620	15.10	84	8 5/16" x 4"
232-622	11.75	41	6 7/16" x 3¼"
232-624	9.10	20	6" x 3¼"
232-626	7.75	10	4¾" x 2½"

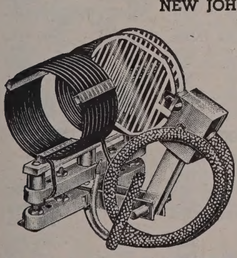
ROTARY INDUCTOR



Same efficient inductor used in final tank of VIKING 1. May be used in any low and medium power rig with bandswitching exciter to provide continuous tuning without changing coils. Variable wound for Hi-Q throughout range with No. 14 tinned copper wire on Steatite form. Maximum inductance 10 microhenries. Mycalex end plates. Smooth rotation provided by front and rear bearings. Positive rolling contact assured by beryllium copper tension springs. Overall size: 2½" wide x 4½" long x 3" high.

Cat. No. 229-201........................**List Price $14.75**

NEW JOHNSON FARADAY SHIELD


Illustrated above is JOHNSON 500HCS40 inductor, 238-172 jack bar, and 238-179 arm with 238-303 shield, hood, and lead assembly installed.

JOHNSON Faraday shields will reduce TVI caused by capacitive coupling. Designed for JOHNSON plug-in links, they are equally effective and easily installed on other links including non-plug-in types. The screen itself is a metallic plating on polystyrene sheets and is attached to the link with polystyrene cement. Grounded hood and copper braid effectively complete the shielding. Link impedance is relatively unchanged and plug-in link flexibility unimpaired. Made in two sizes and offered as the Faraday shield only or as a complete assembly.

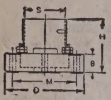
Cat. No.	Description	List Price
238-303	—150/500 watt swinging link shield, hood, and lead assembly	**$3.75**
238-304	—1000 watt swinging link shield, hood, and lead assembly	**4.25**
238-301	—150/500 watt link shield, only	**1.65**
238-302	—1000 watt link shield, only	**2.10**

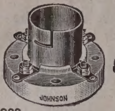
(Link, coil, jack bar, and arm not included)

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

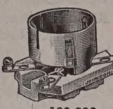
E. F. JOHNSON Company WASECA, MINNESOTA

TUBE SOCKETS

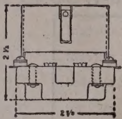




123-209
-210, -211, -216



123-206



No. 123-206 industrial bayonet socket with rugged metal shell for extremely high voltage applications. Will accommodate 8008, 5C22, FG104, GL146 and other tubes with similar bases. Has steatite insulation, silver plated beryllium copper contacts, screw terminals and three heavy springs in shell insure tube being held securely in place.

No. -209 has 4 mtg. holes, -206, -210, -211, -216 have 2. Nos. -209, -210, -211 and -216 all have heavy phosphor bronze, side wiping type contacts, metal shells and white, glazed porcelain bases. No. -209 is similar to No. -210, but provides greater spacing beween contacts and shell, for higher voltages.

No. -211, the standard "50-watt" socket, has double filament contacts for carrying heavy currents. No. -216 is for tubes having a GIANT 5-pin bayonet base such as the 803, RK28, etc. Suffix letters "SB" indicate beryllium copper contacts and steatite bases.

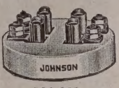
Cat. No.	List Price	D	H	M	S	Pins	Tube Base
123-206	$3.00	$2\frac{5}{8} \times 3\frac{7}{8}$	$2\frac{1}{2}$	$2\frac{3}{4}$	2.219	4	Super Jumbo
123-209	1.50	$2\frac{13}{16}$	$1\frac{27}{32}$	$2\frac{5}{16}$	1.386	4	Med. Bay.
123-209SB	2.50	$2\frac{13}{16}$	$1\frac{27}{32}$	$2\frac{5}{16}$	1.386	4	Med. Bay.
123-210	1.50	$2\frac{1}{2}$	$1\frac{7}{8}$	$2\frac{1}{16}$	1.386	4	Med. Bay.
123-211	1.85	$3\frac{3}{8}$	$2\frac{9}{32}$	$2\frac{13}{16}$	1.886	4	Stand. Jumbo
123-211SB	3.50	$3\frac{3}{8}$	$2\frac{9}{32}$	$2\frac{13}{16}$	1.886	4	Stand. Jumbo
123-216	3.00	$3\frac{3}{4}$	$2\frac{7}{16}$	$3\frac{1}{8}$	2.198	5	Giant Bay.
123-216SB	5.15	$3\frac{3}{4}$	$2\frac{7}{16}$	$3\frac{1}{8}$	2.198	5	Giant Bay.

No. -213 takes Eimac 152TL and 304TL. Contacts for either series or parallel filaments.

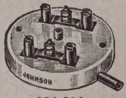
No. -214 takes Eimac 1500TH. Has air jet tube for cooling filament tube seals.

No. -215 is for "250 watt" tubes such as 204A, 849, etc.

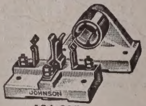
The plate terminal has a "safety cup" which prevents accidental dislodgement.



124-213



124-214



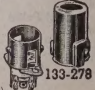
124-215

Cat. No.	List Price	Base
124-213	$2.00	"Eimac"
124-214	2.75	"Eimac"
124-215	4.25	"250 Watt"

MINIATURE SOCKETS AND TUBE SHIELDS

Sockets Steatite insulated, with phosphor bronze contacts. Shields brass, nickel plated, to JAN specs.

120-267



133-278

120-277B

Cat. No.		List Price
120-267	Miniature socket, all ceramic	$0.50
120-277B	Miniature socket with shield base	.75
133-277S	Miniature socket, shield base only	.15
133-278A	$1\frac{3}{8}$" shield for 277 B or S	.22
133-278B	$1\frac{3}{4}$" shield for 277 B or S	.25
133-278C	$2\frac{1}{4}$" shield for 277 B or S	.40

ACORN TYPE

The -265 is designed for "acorn" tubes. Steatite base, silver plated beryllium copper contacts.

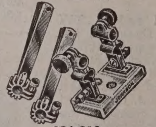
Cat. No. 121-265..........List Price $1.10

121-265

FOR 833 and 833A

The No. -212 socket for RCA833 or 833A. Base of steatite. Filament clamps incorporate "springs" which minimize strains on the glass tube seals and prevent breakage. Heat radiating plate terminals have $5\frac{1}{8}$" flexible laminated leads.

Cat. No. 124-212..........List Price $10.00

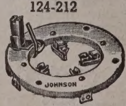


124-212

FOR 5D21, 705A and 715A & B

No. -234 for Western Electric 5D21, 705A, 715A, 715B includes heavy steatite base and special locking device for retaining tube in socket.

Cat. No. 122-234..........List Price $3.00



122-234

CRYSTAL SOCKET

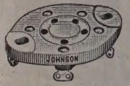
Steatite, DC-200 treated, for .050" pins spaced, .486", single $\frac{1}{8}$" mounting hole, phosphor bronze contacts.

126-105 Crystal Socket..........List Price $0.25

126-105

WAFER SOCKETS

JOHNSON wafer sockets are insulated with grade L 4 steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.



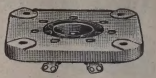
122-217, -224, -225, -226, -227, -228

Cat. No.	List		Cat. No.	List	
122-217	$0.75	7-pin small	122-226	$0.70	6-pin
122-224	.60	4-pin	122-227	.75	7-pin med.
122-225	.65	5-pin	122-228	.80	Octal

GIANT 7 PIN

No. -237 is a 7-pin large steatite wafer socket for transmitting tubes having a GIANT 7-pin base such as the 4E27A, HK257 and RCA 813. $\frac{3}{4}$" ventilating hole in base. .174" mounting holes on $1\frac{7}{8}$" square.

Cat. No. 122-237..........List Price $1.10

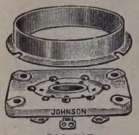


122-237

7 PIN AND BASE SHIELD

No. -247 is a 7-pin steatite wafer socket for transmitting tubes such as the 826. It is furnished with etched aluminum base shield. .174" mounting holes on $1\frac{7}{8}$" square.

Cat. No. 122-247..........List Price $1.25



122-247

SUPER JUMBO 4 PIN

The 122-244 is a 4-pin wafer socket of steatite insulation, for transmitting tubes having a Super Jumbo base such as the 8008. Brass clip contacts and reinforcing steel springs are cadmium-plated and designed for high currents. .174" mounting holes on $1\frac{7}{8}$" square.

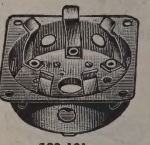
Cat. No. 122-244..........List Price $2.00

122-244

7 PIN WITH BUILT-IN BASE SHIELD

The 122-101 is a 7-pin steatite wafer socket incorporating ventilated base shield, fine tube retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for UHF use with tubes such as the 826, 829, 832, 4D32 and 4D22. Contacts silver plated and recessed to prevent movement. Special terminals permit direct mounting of grid coils. Two holes provided for mounting of buss bar neutralizing leads. .185" mounting holes on $2\frac{5}{16}$" square.

Cat. No. 122-101..........List Price $3.00

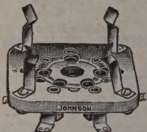


122-101

GIANT 5 PIN

The 122-275 is a 5-pin steatite wafer socket for transmitting tubes having a GIANT 5-pin base such as the 4-125A and RK48. Contacts are designed for high currents. Adequate ventilation for tubes is provided by a central hole and five holes between contacts. .190" mounting holes on $2\frac{1}{4}$" square.

Cat. No. 122-275..........List Price $1.75



122-275

TUBE CAP CONNECTORS

The 119-843 is a part of the 124-212 socket. Types 119-846 to 119-849 are silver-plated beryllium copper plated for permanent low resistance contact. 119-852 and -854 are of phosphor bronze, cadmium plated with high spring tension.

119-846

119-843

119-848
119-849

119-850
119-851

119-852
119-854

Cat. No.	List Price	Tube Cap. Dia.	Cat. No.	List Price	Tube Cap. Dia.
119-843	$1.50	.567"	119-850	$1.80C	.250"
119-846	.35	.125"	119-851	1.80C	.360"
119-848	.16	.070"	119-852	.06	.360"
119-849	.12	.048"	119-854	.12	.566"

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

E. F. JOHNSON Company

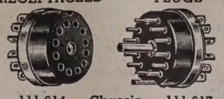
WASECA, MINNESOTA

MULTIPLE WIRE CONNECTORS

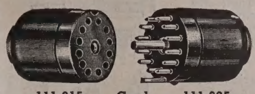
JOHNSON cable connectors provide a most efficient means of quickly connecting or disconnecting multiple electrical circuits in low-voltage control, audio and instrument service. Contacts accommodate No. 16 stranded wire, or No. 14 solid. Minimum surface creepage path for 12 contact types 1/16″, for 7 contact types 3/32″. Body material of molded black bakelite, back shells are brass dull black finished, shell liners are fibre. Plug and receptacle polarized for quick accurate insertion. The cadmium plated steel mounting yokes fit standard switch boxes and cover plates and are supplied with necessary hardware.

The multiple wire connectors, tip plugs and jacks appearing on this page are former Mallory-Yaxley products.

RECEPTACLES PLUGS

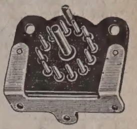


111-614 111-644 Chassis Type 111-617 111-631

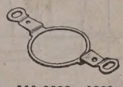


111-615 111-645 Cord Type 111-625 111-635

Cat. No.	List Price	No. of Contacts	Connector Type
RECEPTACLES			
111-614	$2.00	12	Chassis
111-615	2.30	12	Cord
111-644	1.00	7	Chassis
111-645	1.25	7	Cord
PLUGS			
111-617	2.10	12	Chassis
111-625	2.40	12	Cord
111-631	1.45	7	Chassis
111-635	1.70	7	Cord
PIN PLATE BRACKET MOUNTED			
111-682	1.60	12	
MOUNTING YOKE			
111-6002	.25	for 7 wire connectors	
111-6003	25	for 12 wire connectors	

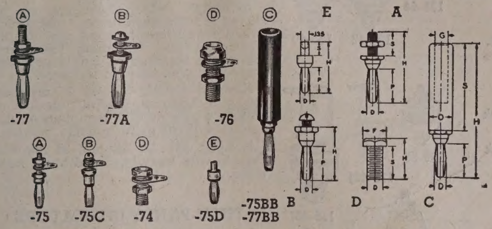


111-682



111-6002, -6003

PLUGS AND JACKS



"BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support.

75D is designed for riveting. Spring is beryllium copper

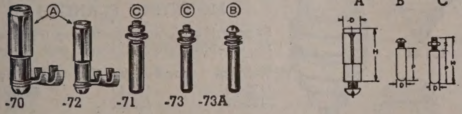
75BB has 1 3/8″ black plastic handle; 75BR same but red.

77BB has 1 3/4″ black plastic handle; 77BR same but red.

75 or 75A can be furnished with beryllium copper spring on special order, and all plugs can be furnished with nickel, cadmium or silver plating if required.

108-7451 is a red plastic insulated jack similar to the 108-74 and furnished with fibre washers. 108-7452 same but black.

Cat. No. Plugs	List Price	Illus. Dwg.	S	P	D	H	G	O	Thread
108-75	$0.12	A	3/8	.53	.170	1.115			6-32
108-75A	.13	A	3/4	.53	.170	1.490			6-32
108-75BB	.40	C	1 3/8	.53	.170	2.115	.215	7/16	
108-75BR	.40	C	1 3/8	.53	.170	2.115	.215	7/16	
108-75C	.13	B		.53	.170	.94			6-32
108-75D	.10	E	7/32	.40	.155	.81			
108-77	.30	A	5/8	.74	.300	1.77			1/4-28
108-77A	.35	B	5/8	.74	.300	1.15			10-32
108-77BB	.50	C	1 3/4	.74	.300	2.90	5/16	5/8	
108-77BR	.50	C	1 3/4	.74	.300	2.90	5/16	5/8	
Jacks			F	D	S	H	B		Thread
108-74	.11	D	3/8	1/4	17/32	5/8	.166		1/4-28
108-7451	.25		7/16	1/4	1/2	21/32	.166		1/4-28
108-7452	.25		7/16	1/4	1/2	21/32	.166		1/4-28
108-76	.35	D	9/16	3/8	15/16	1 9/32	.277		3/8-24



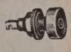
"SPRING SLEEVE" TYPE

Maximum current carrying capacity, minimum resistance, great mechanical strength and snug fit. Nickel-plated brass with phosphor bronze "spring sleeves."

Cat. No. Plugs	List Price	D	S	P	H	Thread
106-71	$0.25	.375	1/2	1 1/8	1 5/8	1/4-28 screw
106-73	.15	.250	3/8	15/16	1 5/16	10-32 screw
106-73A	.15	.250		15/16		10-32 tapped
Jacks						
106-70	.50	1/2			1 1/2	1/4-20 screw
106-72	.35	3/8			1 1/8	10-32 screw

PLASTIC HEAD TIP JACKS

Plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel-plated hex nut. Standard finish is nickel plate on body. Mounts in 3/8″ hole. Maximum panel thickness 5/32″ where insulating washers are used, 1/4″ where omitted. 1/4″-32 thread.



105-520

Cat. No.	List	Color	Cat. No.	List	Color
105-520	$0.20	Red	105-526	$0.20	Orange
105-521	.20	Black	105-527	.20	Yellow
105-522	.20	Dk. Green	105-528	.20	Lt. Green
105-524	.20	Brown	105-529	.20	Dk. Blue
105-525	.20	Lt. Blue	105-530	.20	Ivory

Description similar to above type except that brass body is molded integral with head, and additional phenolic washer is furnished. 5/16″-40 thread.

105-418 Red.........**List $0.30** **105-419** Black.........**List $0.30**

105-418, -419

ALL METAL TIP JACKS

SMALL ROUND HEAD—5/16″-40 thread. Supplied with fiber bushing to fit 3/8″ panel hole. 11/32″ maximum panel thickness.

No. 105-416..............................**List Price $0.20**

105-416

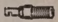
SMALL HEX HEAD—Similar to 105-416 except has hex head and 1/4″-32 thread. Supplied with fiber bushing to fit 3/8″ panel hole.

No. 105-417..............................**List Price $0.15**

105-417

HEADLESS TIP JACK—Body nickel-plated. 1/4″-32 thread.

No. 105-1..............................**List Price $0.10**



105-1

INSULATED COMBINATION JACK

Supplied with shoulder bushing, phenolic washer and one piece contact and nut. Maximum chassis thickness 1/8″. Mounts in 3/8″ diameter hole. Provides insulated jack for phonetip plugs and No. 75 series "Banana Spring" plugs.

105-420 Red.........**List $0.30** **105-421** Black.........**List $0.30**

105-420 -421

LARGE ROUND HEAD METAL TIP JACK

Supplied with insulating washers and hex nut. Mounts in 1/2″ hole. 3/16″ maximum panel thickness. Contact is phosphor bronze.

No. 105-16..............................**List Price $0.50**

105-16

LONG SOLDERLESS TIP PLUG. For use with all tip jacks including 105-16 and 105-420.

No. 105-15..............................**List Price $0.20**

No. 105-14 Sharpened point..........**List Price .22**

105-15

SHORT SOLDERLESS TIP PLUG. For use with all tip jacks except 105-16, -420 and -421.

No. 105-415..............................**List Price $0.18**

105-415

TWIN TIP JACKS

Twin jacks spaced 7/8″. Single hole mounting. Molded black phenolic body.

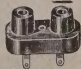
Cat. No.	List	Marking
105-401	$0.60	Blank
105-4012	.60	Speaker
105-4015	.60	Phono

105-401

SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed. Jacks spaced 7/8″. Single hole mounting. Molded black or red phenolic body.

105-432 Black.........**List $0.60** **105-433** Red.........**$0.60**



105-432

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

INSULATORS AND BUSHINGS

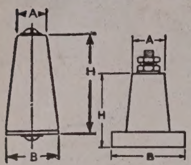
In design . . . material . . . workmanship, you'll find characteristic JOHNSON superiority in this line of quality insulators and bushings.

Each JOHNSON insulator is designed for a specific purpose. Where lowest losses are vital, glazed Steatite is used; elsewhere, superior grade electrical porcelain.

Proportions and contours are chosen to best balance insulating value—creepage path, dielectric strength and electrical losses—against mechanical strength in the various sizes.

Molding is clean-cut and accurate. Hardware is high grade nickel-plated brass.

JOHNSON insulators offer more in choice of style and size; in advanced but practical design; and in mass production economy.

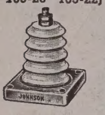


135-20

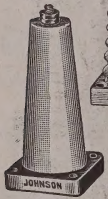
135-22J

135-22

135-65


135-68

135-62
135-60


135-67

135-66

STAND-OFF AND CONE INSULATORS

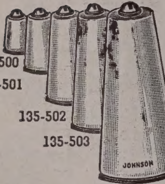
The stand-off insulators feature heavy, breakage-resistant bases and adequate "glaze grooves" around mounting screw holes. Numbers 135-65, 135-66, 135-67 and 135-68 have unbreakable, drawn and etched aluminum bases.

The No. 500 cone insulator series are steatite for better high frequency insulation. Threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cushion washers.

STAND-OFF INSULATORS

Cat. No.	List Price	Dimensions A	B	M*	H	Hardware
		Steatite				
135-20	$0.22	3/4	1 3/4	1 5/16	1 9/16	10-32
135-20J	.27	3/4	1 3/4	1 5/16	1 9/16	74 Jack
135-22	.18	15/32	1 5/32	1 3/16	1	8-32
135-22J	.23	15/32	1 5/32	1 3/16	1	74 Jack
135-24	.14	3/8	1	11/16	5/8	6-32
		Porcelain				
135-60	.90	1 3/16	2 1/2	1 7/8	4 1/2	1/4-20
135-62	.50	7/8	1 7/8	1 3/8	2 3/4	1/4-20
		Metal Base Types				
135-65	.30	5/8	1 7/8	1 1/2	1 3/8	10-32
135-65J	.35	5/8	1 7/8	1 1/2	1 3/8	74 Jack
135-66	.70	15/16	1 3/4	1 3/8	2 3/4	1/4-20
135-66J	.90	15/16	1 3/4	1 3/8	2 3/4	76 Jack
135-67	.85	1 1/16	2 1/4	1 3/4	4 1/2	1/4-20
135-67J	1.10	1 1/16	2 1/4	1 3/4	4 1/2	76 Jack
135-68	.40	23/32	1 3/4	1 3/8	2	10-32
135-68J	.50	23/32	1 3/4	1 3/8	2	74 Jack

* Mounting centers.


-500
-501
135-502
135-503
135-504

STEATITE CONE INSULATORS

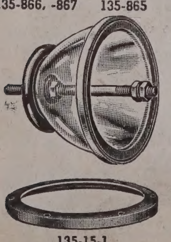
135-500	.30	7/16	5/8		5/8	6-32
135-501	.35	1/2	3/4		1	8-32
135-502	.65	1/2	1		1 1/2	8-32
135-503	.75	5/8	1 1/8		2	10-32
135-504	1.45	3/4	1 1/2		3	10-32

135-866, -867 135-865

METAL BASES

Aluminum bases for replacement on 135-65, -66, -67 and -68 insulators.

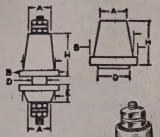
Cat. No.	List Price	For Use With
135-865	$0.12	135-65
135-866	.15	135-66, 135-68
135-867	.20	135-67


135-15-1

FEED-THRU BOWL

Low loss glass, 6 15/16" O.D., 4 3/8" high. With steel flange 7 3/4" O.D., stud threaded 1/2"-13, spun aluminum shield and cork gaskets. 135-15-1 (illustrated) has 10 1/4" stud; 135-15-3 two bowls with 16" stud for mounting on a 4" wall; 135-15-7 with 24" stud for a 12" wall.

Cat. No.	List Price	
135-15-0	$9.25	Glass bowl only
135-15-1	17.00	One bowl and fittings
135-15-3	30.00	Two bowls and fittings
135-15-7	31.00	Two bowls and fittings



135-44

135-42

135-40

135-55

135-42J

135-40J

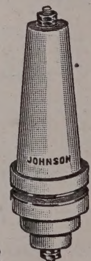
135-52

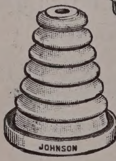
135-50

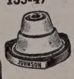
135-45

135-48

135-46


135-47


135-54


135-53 with 135-90

115-240, -241, -242

THRU-PANEL INSULATORS AND BUSHINGS

In the thru-panel and bushing series special attention has been given to obtaining high mechanical strength through heavier construction and at the same time increasing the breakdown voltage. Flat mounting surfaces with cushion washers eliminate breakage. Bottom pieces have long internal and external portions for higher breakdown voltage rating, and grooved surfaces to increase leakage path. Jack types have terminals permitting connection above as well as below the panel.

JOHNSON lead-in bushings are designed to have even greater mechanical strength and long leakage path in proportion to size. Numbers 135-53 and 135-54 are supplied as single porcelain parts including cushion washers.

Nos. 135-50, -51, -52 and -55 are steatite and have a special interlocking feature which permits mounting on thin panels without extra spacing washers.

Nos. 20, 20J, 22, 22J and 24 are also steatite with heavily plated brass hardware.

THRU-PANEL INSULATORS

Cat. No.	List Price	Dimensions A	B	D	E	H	Hardware
		Steatite					
135-40	$0.35	19/32	15/16	7/16	1/2	1 1/4	10-32
135-40J	.45	19/32	15/16	7/16	1/2	1 1/4	74 Jack
135-42	.30	1/2	3/4	.400	3/8	7/8	10-32
135-42J	.40	1/2	3/4	.400	3/8	7/8	74 Jack
135-44	.25	3/8	5/8	.305	5/16	5/8	6-32
		Porcelain					
135-45	.45	5/8	1 1/4	1/2	11/16	1 3/8	10-32
135-45J	.60	5/8	1 1/4	1/2	11/16	1 3/8	74 Jack
135-46	1.00	15/16	1 5/8	11/16	1	2 3/4	1/4-20
135-46J	1.25	15/16	1 5/8	11/16	1	2 3/4	76 Jack
135-47	1.40	1 1/16	2 1/8	31/32	1 1/2	4 1/2	1/4-20
135-47J	1.65	1 1/16	2 1/8	31/32	1 1/2	4 1/2	76 Jack
135-48	.65	23/32	1 5/8	11/16	7/8	2	10-32
135-48J	.80	23/32	1 5/8	11/16	7/8	2	74 Jack

LEAD-IN BUSHINGS

		Steatite					
135-50	.35	3/8	3/4	15/32		1/2	6-32
135-51	.50	5/8	1 1/4	27/32		13/16	10-32
135-52	.80	7/8	1 3/4	1 7/32		1 1/8	1/4-20
135-55	.30	1/2	3/4	15/32		1/4	6-32
		Porcelain					
135-53	.30	1 1/16	2 1/2	1 27/32		1 3/4	
135-54	.75	1	3 1/2	2 11/16		4	

MOUNTING FLANGES

Stamped aluminum Mounting Flanges for Lead-in Bushings 135-53 and 135-54.

Cat. No.	For Bushing No.	List Price
135-90	135-53	$0.35
135-91	135-54	.70

THREADED BRASS ROD

Intended primarily for use with lead-in bushings 135-53 and 135-54. Accurately cut threads, heavy nickel plating, complete with 4 washers and 4 nuts, 1/4" diameter, 1/4-20 thread. It has many other uses in radio construction.

Cat. No.	List Price	Length
115-240	$0.50	8"
115-241	.60	10"
115-242	.70	15"

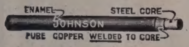
ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

E. F. JOHNSON Company WASECA, MINNESOTA

ANTENNA ACCESSORIES

ENAMELLED COPPERWELD ANTENNA WIRE

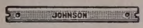
JOHNSON Enamelled Copperweld Antenna Wire will not stretch nor sag. Prices are per 100 feet. Carried by most suppliers in bulk, it is available from the factory in any specified length.



Cat. No.	List Price	B&S Gauge	Ft. per lb.	Breaking Strength
144-348	$4.45	10	34½	1130 lbs.
144-350	3.25	12	54	720 lbs.
144-352	2.20	14	85	400 lbs.

FEEDER INSULATORS

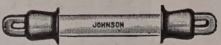
Nos. 136-122, -124 and -126 are conventional feeder spreaders of high grade low absorption porcelain, Silicone impregnated for finest water repellent characteristics. No. 136-122 is provided with notches for 1½'' line spacing. All have ⅜x½'' cross section.



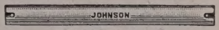
Cat. No.	List Price	Lg.
136-122	$0.16	2''
136-124	.23	4''
136-126	.30	6''

ANTENNA INSULATORS

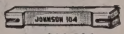
The 136-151, -152, -153 are 1½'' in diameter, wet process porcelain and have non-corrosive aluminum end bells. The 136-107, -112 are wet process 1'' in diameter. The 136-104 is dry process ⅝'' square. The 136-32 is dry process compression strain type, 1½'' long. All are glazed to prevent moisture absorption.



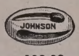
136-151, -152, -153



136-107, 136-112



136-104



136-32

Cat. No.	List Price	Breaking Strength	Length Net	Length Over-all
136-151	$9.00	5000 lbs.	8''	15½''
136-152	12.00	5000 lbs.	12''	19½''
136-153	17.50	5000 lbs.	20''	25½''
136-104	.20	400 lbs.		4''
136-107	1.10	800 lbs.		7''
136-112	1.20	800 lbs.		12''
136-32	.15			1½''

NEW JOHNSON KNOBS AND DIALS

DISTINCTIVE — VERSATILE — RUGGED

Here's an entirely new series of knobs and dials designed for laboratory, test and measuring instruments, radio transmitters, studio equipment and industrial controls. Intended for the manufacturer or user who wants something better, more distinctive, yet in keeping with excellent taste, they are unexcelled for enhancing the appearance of fine quality products.

EXCELLENT GRIPPING SURFACE

They offer fresh new modern styling, yet retain and improve upon the utility of a long familiar type. Use of twelve flutes, in place of eight, improves appearance by eliminating the usual octagonal, bumpy effect. Although essentially round, they retain excellent gripping surfaces. The ''feel'' is comfortable, positive, without sharp ribs or edges.

Featuring greater depth of the flutes, slightly tapered sides, and gently curved front surface—depressed to protect the attractive smooth finish—these JOHNSON Knobs and Dials achieve a feeling of greater mass and ruggedness without being larger or heavier. Molded of black phenolic material, walls are thick for adequate strength. All types have heavy brass inserts.

MANY STYLES AVAILABLE

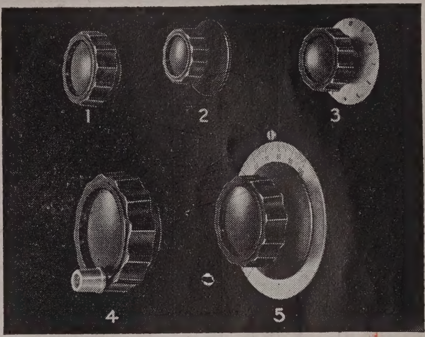
Many styles are available, in the three basic standard knob diameters of 1⅛'', 1⅝'' and 2⅜''. In addition to the knob itself, they are assembled with matching black molded phenolic skirts measuring, respectively, 1½'', 2$\frac{1}{16}$'' and 3'' diameter. Other assemblies include attractive metal dial plates in the usual diameters of 1½'', 2¾'' and 4''. These dials are made of nickel silver, with beautiful chromium plating in a satin etched finish for maximum visibility.

On the 1½'' metal dials with 1⅛'' knobs, five standard calibrations are stocked, and on the larger sizes the most common scale, 0-100 over 180°. Other markings may be supplied, in suitable quantities. Vernier scales are available for the 2¾'' and 4'' dials. A ''spinner'' is incorporated in the 116-286 (2⅜'') and the 116-266 (1⅝'') knobs, and is useful for tuning controls, multiturn variable inductors, resistors, etc.

OTHER TYPES ON SPECIAL ORDER

In addition to the items listed below, JOHNSON is prepared to furnish many variations on special order in quantity production lots. Modifications and other types include friction disc slow speed drives and pointer types. Extra set screws of any type, special markings on knobs or skirts, and other variations, can also be obtained.

Cat. No.	Illus.	Description	List Price
		2⅜'' KNOB SIZE	
116-280	1	Knob only, black phenolic	$0.90
116-281	2	Knob with black phenolic skirt 3'' diameter	1.25
116-282	5	Knob with 4'' satin chrome dial, 0-100 scale over 180° plain (single line) indicator button	2.50
116-286	4	Spinner knob for ¼'' shaft	1.25
		1⅝'' KNOB SIZE	
116-260	1	Knob only, black phenolic	.60
116-261	2	Knob with black phenolic skirt 2$\frac{1}{16}$'' diameter	.95
116-262	5	Knob with 2¾'' satin chrome dial, 0-100 scale over 180° plain (single line) indicator button	1.75
116-266	4	Spinner knob	.95
		1⅛'' KNOB SIZE	
116-220	1	Knob only, black phenolic	.45
116-221	2	Knob with black phenolic skirt 1½'' diameter	.70
	3	Knob with 1½'' beveled satin chrome dial, readings as follows:	
		116-222-1—100-0 over 180°	.85
		116-222-2—0-10 over 270°	.85
		116-222-3—1-7 over 180°	.85
		116-222-4—ON-OFF over 60°	.85
		116-222-5—Single line	.85

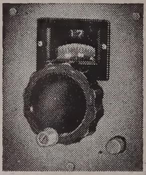


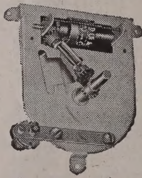
COUNTER-DIAL

Simple, rugged, attractive, easy to install, the new JOHNSON counter-dial is a positively calibrated drive for rotary variable inductors and other multi-turn devices. Has built-in dial lock, the new JOHNSON 116-286 ''spinner'' knob, and attractive black phenolic escutcheon, No. 116-201. Counter will record up to 99 turns. Vernier dial calibrated 0-100 over 360°, making possible an accurate return to any pre-determined setting.

116-208-1—Counter-dial with dial lock, escutcheon, and spinner knob. **List Price**......**$17.00**

116-208-4—Same as above without dial lock. **List Price**......**$15.00**

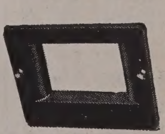




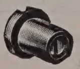
ESCUTCHEON PLATE

Attractive black phenolic escutcheon provides unusually neat and modern ''window'' for back-of-panel dial plate mounting. One face of escutcheon suitable for attaching standard ⅜'' w. etched name plate. Opening 1¼'' w. x ⅞'' h. Overall size 2¼'' x 1$\frac{11}{16}$''. Furnished with No. 2 screws.

Cat. No.		List Price
116-201	Escutcheon Plate	$1.00



INSTRUMENT KNOB



A new and extremely versatile black phenolic knob for screwdriver or hand operation. Has set-screw for attachment. $\frac{13}{16}$'' long, skirt ¾'' diameter.

Cat. No. 116-214-1 for ¼'' shaft......**List Price $0.50**
Cat. No. 116-214-2 for $\frac{3}{16}$'' shaft......**List Price .50**

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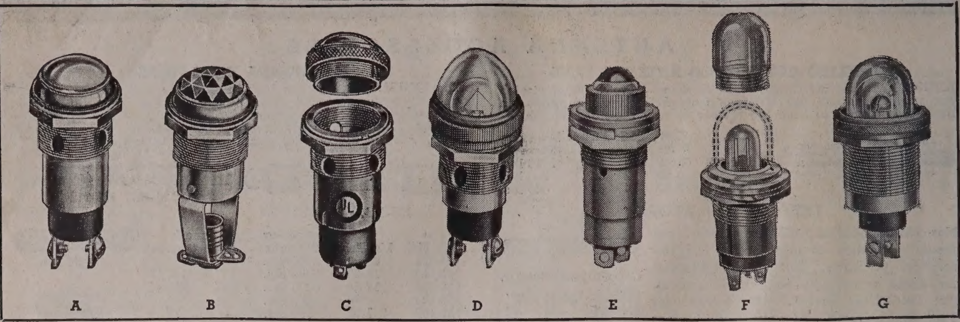

JOHNSON Indicator Light Assemblies are outstanding examples of sound engineering design, excellent material and careful workmanship. Their use is your assurance of complete satisfaction.

The listings on these two pages include only those standard units in greatest demand but many other types are readily available. Special assemblies can be furnished in production quantities.

Cat. No.	List Price	Illus.	Mounting Hole Size	Length Behind Panel⁷	Bulb Shape	Lamp Base	Jewels			Terminals		Insulation	Under-writer Approved	Color
							Type	Size	Holder	No.	Type			
147-800	$1.05	B	1″	2⅜″	G3½, T3¼	Min. Screw	Faceted	1″	Friction	2	Solder	Fiber	----------	SPECIFY COLOR: RED, GREEN, AMBER, BLUE, OPAL, CLEAR. FOR NEON DO NOT USE BLUE, GREEN, OPAL
147-801	1.05	B	1″	2⅜″	G3½, T3¼	Min. Screw	Smooth	1″	Friction	2	Solder	Fiber	----------	
147-802	1.10	B	1″	2⅜″	S6	Cand. Screw	Faceted	1″	Friction	2	Solder	Fiber	----------	
147-803	1.10	B	1″	2⅜″	S6	Cand. Screw	Smooth	1″	Friction	2	Solder	Fiber	----------	
147-804	1.10	B	1″	2⅜″	G3½, T3¼	Min. Bay.	Faceted	1″	Friction	2	Solder	Fiber	----------	
147-805	1.10	B	1″	2⅜″	G3½, T3¼	Min. Bay.	Smooth	1″	Friction	2	Solder	Fiber	----------	
147-1000	1.40	A	1″	2⁹⁄₁₆″	S6	Cand. Screw	Faceted	1″	Friction	2	Solder	Porcelain	Yes	
147-1001	1.40	A	1″	2⁹⁄₁₆″	S6	Cand. Screw	Smooth	1″	Friction	2	Solder	Porcelain	Yes	
147-1002	1.50	A	1″	2⁹⁄₁₆″	S6	Cand. Screw	Colored Disc⁶	1″	Friction	2	Solder	Porcelain	Yes	
147-1003	1.40	A	1″	2⁹⁄₁₆″	T4½, NE45	Cand. Screw	Faceted	1″	Friction	2	Solder	Porcelain	Yes	
147-1004	1.40	A	1″	2⁹⁄₁₆″	T4½, NE45	Cand. Screw	Smooth	1″	Friction	2	Solder	Porcelain	Yes	
147-1005	1.50	A	1″	2⁹⁄₁₆″	T4½, NE45	Cand. Screw	Colored Disc⁶	1″	Friction	2	Solder	Porcelain	Yes	
147-1032	1.65	A	1″	2¾″	S6	Cand. Screw	Faceted	1″	Friction	2	Screw	Phenolic	Yes	
147-1033	1.65	A	1″	2¾″	S6	Cand. Screw	Smooth	1″	Friction	2	Screw	Phenolic	Yes	
147-1034	1.75	A	1″	2¾″	S6	Cand. Screw	Colored Disc⁶	1″	Friction	2	Screw	Phenolic	Yes	
147-1035	1.65	A	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Faceted	1″	Friction	2	Screw	Phenolic	Yes	
147-1036	1.65	A	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Smooth	1″	Friction	2	Screw	Phenolic	Yes	
147-1037	1.75	A	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Colored Disc⁶	1″	Friction	2	Screw	Phenolic	Yes	
147-1050	1.75	A	1″	2½″	G6	S. C. Cand. Bay.	Faceted	1″	Friction	1	Screw	H. Rubber	----------	
147-1051	1.75	A	1″	2½″	G6	S. C. Cand. Bay.	Smooth	1″	Friction	1	Screw	H. Rubber	----------	
147-1052	1.85	A	1″	2½″	G6	S. C. Cand. Bay.	Colored Disc⁶	1″	Friction	1	Screw	H. Rubber	----------	
147-1053	1.75	A	1″	2½″	G6	D. C. Cand. Bay.	Faceted	1″	Friction	2	Screw	H. Rubber	Yes	
147-1054	1.75	A	1″	2½″	G6	D. C. Cand. Bay.	Smooth	1″	Friction	2	Screw	H. Rubber	Yes	
147-1055	1.85	A	1″	2½″	G6	D. C. Cand. Bay.	Colored Disc⁶	1″	Friction	2	Screw	H. Rubber	Yes	
147-1056	1.75	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.¹	Faceted	1″	Friction	2	Screw	H. Rubber	Yes	
147-1057	1.75	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.¹	Smooth	1″	Friction	2	Screw	H. Rubber	Yes	
147-1058	1.85	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.¹	Colored Disc⁶	1″	Friction	2	Screw	H. Rubber	Yes	
147-1076	2.00	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.²	Faceted	1″	Friction	2	Screw	H. Rubber	Yes	
147-1077	2.00	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.²	Smooth	1″	Friction	2	Screw	H. Rubber	Yes	
147-1078	2.10	A	1″	2⅝″	G6, NE48	D. C. Cand. Bay.²	Colored Disc⁶	1″	Friction	2	Screw	H. Rubber	Yes	
147-1110	1.15	E	¹¹⁄₁₆″	1⅝″	T3¼	Min. Bay.	Faceted	½″	Threaded	2	Solder	Phenolic	----------	
147-1111	1.15	E	¹¹⁄₁₆″	1⅝″	T3¼	Min. Bay.	Smooth	½″	Threaded	2	Solder	Phenolic	----------	
147-1112	1.15	E	¹¹⁄₁₆″	1⁷⁄₁₆″	G3½	Min. Bay.	Faceted	½″	Threaded	2	Solder	Phenolic	----------	
147-1113	1.15	E	¹¹⁄₁₆″	1⁷⁄₁₆″	G3½	Min. Bay.	Smooth	½″	Threaded	2	Solder	Phenolic	----------	
147-1142	1.10	F	¹¹⁄₁₆″	1⁷⁄₁₆″	T3¼	Min. Bay.⁸	Lucite	⅝″	Threaded	2	Solder	Phenolic	Yes	
147-1143	1.25	F	¹¹⁄₁₆″	1⁷⁄₁₆″	T3¼, NE51	Min. Bay.³	Lucite	⅝″	Threaded	2	Solder	Phenolic	Yes	
147-1144	1.25	F	¹¹⁄₁₆″	1⁷⁄₁₆″	T3¼, NE51	Min. Bay.⁴	Lucite	⅝″	Threaded	2	Solder	Phenolic	Yes	
147-1200	1.65	C	1″	2⁹⁄₁₆″	S6	Cand. Screw	Faceted	1″	Threaded	2	Solder	Porcelain	Yes	
147-1201	1.65	C	1″	2⁹⁄₁₆″	S6	Cand. Screw	Smooth	1″	Threaded	2	Solder	Porcelain	Yes	
147-1202	1.75	C	1″	2⁹⁄₁₆″	S6	Cand. Screw	Colored Disc⁶	1″	Threaded	2	Solder	Porcelain	Yes	
147-1209	1.90	C	1″	2¾″	S6	Cand. Screw	Faceted	1″	Threaded	2	Screw	Phenolic	Yes	
147-1210	1.90	C	1″	2¾″	S6	Cand. Screw	Smooth	1″	Threaded	2	Screw	Phenolic	Yes	
147-1211	2.00	C	1″	2¾″	S6	Cand. Screw	Colored Disc⁶	1″	Threaded	2	Screw	Phenolic	Yes	
147-1212	1.90	C	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Faceted	1″	Threaded	2	Screw	Phenolic	Yes	
147-1213	1.90	C	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Smooth	1″	Threaded	2	Screw	Phenolic	Yes	
147-1214	2.00	C	1″	2⁷⁄₁₆″	T4½, NE45	Cand. Screw	Colored Disc⁶	1″	Threaded	2	Screw	Phenolic	Yes	
147-1217	1.90	G	1″	1¹⁵⁄₁₆″	T4½. NE45	Cand. Screw	Lucite	1″	Threaded	2	Screw	Phenolic	Yes	
147-1218	1.60	G	1″	1½″	T3¼, NE51	Min. Bay.⁵	Lucite	1″	Threaded	2	Solder	Phenolic	Yes	
147-1219	2.10	G	1″	2¹⁄₁₆″	T4½ G6, NE48	D. C. Cand. Bay.¹	Lucite	1″	Threaded	2	Screw	H. Rubber	Yes	
147-1220	2.25	G	1″	2¹⁄₁₆″	T4½ G6, NE48	D. C. Cand. Bay.²	Lucite	1″	Threaded	2	Screw	H. Rubber	Yes	
147-1600	2.00	D	1″	2⅛″	S6	Cand. Screw	Glass	1⅛″	Threaded	2	Screw	Phenolic	Yes	
147-1604	2.00	D	1″	1¹³⁄₁₆″	G6	S. C. Cand. Bay.	Glass	1⅛″	Threaded	1	Screw	H. Rubber	----------	
147-1605	2.00	D	1″	1¹³⁄₁₆″	G6	D. C. Cand. Bay.	Glass	1⅛″	Threaded	2	Screw	H. Rubber	Yes	

(1) Requires 30,000 ohm external resistor with NE48.
(2) Has built in 30,000 ohm resistor for NE48.
(3) Has built in 200,000 ohm resistor for NE51.
(4) Has built in 100,000 ohm resistor for NE51, brighter glow but decreased life.
(5) Requires 200,000 ohm external resistor for NE51.
(6) See Colored Disc explanation at right.
(7) Max. length from front of panel.
(8) Do not use with bulb over 3 watts.

COLORED DISCS—Where this designation (6) appears, a colored plastic disc is placed behind a clear sandblasted (frosted) smooth jewel, to conceal color until lighted. Also prevents external light from giving appearance of bulb being lighted.

In addition, lettering, numerals, or insignia may be printed on a plastic disc back of the jewel, and arranged to be visible either continuously or only after lamp is lighted.

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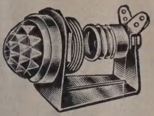
E. F. JOHNSON Company WASECA, MINNESOTA

BRACKET TYPE PILOT LIGHTS AND JEWEL ASSEMBLIES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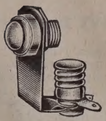
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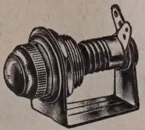
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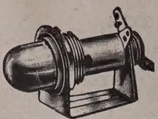
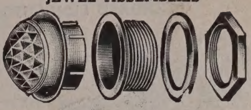

K

Cat. No.	List Price	Illus-tration	Mounting Hole Size	Lgth. Behind Panel	Bulb (1) Shape	Bulb (1) Base	Jewel Type	Jewel Size	Jewel Color
147-100	$0.80	H	1"	1½"	G3½, T3¼	Min. Scr.	Faceted (4)	1"	S
147-101	.80	H	1"	1½"	G3½, T3¼	Min. Scr.	Smooth (4)	1"	P
147-103	.85	H	1"	2 1/16"	S6	Cand. Scr.	Faceted (4)	1"	E
147-104	.85	H	1"	2 1/16"	S6	Cand. Scr.	Smooth (4)	1"	C
147-106	.85	H	1"	1½"	G3½, T3¼	Min. Scr.	Faceted (4)	1"	I
147-107	.85	H	1"	1½"	G3½, T3¼	Min. Scr.	Smooth (4)	1"	F
147-200	.60	I	11/16"	1¼"	G3½	Min. Scr.	Faceted	⅝"	Y
147-201	.60	I	11/16"	1¼"	G3½	Min. Scr.	Smooth	⅝"	
147-203	.65	I	11/16"	1¼"	S6	Cand. Scr.	Faceted	⅝"	C
147-204	.65	I	11/16"	1¼"	S6	Cand. Scr.	Smooth	⅝"	O
147-206	.65	I	11/16"	1"	G3½	Min. Bay.	Faceted	⅝"	L
147-207	.65	I	11/16"	1"	G3½	Min. Bay.	Smooth	⅝"	O
147-300	.40	I	7/16"	1¼"	G3½	Min. Scr.	Faceted	½"	R
147-301	.40	I	7/16"	1¼"	G3½	Min. Scr.	Smooth	½"	
147-303	.45	I	7/16"	1¼"	S6	Cand. Scr.	Faceted	½"	Clear
147-304	.45	I	7/16"	1¼"	S6	Cand. Scr.	Smooth	½"	Red
147-306	.45	I	7/16"	1"	G3½	Min. Bay.	Faceted	½"	Green
147-307	.45	I	7/16"	1"	G3½	Min. Bay.	Smooth	½"	Amber
147-400	.55	J	11/16"	1¼"	G3½, T3¼	Min. Scr.	Faceted (4)	½"	Blue
147-401	.55	J	11/16"	1¼"	G3½, T3¼	Min. Scr.	Smooth (4)	½"	Opal
147-403	.60	J	11/16"	1½"	G3½, T3¼	Min. Bay.	Faceted (4)	½"	
147-404	.60	J	11/16"	1½"	G3½, T3¼	Min. Bay.	Smooth (4)	½"	
147-406	.55	K	11/16"	1¼"	T3¼	Min. Bay.	Lucite (4)	⅝"	
147-407	.70	K	11/16"	1¼"	T3¼, NE51	Min. Bay. (2)	Lucite (4)	⅝"	——
147-408	.70	K	11/16"	1¼"	T3¼, NE51	Min. Bay. (3)	Lucite (4)	⅝"	
147-500	.33	I	9/32"	1¼"	G-3½	Min. Scr.	Faceted	⅜"	
147-501	.33	I	9/32"	1¼"	G-3½	Min. Scr.	Smooth	⅜"	For
147-503	.37	I	9/32"	1¼"	G-3½	Min. Bay.	Faceted	⅜"	Neon
147-504	.37	I	9/32"	1¼"	G-3½	Min. Bay.	Smooth	⅜"	DO NOT
147-700	.60	H	11/16"	1¼"	G-3½	Min. Scr.	Faceted	⅝"	Use:
147-701	.60	H	11/16"	1¼"	G-3½	Min. Scr.	Smooth	⅝"	Blue
147-703	.65	H	11/16"	1½"	G-3½	Min. Bay.	Faceted	⅝"	Green
147-704	.65	H	11/16"	1½"	G-3½	Min. Bay.	Smooth	⅝"	Opal

(1) See bulb and base illustrations below.
(2) With 200,000-ohm built-in resistor for NE51.
(3) With 100,000-ohm resistor. Brighter glow reduced lamp life.
(4) Bulb removable from front of panel.

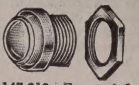
JEWEL ASSEMBLIES



Colors, all types: Red, Green, Amber, Blue, Opal, Clear.

One-inch jewel, polished chrome bezel, with mounting sleeve to fit 1-inch hole, fiber washer and nut.

Cat. No.	List Price
147-110—Faceted Jewel	$0.70
147-111—Smooth Jewel	.70
147-112—Colored Disc*	.80



⅝-inch jewel in polished chrome holder, fits 11/16-inch mounting hole.

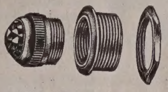
Cat. No.	List Price
147-210—Faceted Jewel	$0.40
147-211—Smooth Jewel	.40

½-inch jewel, nickel-plated holder and nut, fits 7/16-inch mounting hole.

Cat. No.	List Price
147-310—Faceted Jewel	$0.25
147-311—Smooth Jewel	.25

⅜-inch jewel, nickel-plated holder and nut, fits 9/32-inch mounting hole.

Cat. No.	List Price
147-510—Faceted Jewel	$0.20
147-511—Smooth Jewel	.20



½-inch jewel, nickel-plated, threaded holder and mounting sleeve to fit 11/16-inch hole.

Cat. No.	List Price
147-410—Faceted Jewel	$0.40
147-411—Smooth Jewel	.40

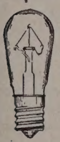
SPECIAL TYPES

JOHNSON manufactures a complete line of bracket-type pilot lights and jewel assemblies. Illustrated are only a few of the more popular types. JOHNSON can readily fill your requirements for any type, regardless of specifications.

BULB SPECIFICATIONS

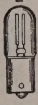
Bulbs used on all pilot lights may be identified from these illustrations, but are not included in prices.

1



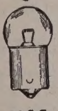
S6 Cand. Screw

2



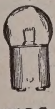
T 3¼ Min. Bay. (NE-51)

3



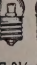
G6 S.C. Cand. Bay.

4



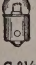
G6 D.C. Cand. Bay.

5



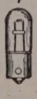
G 3½ Min. Screw

6



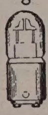
G 3½ Min. Bay.

7



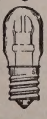
T 3¼ Min. Bay. or Screw

8



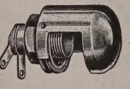
T 4½ D.C. Cand. Bay. (NE-48)

9



T 4½ Cand. Screw (NE-45)

PANEL LIGHT



For front panel illumination. Has polished nickel hood, easily removable for lamp replacement; can be rotated to any position. Fits ½" mounting hole. Made for miniature bayonet or screw base, T 3¼ or G 3½, bulbs.

Cat. No.	List Price
147-330—Miniature Screw Base	$0.80
147-329—Miniature Bayonet Base	.90

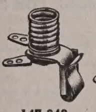
VARIABLE LIGHT INTENSITY

Pilot lights similar to 147-400, -800, -1110, -1200 can be furnished with either polarized or shutter type variable light intensity jewel holders. Information on request.

DIAL LIGHT BRACKETS

Brackets insulated on all types. Many other styles and combinations can be furnished from available tools, also with wire leads.

147-610
147-611



147-640
147-641

147-630
147-631

147-600
147-620
147-601
147-621

Cat. No.	Socket	List Price
147-600	Min. Screw (Bracket Down)	$0.13
147-601	Min. Screw (Bracket Up)	.13
147-610	Min. Bay. (Bracket Down)	.16
147-611	Min. Bay. (Bracket Up)	.16
147-620	Cand. Screw (Bracket Down)	.15
147-621	Cand. Screw (Bracket Up)	.15
147-630	Min. Bay. (Bracket Down)	.17
147-631	Min. Bay. (Bracket Up)	.17
147-640	Min. Screw (Bracket Down)	.14
147-641	Min. Screw (Bracket Up)	.14

BE SURE TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

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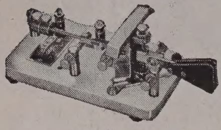
E. F. JOHNSON Company WASECA, MINNESOTA

SPEED-X KEYS, PRACTICE SETS, BUZZERS

STANDARD SEMI-AUTOMATIC KEYS

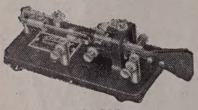


114-500, -501

Improved standard model mounted on heavy steel base 6¼" x 3½" x ½". Four rubber feet insure stationary position while operating. Five adjustments with lock nuts assure dependable operation at all speeds. Smooth, easy action, adjustable from lowest to highest speeds. Vibrator arm, posts, circuit closing switch, and all machine parts heavily chrome plated for permanent finish. Heavy brass connector strips under base insure low resistance circuit. Two black fiber paddles can be adjusted separately to best height. Vibrator bearings are perfectly aligned and free-acting. Complete with circuit-closing switch and adjustable weight. 114-500 has ⅛" coin silver contacts and black wrinkle enamel base. 114-501 has large ¼" coin silver contacts and base is heavily chrome plated and polished to a high luster.

114-500	—⅛" contacts, black wrinkle base	List Price $17.50
114-501	—¼" contacts, polished chrome base	List Price 25.00
114-501L	—Same as 114-501 except left handed	List Price 27.50

AMATEUR SPECIAL MODEL SEMI-AUTOMATIC KEY



114-515

Model 114-515 is the favorite with amateurs because of its compactness and lighter weight. It has a sturdy steel base 6¼" x 3" x ⅜", attractively finished with black wrinkle enamel. Four rubber feet prevent slipping or tilting. Vibrator and all hardware heavily chrome plated. Two adjustable weights. Contacts are ⅛" coin silver. All adjustments have lock nuts to assure stable operation. Has no circuit closing switch.

114-515	—Amateur model, semi-automatic	List Price $12.50

AMATEUR SEMI-AUTOMATIC KEY WITH SWITCH

A light weight but rugged key for those who prefer a compact, light model. Appearance similar to 114-515 except has a circuit closing switch. Base is die cast, 6" x 2¾" x ¾". Base and frame attractively finished in black wrinkle enamel. Vibrator arm is the same as on the Standard model, with the same smooth, easy action. Fully adjustable from eight words per minute to as high a rate as desired. ⅛" coin silver contacts. Truly an outstanding value.

114-510	—Amateur model, with switch	List Price $13.50

CORD AND WEDGE FOR SEMI-AUTOMATIC KEYS

114-380

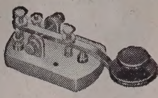
Cord and wedge for quick, easy attachment of semi-automatic key across the circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers, it is also ideal for amateur service where both hand key and semi-automatic are used.

114-380	—Cord and wedge	List Price $1.50

STANDARD REPLACEMENT PARTS
For Semi-Automatic Keys

Cat. No	Description	List Price
114-330	—Adjustable weight with thumb screw	$0.25
114-333	—Self-locking adjustable weight	.50
114-350	—Standard black phenolic knob	.20
114-360	—Navy type black phenolic knob	.30
114-370	—Single black fiber paddle	.25
114-390	—⅛" U-spring coin silver contact	.60

HEAVY DUTY KEYS



114-320, -321, -326

Heavy die cast base, chrome plated key arm, heavy brass connector strips under base. Well insulated for heavy duty service. Large ¼" coin silver contacts. Improved Navy type knob. Adjustable steel bearings and well designed spring give a light keying touch. The finest hand key money can buy.

Cat. No.	Description	List Price
114-320	—Black wrinkle enamel base	$4.25
114-321	—Polished chrome plated base	5.00
114-326	—Brass wrinkle finish base	4.25

STANDARD KEYS

114-310, -311
-312, -316

Heavy die cast base. Smooth adjustable bearings. Has provision for plugging in semi-automatic keys. Contacts are ⅛" coin silver. An attractive high quality key at low cost.

Cat. No.	Description	List Price
114-310	—Black wrinkle, no switch	$3.25
114-310S	—Black wrinkle, circuit-closing switch	3.75
114-311	—Chrome plated, no switch	4.00
114-311S	—Chrome plated, circuit-closing switch	4.50
114-312	—Gray wrinkle, no switch	3.25
114-312S	—Gray wrinkle, circuit-closing switch	3.75
114-316	—Brass wrinkle, no switch	3.25
114-316S	—Brass wrinkle, circuit-closing switch	3.75

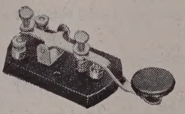
PHENOLIC BASE KEYS

114-301

A high quality black phenolic base key. Adjustable, smooth-acting bearings, improved spring, pigtail connection, ⅛" coin silver contacts. All metal parts heavily nickel plated.

Cat. No.	Description	List Price
114-301	—Black phenolic base, no circuit-closing switch	$3.00
114-301S	—Same as 301 except with circuit-closing switch	3.50

PRACTICE KEYS

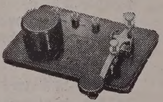


114-300, -305
-306

Inexpensive practice keys for beginners. All metal parts except base nickel plated. Adjustable key arm spring, smooth action bearings, ⅛" coin silver contacts.

Cat. No.	Description	List Price
114-300	—Molded brown phenolic base	$1.75
114-305	—Black wrinkle finish metal base	1.90

PRACTICE SET

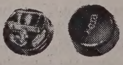


114-450

Constant frequency buzzer and key mounted on a 4" x 6" molded brown Bakelite base, with full directions for connecting. May be used singly or in pairs for code practice.

Cat. No.	Description	List Price
114-450	—Practice set	$4.50

CONSTANT FREQUENCY BUZZER



114-400

Molded black Bakelite base and cap. Fully adjustable, holds constant frequency. Coin silver contacts. Uses 2 dry cells or "C" battery.

Cat. No.	Description	List Price
114-400	—Constant frequency buzzer	$2.00

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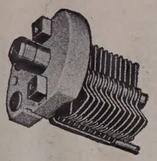
"APC" MICRO CAPACITORS



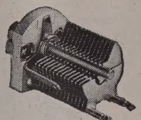
Code	Capacity
APC-25	25 mmf.
APC-50	50 mmf.
APC-75	75 mmf.
APC-100	100 mmf.
APC-140	140 mmf.

The "APC" originated in the Laboratories of the Hammarlund Mfg. Co over twenty years ago and because it is the most widely copied Air Trimmer today, it speaks eloquently for the soundness of its engineering design.

These units feature all brass soldered construction, nickel plating, silicone treated steatite panels, and precision formed rotor contact springs, combined with **Hammarlund** quality, make this capacitor a necessity for peak performance in today's rigid requirements.

Available in stock sizes as listed with a standard nominal air gap of .015" with a test voltage of 600 V. RMS, 60 cycles. Other air gaps available are .0195", .025", .030", .045". Modifications such as insulated adjustment head, extension shaft, lock type bearing, flats on shaft, etc., are obtainable.

"MAPC" CAPACITORS

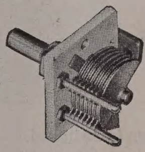


Code	Capacity
MAPC-15	15 mmf.
MAPC-25	25 mmf.
MAPC-35	36 mmf.
MAPC-50	49 mmf.
MAPC-75	75 mmf.
MAPC-100	99 mmf.

The Midget "APC" capacitor or "MAPC" is a worthy mate for the "APC". It is about one-half the size and weight of the "APC" but retains the same constructional features and quality. The "MAPC" has two isolated mounting studs 17/32" apart, shaft slotted for screw driver adjustment. Steatite base size 25/32" x 15/16". Army, Navy, and commercial engineers find this new unit ideal for today's trend towards minaturization.

Standard units as listed have nominal spacing of .0135". Other spacing available are .018" and .027". Modifications such as shaft extension, insulated adjustment head, extension shaft, and locking type bearing are also available.

"HF" MICRO CAPACITORS



Code	Capacity
HF-15	17.5 mmf.
HF-35	36 mmf.
HF-50	52 mmf.
HF-100	102 mmf.
HF-140	142 mmf.
*HF-15-X	15 mmf.
*HF-30-X	30 mmf.

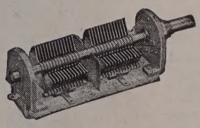
* .045 spacing.

The "HF" employs "APC" construction featuring a special panel permitting either single hole or bracket mounting.

Silicone treated steatite panel 1-5/16" x 1-3/16" coupled with all brass, soldered, nickel plated construction, long sleeve bearing, and positive contact spring give this unit a stable and noiseless quality which accounts for its popularity.

The "HF" is supplied with a standard nominal .015" air gap with a test voltage of 600 V. RMS 60 cycles and the "HF-X" with nominal .045" air gap with a test voltage of 1400 V. RMS 60 cycles. Standard units have ½" long, ¼" shaft. Special spacing and modifications are available.

"HFD" MICRO DUAL CAPACITORS



Code	Capacity
HFD-50	52 mmf. per sect.
HFD-100	102 mmf. per sect.
HFD-140	142 mmf. per sect.
*MFD-15-X	16 mmf. per sect.
*MFD-30-X	28.5 mmf. per sect.

* .045 spacing.

The "HFD" while available as listed and having the same electrical characteristics per section as the "HF" is also one of the most flexible designs to stem from the Hammarlund Laboratories.

This unit has two heavy aluminum end brackets mounted on silicone treated steatite base for strength and stability, long sleeve front bearing and rear bearing, individual silver plated beryllium contact springs on each section for noiseless operation. An electrical shield is provided between sections. This capacitor is 1-½" high x 1" wide, with ½" long ¼" shaft.

Modifications of basic design to include up to five sections of varying capacities are obtainable. This is truly a unit which can be tailored to the engineers individual requirements. Either single hole or base mounting are standard with all versions of this capacitor.

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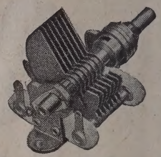
"MC" AND "MCX" CAPACITORS

The "MC" and "MC-X" capacitors available with SLC or midline plates are widely used in all applications for frequencies up to 60 megacycles, and are designed to satisfy the most critical and exacting requirements. Vibration proof for Aircraft, Marine and mobile use. These units are of brass soldered nickel plated constuction with silicone treated steatite insulation outside of the electrostatic field to reduce dielectric losses and to insure maximum efficiency under various conditions of humidity and temperature. A beryium copper silver plated rotor contact spring and precision sleeve bearings give noise free operation. "MC" types have a nominal .0245″ air gap tested at 1000 V. RMS 60 cycles. "MC-X" types have a nominal .0715″ air gap tested at 1750 V. RMS 60 cycles. The "MC" family have ¼″ shaft with rear extension for gang operation. The whole series have rotational stops which nominally permit increasing capacity with clockwise rotation of shaft. "S" types are 1-11/16″ wide and 2-¾″ high. "M" types are 2-3/32″ wide and 2-⅞″ high. These dimensions include swing of rotor plates.

Code	Capacity
MC-20-S	20 mmf.
MC-35-S	35 mmf.
MC-50-S	50 mmf.
MC-50-M	50 mmf.
MC-75-S	80 mmf.
MC-75-M	80 mmf.
MC-100-S	100 mmf.
MC-100-M	100 mmf.
MC-140-S	140 mmf.
MC-140-M	140 mmf.
MC-200-M	200 mmf.
MC-250-M	260 mmf.
MC-325 C	320 mmf.
MC-20-SX	20 mmf.
MC-20-MX	20 mmf.
MC-35-SX	32 mmf.
MC-35-MX	32 mmf.
MC-50-SX	53 mmf.
MC-50-MX	53 mmf.
MC-100-SX	100 mmf.



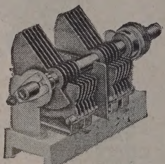
M—Midline Capacity Plates
S—Straight-Line Capacity Plates
X—.0715 Spacing

"MC" AND "MCD-X" CAPACITORS

"MCD" and "MCD-X" capacitors are dual section units having the same constructional feature of the "MC". The "MCD" and "MCD-X" are mounted on a sturdy channel silicone treated steatite base. Same spacings as the "MC" types available.

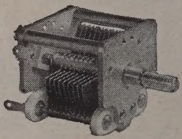
M—Midline Cap. Plates. S—Straight-Line Cap. Plates.
X—.0715 Spacing.

Code	Capacity per sect.
MCD-50-M	50 mmf.
MCD-100-S	100 mmf.
MCD-100-M	100 mmf.
MCD-140-M	140 mmf.
MCD-35-MX	31 mmf.
MCD-35-SX	31 mmf.



"RMC" CAPACITORS

Code	Capacity
RMC-50-S	50. mmf.
RMC-100-S	105. mmf.
RMC-140-S	143.5 mmf.
RMC-325-S	327. mmf.



The "RMC" was born out of the electronic industries demand for the extreme rigidity this capacitor affords. It utilizes the "MC-S" type soldered brass plate assemblies incorporated in a ruggedized frame consisting of aluminum end plates and three tie rods. A front sleeve bearing and single ball thrust rear bearing are used together with a positive rotor contact spring. The resulting unit has many applications where ruggedness is required.

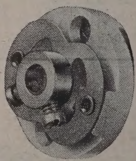
Two removable brackets at the top of panels make for easy mounting of components or with the two tapped holes at the bottom and tapped holes in the panel permit three mounting possibilities. The same airgaps as the "MC" are available. Dimensions are 1-13/16″ wide x 1-11/16″ high with ¼″ shaft.

FLEXIBLE COUPLINGS

These flexible couplings come both insulated and non insulated. The insulated "FC-46-S" employs a silicone treated steatite body and provides maximum insulation. It is 13/16″ in width and 1-¼″ in diameter. The metal body of the non insulated "FNC-46-S" is 23/32″ wide with a diameter of 1-¼″. Both take ¼″ shafts and will compensate for considerable misalignment.

Code

FC-46-S—Insulated
FNC-46-S—Non-insulated

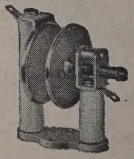


"NZ-10" NEUTRALIZING CAPACITOR

The "NZ-10" has rounded edge formed aluminum plates mounted on glazed isolantite pillars. This unit is rugged and features a fine-threaded horizontal adjusting screw with positive lock. Stands 2-15/16″ high and 1-13/16″ wide x 2-⅞″ in fully open position.

Code

NZ-10—(2.3—10 mmf.)



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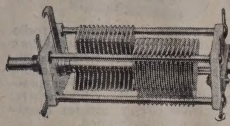
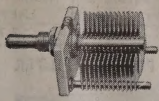
"HFA" AND "HFAD" CAPACITORS



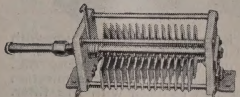


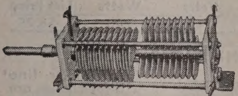
The "HFA" is a high efficiency, high frequency transmitting type capacitor of unusual design. All parts are brass, soldered and nickel plated mounted on treated steatite end panel $1\frac{13}{32}$" x $1\frac{1}{32}$" with ¼" shaft.

The "HFAD" is a dual unit with balanced opposed sections of the same type construction with two end panels $1\frac{13}{16}$" square and ¼" shaft. Both these units are ideal for low power portable transmitters and are available in 3 stock spacings; "A" .020", "B" .030", and "E" .070". The "E" type also has round edge plates. Both of these units may be single hole panel or base mounted.

Code	Capacity	Type
HFAD-25-B	25 mmf.	Dual
HFA-100-A	102 mmf.	Single
HFA-140-A	145 mmf.	Single
HFA-10-B	9 mmf.	Single
HFA-15-B	16 mmf.	Single
HFA-25-B	25 mmf.	Single
HFA-50-B	50 mmf.	Single
HFA-100-B	100 mmf.	Single
HFA-15-E	16 mmf.	Single

"HFB" TRANSMITTING CAPACITORS "HFBD"



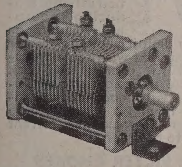


The "HFB" while similar in most respects to the "HFA" types have insulated ¼" shaft extensions which permit high voltage to be applied to the rotor without danger to the operator. This allows a higher tube voltage for a given plate spacing and results in a less expensive, more compact unit.

The "HFBD" is the dual version with the same features with each section in balanced opposition. Both use $1\frac{13}{16}$" square steatite panels and are base mounted.

Code	Capacity
HFBD-50-C	50 mmf.
HFBD-100-C	105 mmf.
HFBD-35-E	37 mmf.
HFBD-65-E	63 mmf.
HFB-50-C	48 mmf.

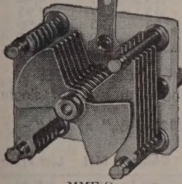
"VU" UHF CAPACITOR



Code	Series Min. Cap.	Series Eff. Capacity
VU-20	3.35	22.5 mmf.
VU-30	3.5	31.5 mmf.
VU-45	3.8	45.0 mmf.

The "VU" Capacitors offer completely silent electrical operation made possible through the use of pyrex glass ball bearings making them adaptable in circuits up to 300 mc. These new bearings completely eliminate wiping contacts and metal sleeves. Elimination of rotor contacts by use of series stators permits a more symmetrical design of the capacitor itself and consequently allows better circuit layout. Two sets of threaded studs are provided, so that a vacuum tube may be mounted on one side and inductor on the other side of the capacitor to minimize lead inductance. The stator sections provide a low inductance path between the two sets of stud contacts. Panel size is $1\frac{7}{16}$" x $1\frac{7}{16}$". Shaft size ¼". These units are supplied in standard sizes as listed in all brass soldered silver plated construction and may be obtained as specially calibrated precision units. Calibration table and complete description furnished on request.

BUTTERFLY CAPACITOR



Code	MMF Cap. per Sec. Max.	Min.	Series Cap. Max.	Min.
BFC-12	14.5	3.5	7.9	2.2
BFC-25	27.5	5.0	14.5	3.0
BFC-38	40.5	6.3	21.0	3.7

The "BFC" Butterfly type of capacitor is designed to meet the demand for an opposed rotor and stator (90 degree rotation) capacitor for use in commercial VHF equipment. The rugged design of this unit lends itself to mobile use and its brass soldered construction with symmetrical design provides easy association with other components for electrical circuit symmetry. Furnished in standard sizes as listed mounted on silicone treated steatite panel 1⅜" square. Two studs on $1\frac{3}{32}$" centers are provided for panel mounting. Shaft size is ¼".

Modifications may be obtained and by the addition of a rear panel with special ball bearing both front and rear a unit may be obtained for continuous rotation at speeds up to 2400 R.P.M. The "BFC" is also obtainable in different plate spacings and capacities on special order.

Miller

UNSHIELDED CHOKES

These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting.

AIR CORE TYPE

Dimensions: 1-⅛" dia. x ⅝" high.

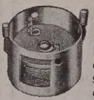
Cat. No.	MH	Ohms	MA	List Price
610	.25	8	125	$.45
620	.75	17	125	.45
630	1.50	21	125	.45
640	2.50	28	125	.55
650	5.0	41	125	.55
660	7.5	53	125	.55
670	10.0	64	125	.65
680	12.5	74	125	.65
690	15.0	83	125	.65
691	20.0	97	125	.85
692	30.0	120	100	.85
693	60.0	175	100	1.10
694	80.0	230	100	1.40

IRON CORE TYPE

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores.

Cat. No.	MH	Ohms	MA	List Price
951	.5	6.8	125	$1.00
952	1.0	10.9	125	1.10
953	2.5	19.5	125	1.15
954	5.0	23.0	125	1.30
955	7.5	37.0	125	1.40
956	10.0	45.0	125	1.45
957	25.0	78.0	100	1.75
958	50.0	130.0	100	1.95
959	75.0	200.0	100	2.20
960	100.0	210.0	100	2.50
961	150.0	268.0	100	2.75

SHIELDED CHOKES



Single section wound R.F. R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

Dimensions: 1-¼" dia. x 1" high (No. 758 is 1-⅝" dia.)

Cat. No.	MH	Ohms	MA	List Price
751	.5	10	125	$.85
752	1.0	17	125	.85
753	2.5	30	125	.95
754	5.0	49	125	.95
755	7.5	61	125	.95
756	10.0	75	125	1.05
757	25.0	125	125	1.20
758	50.0	186	100	1.50

IRON CORE TYPE

Similar to the No. 700 series except wound on powdered iron cores for lower circuit loss.

Dimensions: 1-¼" dia. x 1" high.

Cat. No.	MH	Ohms	MA	List Price
851	.5	8.6	125	$1.40
852	1.0	11.5	125	1.50
853	2.5	22.0	125	1.55
854	5.0	31.0	125	1.70
855	7.5	42.0	125	1.75
856	10.0	47.0	125	1.80
857	25.0	100.0	125	2.15

Dimensions: 1-⅝" dia. x 1" high.

Cat. No.	MH	Ohms	MA	List Price
858	50.0	160.0	100	2.30
859	75.0	222.0	100	2.60
860	100.0	348.0	100	2.85
861	150.0	520.0	100	3.15

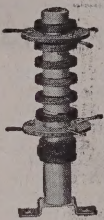
LOW POWER AND RECEIVER CHOKES

These chokes are wound on ¼" dia. forms and feature the exclusive Miller 'Sta-on' terminal clips. Low distributed capacity and accurate inductance values.

Dimensions: (form) ¼" dia. x 1-½" long.

Cat. No.	MH	Ohms	MA	List Price
4531	.5	11	200	$.85
4532	1.5	21	200	.85
4537	2.5	26	200	.85
4538	5.0	40	125	1.10
4539	7.5	79	125	1.40
4540	10.0	95	125	1.65
4541	25.0	160	125	1.95

TV POWER TRANSFORMER (R.F.)



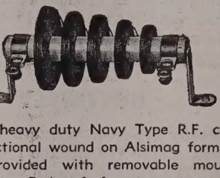
These R.F. power supply transformers for use with television receivers and cathode ray oscilloscope make it possible to construct an inexpensive source of high voltage D.C. Two types are available, the #4525 for voltages to 4000 DC and the #4526 for voltages to 10,000 DC (or 30,000 DC in a voltage rectifier tripler circuit). Type 1B3-GT tubes are used as rectifiers and the R.F. oscillator circuit uses one or more type 6V6 or 6Y6 tubes connected in parallel. The high frequency AC source permits use of simple and inexpensive resistive capacitive filters with low ripple content in the output. Typical circuit diagrams are supplied with each coil.

Cat. No.	Item	List Price
4525	H.V. R.F. Trans. (to 4KV)	$8.25
4526	H.V. R.F. Trans. (to 30 KV)	$13.75

4525: Dimensions—1¼" Dia. x 3¾" high **(Illustrated)**

4526: Dimensions—2¼" Dia. x 6" high **(not illustrated)**

HEAVY DUTY TRANSMITTER CHOKES



These heavy duty Navy Type R.F. chokes are sectional wound on Alsimag forms and are provided with removable mounting brackets. Ends of form are tapped for #6-32 machine screw. For general use in amateur and commercial transmitters.

Dimensions: (form) ½" dia. x 3-½" long.

Cat. No.	MH	Ohms	MA	Meters	List Pr.
4534	1.0	2.5	1000	20	$2.20
4535	1.5	3.6	1000	40	2.50
4533	2.5	4.5	750	80	2.75
4536	4.0	5.5	750	160	3.05

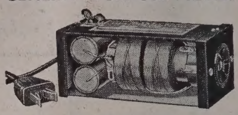
TV APPLIANCE FILTER

These filters are designed to eliminate radio interference caused by horizontal oscillators in T.V. receivers and small electrical appliances such as sewing machines, vacuum cleaners, food mixers, etc., and other similar devices requiring less than 550 watts. Inductive capacitive circuit assures maximum attenuation of interference.

Dimensions: 2¼" square x 4" long.

Cat. No.	Volts	Watts	List Price
7815	115	550	$7.70

GENERAL PURPOSE FILTER

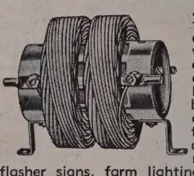


This filter is recommended for use with marine and D.C. appliances and radios. It is also for use with extremely noisy A.C. appliances. A good, permanent connection to ground should be used with this filter.

Dimensions: 2½" square x 5" long.

Cat. No.	Volts	Watts	List Price
7813	115	200	$8.25

LINE FILTER CHOKES



All Miller line filter chokes are duo-lateral wound on ceramic forms (except #7825 & D-7825 are on bakelite). They are for installation in noise producing equipment such as flasher signs, farm lighting plants, motor generators, etc. Also used with radio transmitters to prevent r.f. energy feed-back into the power circuits. Typical circuit diagrams are supplied with each choke. Always select chokes having a current rating at least as high as the maximum current load of the circuit to be filtered.

SINGLE LINE FILTER CHOKES

For use in filtering individual and branch circuits.

Dimensions: #7825 1-⅞" x 1-¾"
Others: 2-½" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
7825	2	.75	.60	$1.65
7826	5	.28	.57	4.40
7827	10	.15	.37	4.95
7828	20	.08	.20	5.50
7829	30	.05	.13	6.05

DUAL LINE FILTER CHOKES

For use in filtering both sides of single phase circuits.

Dimensions: #D-7825 3-¼" x 2-⅛"
Others: 4-½" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
D-7825	2	.75	.60	$3.30
D-7826	5	.28	.57	6.60
D-7827	10	.15	.37	7.70
D-7828	20	.08	.20	8.80
D-7829	30	.05	.13	9.90

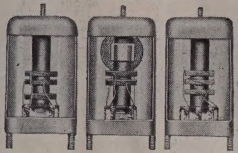
Specifications are for each winding.

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

UNIVERSAL REPLACEMENT COILS

(Permeability Tuned)



This series of variable inductance iron core coils are well suited for general replacement use and new designs. The inductance may be adjusted to cover the standard broadcast band with tuning condensers having a maximum capacity of between 250 and 450 mmfd. The oscillator coils may be used with any I.F. amplifier operating in the 100 to 550 KC range. Complete instructions are supplied.

UNSHIELDED

Dimensions: 7/8" dia. x 2" high. "L" mtg. Bracket.

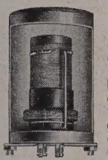
Cat. No.	Use	Freq. Range	List Price
72-A	Antenna Stage	500-1800 KC	$2.20
72-RF	R.F. Stage	500-1800 KC	2.20
72-Osc.	Osc. Coil	100-550 KC I.F.	2.20

SHIELDED

Dimensions: 1-3/8" square x 2-1/2" high

Cat. No.	Use	Freq. Range	List Price
73-A	Antenna Stage	500-1800	$2.75
73-RF	R.F. Stage	500-1800	2.75
73-Osc.	Osc. Coil	100-500 KC I.F.	2.75

DE-LUXE BROADCAST COILS



These coils are used in the finest quality receivers for lasting performance and stability. All coils are wound on XXX grade bakelite tubing and the secondaries are Litz wire wound (except oscillator coils) for maximum "Q". The antenna and R.F. coils are inductive-capacitive coupled for uniform gain. For use with standard 365 mmfd. tuning condensers.

SHIELDED COILS

Dimensions: 1-7/8" dia. x 3" high.

Cat. No.	Use	Freq. Range	List Pr.
242-A	Antenna	540-1750	$1.65
242-RF	Interstage	540-1750	1.65
242-BP	Band-pass	540-1750	1.40
277-C	2-coil Osc.	540-1750*	1.40
279-C	Tapped Osc.	540-1750*	1.20

NOTE: *Oscillator coils are for use with 455KC intermediate frequency and require a 400 mmfd. series pad condenser.

TV ANTENNA COUPLING TRANSFORMERS

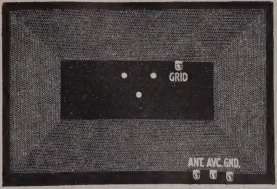
Miller
Cat. No. 616
Ohm
Coupling Trans

Clearer, brighter pictures when these transformers match antenna impedance to line, or line to TV receiver. Signal input may be improved as much as four times! Designed to couple low-impedance antenna to standard 300-ohm line; or 300-ohm antenna to 72-ohm twin-lead or low-loss 52-ohm coaxial cable. At receiver, low-impedance line matched to standard 300-ohm input. Housed in impregnated, weather-tight aluminum shield.

Dimension: 3/4" by 3/4" by 1-3/8".

Cat. No.	Impedance Ratio	List Price
6161	52/300 or 300/52	2.75
6162	72/300 or 300/72	2.75

LOOP ANTENNA



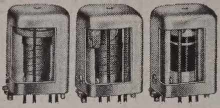
Using the patented "Air Loop"* construction, the No. 703-A Loop Antenna provides high "Q" and mechanical rigidity. The loop as supplied has a secondary inductance of 253 microhenries, which may be reduced as needed. Instructions are supplied. May be used in older sets to replace the antenna coil for local reception without an antenna.

Dimensions: 8-1/8" 5-3/8" x 1/8" thick.

***Mfg. under Franklin Airloop Cp. Pat. #2,401,472**

Cat. No.	Use	Frequency	List Price
703-A	Loop Antenna	540-1700 KC	$2.50

STANDARD BROADCAST COILS



High gain general purpose coils featuring high impedance coupled antenna and R.F. units with progressive wound Litz wire secondaries (except oscillator coils). For use with standard 365 mmfd. tuning condenser. All windings are thoroughly impregnated with tropicalized R.F. lacquer.

SHIELDED COILS

Dimensions: 1-3/8" square x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
44-A	Antenna	540-1700	$1.25
44-RF	Interstage	540-1700	1.25
44-BP	Band-Pass	540-1700	1.25
44-C	2-coil Osc.	540-1700*	1.25
41-C	Tapped Osc.	540-1700*	1.25

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

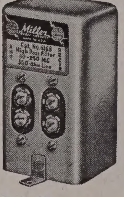
UNSHIELDED COILS

Dimensions: 5/8" dia. (form) x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
43-A	Antenna	540-1700	$ .95
43-RF	Interstage	540-1700	.95
43-BP	Band-Pass	540-1700	.95
43-C	2-coil Osc.	540-1700*	.95
45-C	Tapped Osc.	540-1700*	.95

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

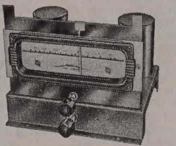
TV HIGH-PASS FILTER



Improves picture clarity by rejecting interference from short wave stations, amateur transmitters, X-ray and diathermy equipment, electric appliances, etc. Attenuates all signals from zero to 40 megacycles. Passes all television channels with minimum loss. Installed easily in antenna lead-in at receiver. No tuning required. In aluminum can: 1-7/16" by 1-7/8" by 3-1/2".

Cat. No.	
6168	300-ohm line — List $5.50

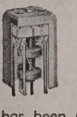
GERMANIUM CRYSTAL DIODE BAND-PASS TRF TUNER KIT



High fidelity! Uses germanium diode detector! No tubes! No power supply! No hum! A simple 2-tuned circuit negative mutual coupled band-pass tuner. Easy to assemble and wire. Full 22 kc. pass-band assures all brilliance of treble tones. Yet selective enough to separate local stations. With good antenna, AM stations in 20-25 mile range give audio output .05V to .5V. Use with your amplifier and speaker system for extra high quality reception. The Miller #585 TRF Tuner Kit contains coupling and TRF coils, 2-gang condenser, slide rule dial, chassis and hardware. Resistors, condensers, germanium crystal and volume control not included.

#585 TRF Tuner Kit — List $19.80

MIDGET I.F. TRANSFORMERS

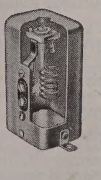


These mica compression tuned intermediate frequency transformers are well suited for use in small receivers of all types. They measure only 1-1/8" square and 2" high. In spite of their small size, only the highest quality of parts and workmanship has been used in the construction of the Miller Midget transformers.

Dimensions: 1-1/8" square x 2" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
112-C1	Input	455	450-475	$1.95
112-C2	Interstage	455	450-475	1.95
112-C3	Full Wave	455	450-475	1.95
112-C4	Half Wave	455	450-475	1.95
112-W1		1500	1400-1600	1.95
112-W2		1500	1400-1600	1.95
112-W3		1500	1400-1600	1.95
112-W4		1500	1400-1600	1.95
IRON CORE TYPES				
012-H1		262	250-275	2.20
012-H2		262	250-275	2.20
012-H3		262	250-275	2.20
012-H4		262	250-275	2.20
012-C1		455	450-475	2.20
012-C2		455	450-475	2.20
012-C3		455	450-475	2.20
012-C4		455	450-475	2.20
012-W1		1500	1400-1600	2.20
012-W2		1500	1400-1600	2.20
012-W3		1500	1400-1600	2.20
012-W4		1500	1400-1600	2.20

TV AND FM WAVE TRAPS



These new high-Q series-resonant traps may completely eliminate interference and undesirable images in television and FM receivers. Assembled in aluminum shields designed for connection direct to antenna twin-lead. Convenient screwdriver tuning adjustment at top. Four traps will cover frequency ranges from 20 to 250 megacycles.

Dimensions: 1-7/16" by 1-7/8" by 3-1/2" high. 1-7/16" mounting centers.

Cat. No.	Frequency Range	List Price
6163	150-250 mc	$4.40
6164	75-150 mc	4.40
6165	40- 80 mc	4.40
6166	20- 40 mc	4.40

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

MINIATURE I.F. TRANSFORMERS*

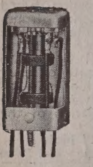
Designed for experimental and custom receivers as well as replacements for 'personal' radios, these transformers are permeability tuned and comparable in performance to standard size components. Expressly designed for use with the new miniature tubes. Plastic insulation throughout. Screw driver adjustment of primary and secondary from top and bottom of shield. Supplied with spring clip for mounting to the chassis.

Dimensions: ¾" square x 2" high.

***Mfg. under K-Trans. Pats. and Pats. Pend.**

Cat. No.	Use	Freq.	KC Range	List Price
12-H1	Input	262	250- 275 KC	$2.50
12-H2	Output	262	250- 275 KC	2.50
12-C1		455	440- 480 KC	2.20
12-C2		455	440- 480 KC	2.20
12-W1		1500	1400-1600 KC	2.20
12-W2		1500	1400-1600 KC	2.20

UNIVERSAL I.F. TRANSFORMERS

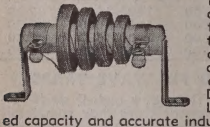


This new series of Miller transformers is used for general replacement purposes and in new designs. High gain and excellent stability are combined in a small transformer designed for use in both home and auto radio receivers. The ceramic mica compression trimmers have been heat cycled for temperature stability. All transformers are assembled in aluminum shields with screw-driver adjustment accessible at the top of the shield.

Dimensions: 1-¼" square x 2-½" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
312-H2	Input	262	250-275	$1.65
312-H4	Output	262	250-275	1.65
312-C2		455	440-475	1.65
312-C4		455	440-475	1.65
IRON CORE TYPES				
412-H2	Input	262	250-275	$2.20
412-H4	Output	262	250-275	2.20
412-C2		455	440-470	2.20
412-C4		455	440-470	2.20

MEDIUM DUTY TRANSMITTER CHOKES

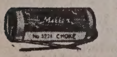


For use in medium power transmitters, these chokes are similar in construction to our Heavy Duty types. Low distributed capacity and accurate inductance values are features.

Dimensions: (form) ½" dia. x 2-½" long.

Cat. No.	MH	Ohms	MA	List Price
4550	2.0	6.5	400	$1.65
4551	4.0	10.0	400	1.95

FILAMENT CHOKE

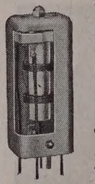


Enclosed solenoid wound chokes for use in the filament and vibrator circuits of battery operated receivers, transmitters, etc.

Dimensions: ¾" Dia. x 1-⅞" long, plus 3" leads.

Cat. No.	uH	Ohms	Amps.	List Price
5221	10	.02	8	$ .70

IRON CORE TRANSFORMERS



These iron core transformers provide higher gain and selectivity than the conventional air core transformers of similar size. The mica compression trimmers, adjustable from the top of the shield, have been heat cycled for capacity stability. Gain and selectivity of a single stage using iron core transformers is often equal to two stages of air core transformers.

Dimensions: 1-⅜" square x 3-¼" high.

Cat. No.	Use	Freq.	KC Range	List Price
612-H1	Input	262	250-275	$2.75
612-H2	Interstage	262	250-275	2.75
612-H3	Full Wave	262	250-275	2.75
612-H4	Half Wave	262	250-275	2.75
612-C1		455	450-475	2.75
612-C2		455	450-475	2.75
612-C3		455	450-475	2.75
612-C4		455	450-475	2.75
612-W1		1500	1400-1600	2.75
612-W2		1500	1400-1600	2.75
612-W3		1500	1400-1600	2.75
612-W4		1500	1400-1600	2.75

DOWELL TYPE COILS

Single section Litz wound secondary coils wound on ½" Dia. lo-loss ceramic dowels, these coils are provided with solder lugs on a bakelite terminal plate and with a #6-32 threaded stud for single hole chassis mounting. For use with standard 365 mmfd. tuning condenser.

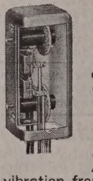
Dimensions: ¾" square base x 1" high.
(ABP & RF types 2-⅛" high).

Cat. No.	Use	List Price
5480-A	Antenna	$1.10
5480-RF	Interstage	1.40
5480-BP	Band-Pass	1.65
5480-K	2-coil Osc.	1.10
5480-H	2-coil Osc.	1.10
5480-C	2-coil Osc.	1.10
5481-K	Tapped Osc.	1.10
5481-H	Tapped Osc.	1.10
5481-C	Tapped Osc.	1.10

NOTE:

K for 175 KC I.F. with 1000 mmfd Pad
H for 262 KC I.F. with 600 mmfd. pad
C for 455 KC I.F. with 400 mmfd. pad

PERMEABILITY TUNED TRANSFORMERS



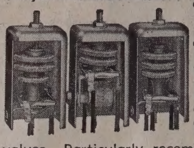
Miller permeability tuned intermediate frequency transformers are recommended for all applications where a high degree of frequency stability and operation under humid conditions are used. The two iron core adjusting screws are accessible from the side of the aluminum shield. These transformers have excellent gain and selectivity characteristics. An internal spring clip prevents vibration from affecting the adjustment.

Dimensions: 1-⅜" square x 3-¼" high.

Cat. No.	Use	Freq.	KC Range	List Price
912-C1	Input	455	450-475	$3.85
912-C2	Interstage	455	450-475	3.85
912-C3	Full Wave	455	450-475	3.85
912-C4	Half Wave	455	450-475	3.85
912-W1		1500	1400-1600	3.85
912-W2		1500	1400-1600	3.85
912-W3		1500	1400-1600	3.85
912-W4		1500	1400-1600	3.85
912-X1		3000	2900-3100	3.85
912-X2		3000	2900-3100	3.85
912-X3		3000	2900-3100	3.85
912-X4		3000	2900-3100	3.85

MIDGET R.F. COILS

(Adjustable Inductance)



This series of compact shielded coils is provided with an adjustable powdered iron core permitting approximately plus or minus 30% secondary inductance deviation from nominal values. Particularly recommended for aircraft, marine and mobile equipment and general custom receiver construction. Core is adjustable from top of aluminum shield. Coils are designed for use with standard 365 mmfd. tuning condenser.

Dimensions: 1-⅛" square x 2" high.
(All Types)

LONG WAVE BAND 140-425 KC

Cat. No.	Use	I.F. Freq.	List Price
X-320-A	Antenna		$2.75
X-320-RF	Interstage		2.75
X-320-M	2-coil Osc.	132 KC	2.20
X-320-C	2-coil Osc.	455 KC	2.20
X-321-M	Tapped Osc.	132 KC	2.20
X-321-C	Tapped Osc.	455 KC	2.20

BROADCAST BAND 540-1700 KC

Cat. No.	Use	I.F. Freq.	List Price
A-320-A	Antenna		$1.95
A-320-RF	Interstage		1.95
A-320-M	2-coil Osc.	132 KC	1.95
A-320-C	2-coil Osc.	455 KC	1.95
A-321-M	Tapped Osc.	132 KC	1.95
A-321-C	Tapped Osc.	455 KC	1.95

MARINE & AIRCRAFT BAND 2100-6300 KC

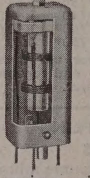
Cat. No.	Use	I.F. Freq.	List Price
B-320-A	Antenna		$1.95
B-320-RF	Interstage		1.95
B-320-M	2-coil Osc.	132 KC	1.95
B-320-C	2-coil Osc.	455 KC	1.95
B-321-M	Tapped Osc.	132 KC	1.95
B-321-C	Tapped Osc.	455 KC	1.95

SHORT WAVE BAND 6.0-18 MC

Cat. No.	Use	I.F. Freq.	List Price
C-320-A	Antenna		$1.95
C-320-RF	Interstage		1.95
C-320-C	2-coil Osc.	455 KC	1.95
C-321-C	Tapped Osc.	455 KC	1.95

REPLACEMENT I. F. TRANSFORMERS

(Double Tuned)



These transformers are an essential part of the stock of every serviceman and dealer. In many cases they will give better performance than the original transformer. All have been pretuned and should require only slight adjustment after installation. Leads are color coded, and the transformers are assembled in aluminum shields. These transformers may be used as replacements in most makes of receivers using transformers of the same physical size. Be sure to order a transformer of the correct frequency.

Dimensions: 1-⅜" square x 2-⅝" high.

Cat. No.	Freq.	KC Range	Use	List Price
512-K1	175	160-190	Input	$2.50
512-K2	175	160-190	Interstage	2.50
512-K3	175	160-190	Full-Wave	2.50
512-K4	175	160-190	Half-Wave	2.50
512-H1	262	240-280	Input	2.20
512-H2	262	240-280	Interstage	2.20
512-H3	262	240-280	Full Wave	2.20
512-H4	262	240-289	Half Wave	2.20
512-C1	455	425-500	Input	2.20
512-C2	455	425-500	Interstage	2.20
512-C3	455	425-500	Full Wave	2.20
512-C4	455	425-500	Half Wave	2.20

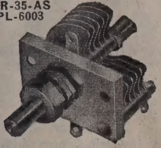
For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

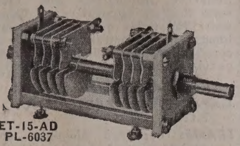
STANDARDS OF COMPARISON

TRIM-AIR MIDGET CAPACITORS

Combine essential sturdiness with the flexibility obtained only in a spacer-built rotor and stator type of assembly.

ZR-35-AS
PL-6003





ET-15-AD
PL-6037

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: End Plates of 5/32" thick Isolantite.

SHAFT: ¼" diameter, nickel plated brass.

PLATES: .020" thick aluminum, specially treated to remove burrs.

FINISH: Spacers, bushing nuts and screws nickel plated brass.

MOUNTING: Singles require one ⅜" hole in panel; Duals provided with four No. 4-36 screws in square brass tie rods. Trim-Air mounting posts or brackets fit both single and dual types. Singles are fitted with tapered nuts acting on split bushing for locking rotor shaft for fixed tune. Duals have rear shaft extension for coupling to other units and have a removable intersection shield, on airgaps of .020 and .030.

Note: Single section Trim-Airs normally stocked with full length shaft for knob or dial. Stub shaft equivalents, with slot for screw driver adjustment only, available to order. "ZS" type singles have .040" thick plates with rounded buffed edges.

SINGLE TRIM-AIR CONDENSERS (Long Shaft Construction)

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL 6016	ZU-75-AS	75	2.7	15	.020	1⅜	$2.75
PL 6017	ZU-100-AS	100	3	19	.020	1½	2.81
PL 6018	ZU-140-AS	140	5	27	.020	1 23/32	5.06
PL 6000	ZR-10-AS	10	1.2	3	.030	⅞	2.04
PL 6001	ZR-15-AS	15	1.5	5	.030	31/32	2.09
PL 6002	ZR-25-AS	25	2	7	.030	1 1/16	2.31
PL 6003	ZR-35-AS	35	2.5	11	.030	1 9/32	2.42
PL-6004	ZR-50-AS	50	2.8	13	.030	1⅜	2.53
PL 6055	ZR-100-AS	108	6.6	29	.030	2 9/64	3.63
PL 6024	ZV-5-TS*	5	1.5	3	.060	⅞	2.04
PL 6044	ZT-5-AS	5	2	3	.070	31/32	2.31
PL 6010	ZT-10-AS	11	3.6	6	.070	1 1/16	2.37
PL 6011	ZT-15-AS	15	3	9	.070	1½	2.48
PL 6012	ZT-30-AS	30	4	17	.070	2 17/64	3.03
PL 6022	ZS-4-SS	4	1.5	5	.140	1½	3.03
PL 6023	ZS-7-SS	7	4	7	.140	1 27/32	3.36

* Supplied with 2 segment stator for UHF circuits.
Extra plate also supplied, making 3 plates as listed.

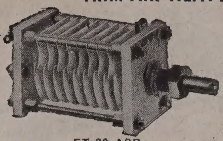
DUAL TRIM-AIR CONDENSERS

Per Section

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
6041	EU-75-AD	75	2.7	15	.020	3 1/32	$5.28
6042	EU-100-AD	100	3	19	.020	3 1/32	5.50
6043	EU-140-AD	140	5	27	.020	3 11/16	9.74
6028	ER-10-AD	10	1.2	3	.030	2 3/16	4.24
6029	ER-15-AD	15	1.5	5	.030	2 3/16	4.24
6030	ER-25-AD	25	2	7	.030	2 3/16	4.35
6031	ER-35-AD	35	2.5	11	.030	3 1/32	4.73
6032	ER-50-AD	50	2.8	13	.030	3 1/32	5.01
6065	ER-100-AD	100	6.9	25	.030	3 11/16	8.97
6037	ET-15-AD	15	3	9	.070	3 1/32	4.84
6039	ET-30-AD	30	4	17	.070	4 15/32	5.83
6033	ES-4-SD	4	1.5	5	.140	3 1/32	5.83
6035	ES-7-SD	7	4	7	.140	3 11/16	6.49
6293	ER-25-ADI*	25	2	7	.030	2 3/16	6.38

* Insulated coupling between rotor sections.

TRIM-AIR HEAVY DUTY SPECIALS



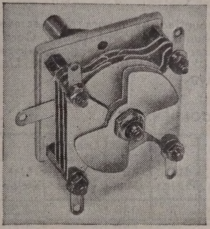
ET-30-ASP
PL-6058

Four-tie-rod frame, ball and strap rear bearing construction, augmenting the simplified Trim-Air construction, to give even greater strength and rigidity. General characteristics otherwise same as standard Trim-Airs.

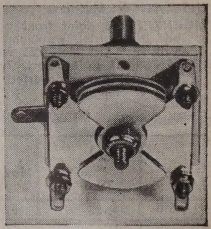
Dual section units have balanced rotor and stator sections and both single and dual section types may be single hole mounted or used with standard Trim-Air mounting accessories. Standard Trim-Air shaft locking nut may be used for fixed tune. PL-6069 and PL-6068 are duals with rear shaft extended; all others have ball and strap type rear bearing.

SINGLES		LIST	DUALS		LIST
PL 6056	ER-50-ASP	$4.79	PL 6057	ER-50-ADP	$5.28
PL 6059	EU-75-ASP	4.35	PL 6669	ER-50-ADP (rear sh. ext.)	9.57
PL 6058	ET-30-ASP	4.46	PL 6068	EU-140-ADP (rear sh. ext.)	12.76

A NEW LINE OF CARDWELL MIDGET CONDENSERS FOR V.H.F.



PL-6113



PL-6076

Cardwell offers a new line of 90 degree condensers with butterfly rotor plates, fulfilling a demand created by engineers and amateurs since the publication of an article "Stabilizing The 144 Megacycle Transmitter" in April, 1946 "QST." Also see pages 351 to 353 inclusive in the 1946 ARRL Radio Amateurs Handbook. PL-6113 and PL-6076 are specified in these articles. Features of these 90 degree midget condensers are as follows:

Electrical Symmetry
Low Distributed Inductance.
No Moving Contacts.
Plates easily removable to change capacity range.
Isolantite Insulation.
Single Hole Mounting.
Small Size; 1 7/16" x 1 13/32" per general outline dimensions for differential "Trim-Airs" as shown on Page 6 of Catalog No. 46.

These condensers are made to fit all standard Cardwell "Trim-Air" hardware.

Note maximum and minimum capacity values shown are measured from stator-to-stator and are effective values as used when a coil is connected stator-to-stator, with rotor floating.

CARDWELL V.H.F. 90 DEGREE TRIM-AIR MIDGETS

Part List No.	Type	Max. Cap.	Min. Cap.	No. Plates Rotor	No. Plates Stator	Air Gap.	Length Over-all	List Price
6075	ER-3-BF/S	3	1.5	2	1	.030"	1 25/32"	$2.86
6076	ER-6-BF/S	5	1.5	3	2	.030"	1 31/32"	2.97
6077	ER-8-BF/3	7	2.0	4	3	.030"	1 31/32"	3.08
6078	ER-15-BF/S	13	3.0	7	6	.030"	2⅜"	3.74
6079	EU-25-BF/S	20.4	3.4	8	7	.020"	2 5/32"	4.02
6080	EU-35-BF/S	27	4.0	10	9	.020"	2⅜"	4.18
**6081	EU-50-BF-S	38	6.0	14	13	.020"	2 31/32"	8.42
*6113	ER-14-BF/SL	13	10.4	(3) Disc (2) 90°	(2) 180° (2) 90°	.030"	2 1/16"	4.40

* Minimum capacity loaded by circular rotor plates.
** Iso. rear end plate—ball and strap rear bearing.

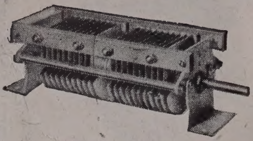
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

MIDWAY TRANSMITTING CAPACITORS



MT-100-GD PL-7030
with PL-5051 Mtg. Brackets

The Midway is ideal for low and medium power transmitters for portable Mobile and aircraft equipment, due to its light weight, compact size and extremely sturdy construction. Incorporates original patented features of the larger "X" type standard transmitting condenser.

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: All aluminum end plates and tie rods.

SHAFT: ¼" C.R. steel, cadmium plated.

PLATES: .025" aluminum. On sizes having airgap of .070" or over, plates have rounded edges, buffed to minimize corona loss.

BEARINGS: Brass, nickel plated shoulder type front bearing with ball thrust rear bearing.

INSULATION: Mycalex.

MOUNTING: 3 point front panel mounting by means of 3 screws and hex. posts. Two aluminum mounting feet with screws, Cardwell Part List No. 5052 for regular chassis mounting, provided instead, if so ordered. Type "M" special brackets (Part List No. 5051) permit inverted mounting.

MIDWAY SINGLE CONDENSERS

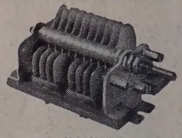
Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL7000	MR-25-BS	25	6	3	.030	1¾	$4.35
PL7001	MR-50-BS	50	6	5	.030	1¾	5.50
PL7002	MR-70-BS	70	7	7	.030	1¾	5.67
PL7003	MR-105-BS	112	9	11	.030	1¾	5.89
PL7004	MR-150-BS	150	10	15	.030	1¾	6.38
PL7005	MR-260-BS	260	13	25	.030	2¾	7.04
PL7006	MR-365-BS	365	16	35	.030	2¾	7.70
PL7015	MT-20-GS	25	8	5	.070	1¾	5.28
PL7016	MT-35-GS	35	6	7	.070	1¾	5.67
PL7017	MT-50-GS	50	10	11	.070	1¾	6.33
PL7018	MT-70-GS	70	10	15	.070	2¾	7.21
PL7019	MT-100-GS	100	14	21	.070	2¾	7.92
PL7020	MT-150-GS	150	18	31	.070	$3\frac{11}{16}$	9.74
PL7021	MG-35-NS	35	14	15	.171	$3\frac{11}{16}$	9.74
PL7024	MO-165-BS	165	15	25	.050	2¾	5.39

MIDWAY DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL7007	MR-25-BD	25	5	3	.030	1¾	$7.04
PL7008	MR-50-BD	47	7	5	.030	2¾	7.54
PL7009	MR-70-BD	70	8	7	.030	2¾	7.92
PL7010	MR-100-BD	112	9	11	.030	2¾	8.25
PL7011	MR-150-BD	150	10	15	.030	2¾	8.53
PL7013	MR-260-BD	260	13	25	.030	$3\frac{11}{16}$	9.63
PL7026	MT-20-GD	20	6	5	.070	2¾	8.97
PL7027	MT-35-GD	35	8	7	.070	2¾	9.74
PL7028	MT-50-GD	50	9	11	.070	$2\frac{15}{16}$	10.29
PL7029	MT-70-GD	70	11	15	.070	$3\frac{11}{16}$	11.33
PL7030	MT-100-GD	100	13	21	.070	$5\frac{11}{32}$	12.93
PL7031	MO-180-BD	190	15	29	.050	$5\frac{11}{32}$	12.93

"N" TYPE TRANSMITTING CAPACITORS

Designed for medium power high frequency transmitters and short wave therapy apparatus, the Cardwell "N" series maintains the customary high standard of Cardwell construction, yet eliminates closed circuit loops completely.



NP-35-DD
PL-7107

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: Improved aluminum end plates support heavy lateral ceramic insulating bars which carry the stators.

SHAFT: ¼" diameter cadmium plated steel.

PLATES: Aluminum, .040" thick, with rounded edges. PL-7106 and 7116 have buffed and polished edges. PL-7105 has .025" thick plates, buffed and polished edges.

BEARINGS: Cardwell shoulder type front bearing, with ball thrust rear bearing.

MOUNTING: Can be single hole mounted, or by three mounting posts and screws, to front panel. Chassis mounting on feet which form part of end plates, or use Cardwell "M" brackets, Cardwell part No. 301, for inverted mounting, for lowest stator-to-ground capacity.

ULTRA-HIGH FREQUENCY SINGLE CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7100	NP-50-DS	50	9	13	.084	3⅜	$5.67
PL7101	NP-75-DS	75	11	19	.084	$4\frac{5}{32}$	6.66
PL7102	NP-100-DS	100	13	25	.084	$5\frac{7}{32}$	7.54
PL7103	NP-150-DS	150	19	39	.084	$6\frac{11}{16}$	9.85
PL7104	NG-35-DS	35	11	15	.171	$5\frac{7}{32}$	7.43

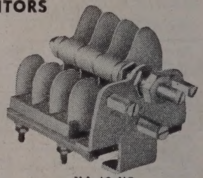
ULTRA-HIGH FREQUENCY DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Back of Panel	List Price
PL7105	NT-50-GD	50	7	11	.070	$4\frac{5}{32}$	$9.74
PL7116	NP-15-ND	17	4	5	.084	$4\frac{5}{32}$	9.24
PL7106	NP-35-ND	35	5	9	.084	$4\frac{5}{32}$	9.74
PL7110	NP-15-DD	17	4	5	.084	$4\frac{5}{32}$	8.25
PL7107	NP-35-DD	35	5	9	.084	$4\frac{5}{32}$	8.69
PL7108	NP-50-DD	50	9	13	.084	$5\frac{7}{32}$	9.74
PL7109	NP-75-DD	75	11	19	.084	$6\frac{11}{16}$	11.66
PL7115	NA-12-NDI	13	6	7	.218	$5\frac{15}{16}$	24.31

Note: NA-12-NDI is dual neutralizer, rotor sections insulated from each other. Capacity and nr. plates shown, is PER SECTION.

"NA" NEUTRALIZING CAPACITORS

The "NA" group offers 180° neutralizing capacitors of restricted range, for dial or screw driver adjustment. Shaft lock for permanent setting. Adjustable airgap on NA-4-NS *only* by adjusting threaded bushing in aluminum end plate. Single rotor bearing with beryllium tension washer and special bushing for rigidity. Plates are .040" thick aluminum, rounded and buffed edges. Three point panel mounting or foot mounting.



NA-16-NS
PL-7114

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7111	NA-4-NS	4	3.25	2	.218	$1\frac{19}{32}$	$5.83
PL7112	NA-6-NS	6	4	3	.218	$1\frac{19}{32}$	5.83
PL7113	NA-10-NS	12	6	6	.218	$2\frac{19}{32}$	7.32
PL7114	NA-16-NS	16	7	8	.218	$3\frac{3}{32}$	8.14

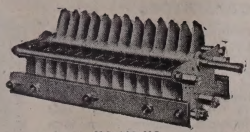
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

"X" TYPE STANDARD TRANSMITTING CAPACITOR


XC-100-XS
PL-8023

The original grounded rotor, metal frame variable air capacitor.

Rounded edges, polished aluminum plates, .040" thick on all but "XT" and "XR" types.

Frames, tie rods, bearing bushings, spacers and stator blocks, nickeled brass. Cadmium plated ¼" steel shaft supports securely locked rotor assembly. Mycalex insulation. Panel spaces 4⅛" x 3⅜". Panel mounting. N.P. brass mounting feet provided on special order, for chassis mounting. See Accessories.

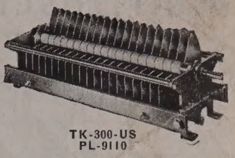
"X" TYPE STANDARD SINGLES

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL8000	XR-50-PS	50	11	3	.030	1½	$5.56
PL8001	XR-100-PS	100	12	5	.030	1½	5.67
PL8002	XR-150-PS	150	12.5	7	.030	1½	5.83
PL8003	XR-250-PS	250	13	11	.030	1½	5.94
PL8004	XR-375-PS	375	16	17	.030	2 1/16	6.77
PL8005	XR-500-PS	475	18	21	.030	2 1/16	8.31
PL8007	XR-1000-PS	950	30	41	.030	3 3/16	15.95
PL8013	XR-1500-PS	1500	50	65	.030	5	17.60
PL8048	XT-220-PS	220	20	21	.070	3 3/16	8.09
PL8050	XT-440-PS	440	40	43	.070	5	12.43
PL8040	XP-90-KS	90	16	11	.084	2 1/16	7.32
PL8041	XP-165-KS	165	22	19	.084	3 3/16	10.51
PL8043	XP-290-KS	290	35	33	.084	5	15.40
PL8044	XP-330-KS	330	37	37	.084	5⅝	17.60
PL8029	XE-120-XS	120	19	17	.100	3 3/16	9.74
PL8031	XE-240-XS	240	30	33	.100	5⅝	17.60
PL8025	XD-160-XS	160	28	27	.125	5⅝	14.63
PL8032	XG-25-XS	25	8	5	.171	2 1/16	5.67
PL8033	XG-50-XS	50	15	11	.171	3 3/16	10.51
PL8034	XG-110-XS	110	26	23	.171	5⅝	15.68
PL8020	XC-18-XS	19	8	5	.200	2 1/16	7.32
PL8021	XC-40-XS	40	15	11	.200	3 3/16	10.51
PL8022	XC-65-XS	65	20	17	.200	5	13.75
PL8023	XC-100-XS	100	28	25	.200	6⅝	17.05
PL8037	XK-55-XS	55	20	15	.230	5	16.23

"X" TYPE STANDARD DOUBLES

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL8018	XR-500-PD	500	18	21	.030	3 3/16	$15.40
PL8068	XT-80-PD	80	11	9	.070	3 3/16	10.23
PL8070	XT-210-PD	210	22	21	.070	5	14.08
PL8065	XP-90-KD	95	15	11	.084	3 23/32	12.16
PL8066	XP-165-KD	165	23	19	.084	5⅝	17.82
PL8067	XP-325-KD	325	38	37	.084	10 3/16	35.70
PL8061	XE-120-XD	120	19	17	.100	5⅝	16.23
PL8062	XE-240-XD	240	32	33	.100	10 3/16	33.94
PL8060	XD-160-XD	160	28	27	.125	10 3/16	30.86
PL8063	XG-50-XD	50	14	11	.171	5⅝	17.33
PL8064	XG-110-XD	110	27	21	.171	10 3/16	29.15
PL8056	XC-40-XD	40	14	11	.200	6⅝	18.65
PL8057	XC-75-XD	75	21	19	.200	10 3/16	24.31
PL8081	XE-160-70-XQ	Multi-Band			.100	10 3/16	44.66

"T" TYPE HEAVY DUTY TRANSMITTING CAPACITORS


TK-300-US
PL-9110

6¼" wide, 5⅜" high, plates unmeshed. Corona shields on stators for wider airgap types. End plates ⅛" thick, heavy nickel plated. Massive bearings, ⅜" stainless steel shafts; heavy, two finger phosphor bronze rotor contactor bears on sturdy contact ring built to carry very heavy current without power loss. Rotor plates 4½" diameter, .050" thick aluminum. Heavy mounting feet formed as part of end plates. Ball thrust rear bearing. Mycalex insulation.

SINGLE HEAVY DUTY TRANSMITTING CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Inside End Plates	List Price
PL9009	TJ-315-US	315	36	31	.168	8 1/32	$44.55
PL9001	TC-200-US	200	35	23	.200	7	38.94
PL9002	TC-300-US	300	42	35	.200	10	44.55
PL9036	TK-300-US	312	53	39	.230	12 3/16	51.70
PL9011	TL-50-US	45	15	7	.294	3 9/16	22.99
PL9013	TL-80-US	85	24	13	.294	5⅝	29.21
PL9014	TL-100-US	98	26	15	.294	6 5/16	30.64
PL9016	TL-160-US	160	40	25	.294	9¾	41.75
PL9019	TZ-40-RS	43	18	11	.500	7	33.39
PL9020	TZ-80-RS	83	32	21	.500	12½	44.55

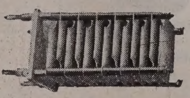
DOUBLE HEAVY DUTY TRANSMITTING CONDENSERS

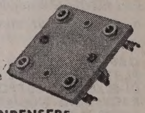
Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Inside End Plates	List Price
PL9026	TJ-150-UD	150	21	15	.168	8 1/32	$44.55
PL9027	TJ-200-UD	211	30	21	.168	10¾	50.11
PL9021	TC-100-UD	112	20	13	.200	8 1/32	43.12
PL9022	TC-160-UD	160	30	19	.200	11	47.30
PL9023	TC-200-UD	200	35	23	.200	13	52.86
PL9024	TC-250-UD	255	40	29	.200	16	58.47
PL9030	TL-50-UD	45	15	7	.294	6 5/16	34.82
PL9031	TL-70-UD	70	19	11	.294	9	40.37
PL9033	TL-100-UD	98	26	15	.294	11 13/16	48.02
PL9034	TL-160-UD	160	40	25	.294	18¾	61.22
PL9029	TKD-100-UD	110	30	21	.350	18¾	61.22
PL9035	TZ-40-RD	43	18	11	.500	13 9/16	50.11

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

For fixed capacity loading.

Plates easily removed. All "J" types have 2¼" square x ¼" Alsimag No. 196 ceramic end plates. Supplied with banana plugs to fit "JB" Jack Base. On special order provided with hexagonal brass mounting pillars and mounting screws for permanent installation.


JCO-50-OS
PL-9705


"JB" Jack Base
PL-5102

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

Parts List No.	Type	Capacity	No. Plates	Air Gap	Length Overall	List Price
PL9705	JCO-50-OS	50 mmf.	13	.250	5⅜	$8.91
PL9704	JCO-25-OS	25 mmf.	7	.250	3¾	6.44
PL9703	JD-100-OS	100 mmf.	17	.125	4⅜	10.51
PL9702	JD-80-OS	80 mmf.	13	.125	4	8.91
PL9701	JD-50-OS	50 mmf.	8	.125	3 3/16	6.44
PL9700	JD-25-OS	25 mmf.	4	.125	2½	4.51
PL9706	JR-750-OS	750 mmf.	33	.030	4⅝	14.30
PL9707	JKD-50-OS	50 mmf.	18	.350	8 3/16	10.67

JACK BASE FOR "J" FIXED AIR CONDENSERS

Size: 2½" x 3½" x ¼". **Material:** Alsimag No. 196.
Complete with mounting posts, screws and nuts.
Type "JB" (PL-5102) .... List Price $1.38

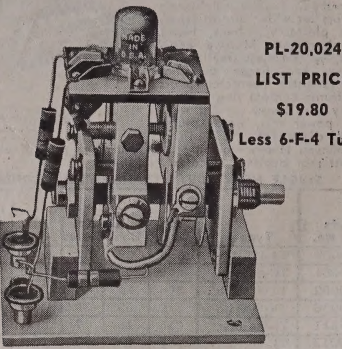
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

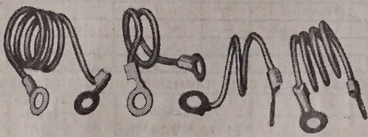
THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

V.H.F. OSCILLATOR KIT



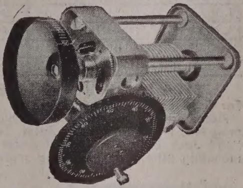
PL-20,024
LIST PRICE
$19.80
Less 6-F-4 Tube



This kit includes 3 sets of coils covering 144-148 mc, 220-225 mc, 420-450 mc bands. (The 6F4 tube is not included.)
Ideally suited for local oscillator, for super-heterodyne receiver, as plate modulated oscillator for low power transmitter or transceiver, driver unit for amplifier tube in higher powered transmitter, V.H.F. signal generator, etc., etc.

CARDWELL PRECISION CAPACITOR
Type PL-24,050

Designed for frequency meters requiring maximum mechanical and electrical precision. Type No. 4.080 gear and worm driven capacitor incorporates special design features representing years of research and usage of this component in special measurement equipment which has successfully withstood most rigorous usage our armed forces could give it.

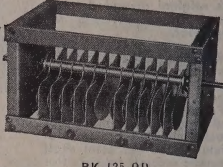


Frequency Meter Condenser
PL-24,050

CAP. RANGE: Max. Cap. 220 mmfd., Min. Cap. 21 mmfd.
PLATE SHAPE: S.L.F.
DI-ELECTRIC SUPPORTS: Steatite.
BACKLASH: Negligible.
RESETTABILITY: To 10 parts in one million.
GEAR DRIVE: Precision split worm gear, equipped with precision ball bearings. Ratio—100 : 1 over 360 degrees.
DIALS: 3" DRUM: 50 divisions over 180° condenser rotation. 3" FAST RUNNING DIAL: Graduated 100 divisions, makes 1 revolution for each drum division. VERNIER RING: Divides each division on fast running dial into 10 parts.
DIMENSIONS: 5⅝" lg. (over drum dial) x 3⅛" deep x 3⅛" high.
WEIGHT: 1¾ lbs. (with cast aluminum frame).
ROTOR CONTACT: Silver plated phosphor bronze spring, with 2 silver contacts bearing on silver plated disc.
MOUNTING: 3 point, to bottom of main casting.

PRICE:		
Capacitor, PL-24,050, Type 4.080, only	List	$28.15
Drum Dial	List	6.55
Fast Running Dial	List	14.03
Vernier Ring	List	2.75

TYPE "P" LIGHT HEAVY WEIGHT TRANSMITTING CAPACITORS



PK-125-QD
Special

Designed to accommodate capacitance values up to 150 mmfd. per section in a dual section type having an airgap of .500", the "P" type construction permits higher capacity for a given airgap, and therefore a shorter frame than the "T" type construction. Typical Cardwell sturdiness is built-in, and the "P" type is probably the lightest transmitting condenser built for its size, yet completely satisfactory for heavyweight use. No single section types are catalogued; parallel or series connect for double or half single section capacity listed in table.

GENERAL SPECIFICATIONS:

FRAME: End plates are ⅛" thick formed aluminum, satin finish.
SHAFT: ⅜" diameter, non-magnetic stainless steel, extended both front and rear end.
PLATES: .064" thick, rounded and buffed edges. Rotor plates are 6¾" in diameter.
BEARINGS: Heavy nickel plated brass front and rear shoulder bearings.
ROTOR CONNECTION: Heavy, two finger N.P. phosphor bronze wiper bears on ⅛" thick N.P. brass contact ring, at each end.
STATOR CONSTRUCTION: Plates permanently staked into slotted, rounded edge aluminum stator blocks.
INSULATION: Mycalex (glass bonded mica).
MOUNTING: 3 clearance holes for No. 10 screws in each *side* of each end plate permitting mounting on any side, as well as provision for mounting associated components such as inductance coil mountings, etc.

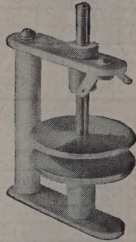
TYPE "P" LIGHT HEAVYWEIGHT DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL9208	PJ-750-QD	750	50	35	.168	20½	Special
PL9210	PK-200-QD	210	30	13	.230	11 27/64	Special
PL9203	PKD-70-QD	70*	15*	7	.350	9 13/16	82.50
PL9204	PKD-100-QD	115	22	9	.350	11 27/64	91.85
PL9205	PZ-50-QD	50*	15*	7	.500	11⅞	90.48
PL9206	PZ-70-QD	70*	20*	9	.500	14¼	96.69
PL9207	PZ-100-QD	91	23	11	.500	16 1/16	110.00
PL9209	PZ-150-QD	150	40	19	.500	24 9/16	137.50

* Estimated value.
Tolerance for maximum and minimum capacity values: ±10%.

DISC TYPE NEUTRALIZER

For neutralizing low capacity transmitting triodes. Glazed steatite insulation. Polished aluminum discs. Fine screw thread adjustment in long nickel silver bearing—no wabble. Knurled thumb nut for easy locking. Heavy satin finish aluminum support and base plate.



ADN. Neut. Conds.
PL-7118

DISC TYPE NEUTRALIZING CONDENSERS

Item No.	Parts List No.	Type	Max. Cap.	Air Gap	Min. Cap.	Air Gap	List Price
1	PL7118	ADN	7 mmf.	.100"	1 mmf.	.700"	$0
2	PL7119	BDN	15 mmf.	.200"	3 mmf.	1.000"	

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

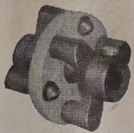
STANDARDS OF COMPARISON

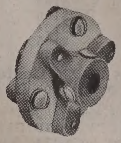
INSULATED COUPLINGS

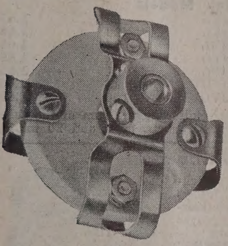
For isolating R.F. controls. Ceramic insulation (Alsimag No. 196). All flexible types have N.P. phosphor bronze springs, and heavy N.P. brass hubs, permanently swedged or spin riveted into the springs. Two fillister head, cup point, case hardened steel set screws in each hub insure positive lock to shaft.

All rigid types have improved three-point-spider construction, carefully machined solid brass castings, and are absolutely rigid.

Flexible types C, D, E and F fit both ¼" diameter shaft or a ⅜" shaft by removing bushing supplied.


"LNF" Rigid Coupling
PL-5201


"FNF"
PL-5013


"C"
PL-5004

"A"
PL-5000

INSULATED COUPLINGS—Flexible

Parts List No.	Type	DIMENSIONS "A" (Width)	"B" (Length)	Peak Flashover	To Fit Shaft Diameter	List Price
5000	A	1 9/32"	¾"	3;700 V.	¼"	$0.83
5002	B	1 9/32"	1 3/32"	7,000 V.	¼"	.83
5202	AB	1 9/32"	29/32"	5,000 V.	¼"	1.10
5004	C	2 ⅝"	2 3/32"	13,500 V.	¼ & ⅜"	3.91
5006	D	2 ⅝"	1 ⅜"	9,000 V.	¼ & ⅜"	3.91
5008	E	2 1/16"	1 ¾"	10,000 V.	¼ & ⅜"	2.09
5010	F	2 1/16"	1 1/16"	5,000 V.	¼ & ⅜"	2.09

INSULATED COUPLINGS—Rigid

5014	CNF	2 ¼"	2 1/16"	12,000 V.	⅜"	4.90
5201	ENF	1 ⅜"	1 13/16"	10,000 V.	¼"	1.65
5013	FNF	1 ⅜"	15/16"	7,500 V.	¼"	1.38

ACCESSORIES

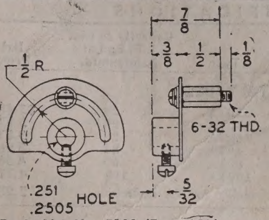
"MIDWAY" MOUNTING FEET

Heavy aluminum, with 2 screws; for Midway condensers.
Parts List No. 5052........................**List (Pair)**...**$0.28**

INDUCTANCE CLIPS

For tapping air-wound inductors. Cadmium plated phosphor bronze spring clips for No. 12 or 14 wire. Thin blades prevent shorting turns. Type 804-A. **Parts List No. 5104**........**List Price**...**$0.22**

ROTOR LOCK



For locking "X" standard or "M" Midway rotor shafts in position for fixed tune. Can be set behind panel or attached to any ¼" shaft, mounted directly on front of panel. Nickel plated brass; diameter 1½".

Parts List No. 5100 (Type ARL)........................**List Price $0.83**

SHAFT LOCK PANEL BUSHING

Long panel bushing for ¼" shafts, has tapered nut for locking shaft in position. Fits ⅜" hole in panel. Complete with panel nuts. Nickeled brass.
Parts List No. 5055 (Type ALB)........................**List Price $0.44**

TYPE "M" BRACKET

Use with type "N" U.H.F. duals or "M" Midway condensers. Turns condenser upside down for shortest plate leads in balanced R.F. amplifier. Regular mounting feet can be used to support a tank coil or jack base. Made of strong, satin finished, 1/16" aluminum, and supplied with proper screws and lock washers.
Parts List No. 5051........................**List Price, each $0.28**

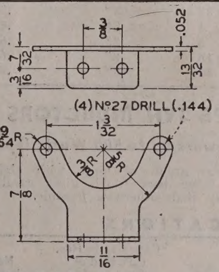
"STANDARD" TYPE "X" MOUNTING FEET

Heavy nickel plated brass; for "X" transmitting types, with four screws.
Parts List No. 5053........................**List Price, pair $0.28**

TRIM-AIR ACCESSORIES

As catalogued, Trim-Air singles are equipped for single hole mounting. Additional mounting accessories listed below are sold separately.

MOUNTING POSTS—(¼" hex. x ¾" long, tapped 6-32 N.P. brass). Pair, with screws and lockwashers.
Parts List No. 5054........................**List Price $0.28**



"TRIM-AIR" MOUNTING BRACKET

For dual and single Trim-air condensers. Insulated from rotor and stator; N.P. brass, with two screws and nuts.

Parts List No. 5050........................**List Price, each $0.22**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

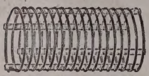
COMPONENTS for amateurs and experimenters
BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

ANTENNA INDUCTORS TYPES TA AND HDA

Wound with tinned copper wire for ease in tapping feeders to coils. Equipped with fixed center links for coupling to either fixed or variable linked final tank circuits through a low impedance line. Two tinned clips come with each coil. TYPE TA COILS for power input up to 500 watts. TYPE HDA COILS for power inputs of one kilowatt.

SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
		TA TYPES		
10	3601	10TA	20	$3.45
15	3602	15TA	23	3.57
20	3603	20TA	23	3.57
40	3604	40TA	34	3.96
80	3605	80TA	50	4.38
160	3606	160TA	100	4.71
Stock No. 3321 Jack Bar Assembly for TA Inductors.				1.25
		HDA TYPES		
10	3607	10HDA	20	7.02
15	3608	15HDA	20	7.83
20	3609	20HDA	20	7.83
40	3610	40HDA	20	8.25
80	3611	80HDA	34	9.06
160	3612	160HDA	100	10.32
Stock No. 3721 Jack Bar Assembly for HDA Inductors				1.75

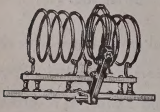


B & W MINIDUCTORS

For use in limited space—can be cut to size. Amazingly high Q characteristic. Useful for tank circuit coils, R-F chokes, high-frequency I-F transformers, loading coils, etc.

SPECIFICATIONS

Catalog No.	Diameter	Turns per Inch	Length	Net Price
3001	½″	4	2″	$0.36
3002	½″	8	2″	.36
3003	½″	16	2″	.36
3004	½″	32	2″	.36
3005	⅝″	4	2″	.45
3006	⅝″	8	2″	.45
3007	⅝″	16	2″	.45
3008	⅝″	32	2″	.45
3009	¾″	4	3″	.54
3010	¾″	8	3″	.54
3011	¾″	16	3″	.54
3012	¾″	32	3″	.54
3013	1″	4	3″	.60
3014	1″	8	3″	.60
3015	1″	16	3″	.60
3016	1″	32	3″	.60



TYPE TVH INDUCTORS

For Powers up to 500 Watts Input

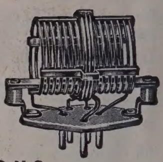
A special group of units with eight contact plug bars which gives greater flexibility than otherwise possible.

SPECIFICATIONS

Band	Stock No.	Type	*Capacity to Res. L.F. End of Band mmfd.	Net Price
10	3501	10TVH	11	$4.71
15	3502	15TVH	23	4.71
20	3503	20TVH	23	4.71
40	3504	40TVH	28	4.71
80	3505	80TVH	49	4.71
160	3506	160TVH	100	4.71
Stock No. 3566 Jack Bar Assembly for Type TVH Inductors				5.16

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

PRICE INDICATIONS ARE REVISIONS MADE NOVEMBER 15, 1950



JUNIOR INDUCTORS

For Powers Up to 75 Watts Input

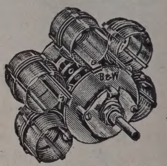
Fitted with standard five-prong steatite base. Small size for compact construction. May be used in the oscillator, buffer or final amplifier stage with input powers up to 75 watts and plate voltages up to 850. Three different assemblies provided, any of which may be used in capacity-coupled circuits by omitting connection to the links.

SPECIFICATIONS

Band	Stock No.	Type	*Cap. to Res. L.F. End of Band mmfd.	Net Price
		End Linked Models		
6	3100	6JEL	15	$1.65
10	3101	10JEL	22	1.65
15	3102	15JEL	22	1.65
20	3103	20JEL	34	1.65
40	3104	40JEL	47	1.65
80	3105	80JEL	60	1.65
160	3106	160JEL	100	1.65
		Center Linked Models		
6	3107	6JCL	15	1.65
10	3108	10JCL	16	1.65
15	3109	15JCL	16	1.65
20	3110	20JCL	16	1.65
40	3111	40JCL	33	1.65
80	3112	80JCL	53	1.65
160	3113	160JCL	100	1.65
		Variable Link Models		
6	3114	6JVL	15	1.65
10	3115	10JVL	22	1.65
15	3116	15JVL	27	1.65
20	3117	20JVL	21	1.65
40	3118	40JVL	31	1.65
80	3119	80JVL	46	1.65
160	3120	160JVL	100	1.65

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

B & W TURRET ASSEMBLIES



Makes possible fast, positive band switching. Unique switching assembly allows unused coils to be shorted, thus eliminating absorption effects. All units cover 80, 40, 20, 15 and 10 meter bands.

B & W 75 WATT 2A "BAND HOPPERS" Uses same coil design as B & W Juniors. Unusually compact panel controlled unit. It may be used for interstage coupling between two beam power tubes or between beam power tubes and triodes.

Stock No. 3121 .... **Amateur Net $5.76**

B & W 75-WATT TURRETS—provide a means for link coupling single ended or push-pull low power stages. Complete assembly is mounted on a positive action switch arranged for panel mounting through a single ⅜″ hole. Turrets may be used with tubes operating at voltages up to 850.

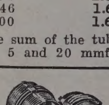
Stock No. 3810—Type JTCL—Center linked, center tapped coils. **Amateur Net $11.25**

Stock No. 3811—Type JTEL—End linked, untapped coils. **$11.25**

B & W 150-WATT TURRETS—Supplied in both center and end link models for both single- and double-ended circuits. Operation is by a positive action switch arranged for panel mounting through a single ⅜″ hole. Turrets may be used with tubes operating at voltages up to 1000 volts.

Stock No. 3812—Type BCL—Center linked, center tapped coils. **Amateur Net $14.01**

Stock No. 3813—Type BEL—End linked, untapped coils. **$14.01**



3400 SERIES INDUCTORS

FOR POWERS UP TO 500 WATTS

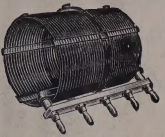
Give the utmost in sturdy construction and electrical flexibility. Same as those supplied by B & W to the armed forces during the war. Each coil has an individual internal center coupling, adjustable over 360°—permitting precise impedance matching up to 600 ohms, thus providing flexibility far in excess of any installation requirements.

SPECIFICATIONS

Band	Stock No.	*Cap. to Res. L.F. End of Band mmfd.	Net Price
10	3401	24	$9.00
15	3402	25	9.00
20	3403	30	9.00
40	3404	30	9.00
80	3405	50	9.00
160	3406	100	9.00
Stock No. 3321 Steatite Jack Bar Assembly			1.25

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

B&W COMPONENTS for amateurs and experimenters
BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.


TYPE HD1
(Fixed Link)

- MINIMUM DIELECTRIC IN THE FIELD OF THE COIL
- EXTREMELY LOW LOSSES
- RUGGED CONSTRUCTION
- EXCELLENT APPEARANCE
- LOW COST

Each AIR INDUCTOR is a **completely** finished unit. All coils are equipped with banana type plugs . . . Type "B" is for use in oscillator and buffer—doubler stages developing up to 100 Watts power. Type "T" is especially suited for high powered neutralized buffer and final tank stages where powers of 500 Watts are developed. Type "HD" is for maximum power — handles a Kilowatt with ease.

SPECIFICATIONS

Band	Stock No.	Type	Net Price
TYPE B			
MODELS WITHOUT LINK—CENTER TAPPED			
6	3200	6B	$1.65
10	3201	10B	1.65
15	3202	15B	1.74
20	3203	20B	1.74
40	3204	40B	2.16
80	3205	80B	2.58
160	3206	160B	2.88
END LINK MODELS—WITHOUT TAP			
6	3207	6BEL	2.91
10	3208	10BEL	2.91
15	3209	15BEL	2.97
20	3210	20BEL	2.97
40	3211	40BEL	3.39
80	3212	80BEL	3.81
160	3213	160BEL	4.11
CENTER LINK MODELS—CENTER TAPPED			
6	3214	6BCL	2.91
10	3215	10BCL	2.91
15	3216	15BCL	2.97
20	3217	20BCL	2.97
40	3218	40BCL	3.39
80	3219	80BCL	3.81
160	3220	160BCL	4.11
VARIABLE LINK MODELS—CENTER TAPPED			
6	3221	6BVL	2.31
10	3222	10BVL	2.31
15	3223	15BVL	2.40
20	3224	20BVL	2.40
40	3225	40BVL	2.73
80	3226	80BVL	3.12
160	3227	160BVL	3.45

Stock No. 3228—Steatite Jack Bar Assembly for end or center link type B Inductors, old Type A56.
Stock No. 3266—Jack Bar and Swinging Link for BVL Inductors.

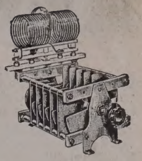
Band	Stock No.	Type	Net Price
TYPE T			
10	3301	10T	1.80
15	3302	15T	1.92
20	3303	20T	1.92
40	3304	40T	2.31
80	3305	80T	2.73
160	3306	160T	3.06
CENTER LINKED MODELS—CENTER TAPPED			
10	3308	10TCL	$3.45
15	3309	15TCL	3.57
20	3310	20TCL	3.57
40	3311	40TCL	3.96
80	3312	80TCL	4.38
160	3313	160TCL	4.71
VARIABLE LINKED—CENTER TAPPED			
10	3315	10TVL	2.64
15	3316	15TVL	2.73
20	3317	20TVL	2.73
40	3318	40TVL	3.12
80	3319	80TVL	3.57
160	3320	160TVL	3.72

Stock No. 3321—Steatite Jack Bar Assembly for end or center link Type T Inductors, old Type A54.
Stock No. 3366—Base Assy. and Swinging Link for TVL Inductors.

Band	Stock No.	Type	Net Price
TYPE HD			
MODELS WITHOUT LINK—CENTER TAPPED			
10	3701	10HD	3.72
15	3702	15HD	4.50
20	3703	20HD	4.50
40	3704	40HD	4.95
80	3705	80HD	5.76
160	3706	160HD	7.02
CENTER LINKED MODELS—CENTER TAPPED			
10	3708	10HDCL	7.02
15	3709	15HDCL	7.83
20	3710	20HDCL	7.83
40	3711	40HDCL	8.25
80	3712	80HDCL	9.06
160	3713	160HDCL	10.32
VARIABLE LINKED MODELS—CENTER TAPPED			
10	3715	10HDVL	5.37
15	3716	15HDVL	6.21
20	3717	20HDVL	6.21
40	3718	40HDVL	6.60
80	3719	80HDVL	7.41
160	3720	160HDVL	8.67

Stock No. 3721—Jack Bar Assembly for HD and HDCL Inductors.
Stock No. 3766—Base Assembly and SL for HDVL Inductors.

TYPE CX CONDENSER



Superior design! Only half the length of conventional units. Perfect electrical and mechanical symmetry. Designed for built-in neutralization. Integral mounting of B & W coils reduces lead lengths and resulting lead inductance to an absolute minimum.

Stock No. 3767—Type HD Jack Bar and SL assembly mounted on any type of condenser.
Stock No. 3721-1—Type HD or HDL Jack Bar mounted on condenser.
Stock No. 3567—Type TVH Jack Bar and SL mounted on condenser.
Stock No. 3930-1—Single Vacuum Condenser mount.
Stock No. 3930-2—Twin Vacuum Condenser mount.

NEUTRALIZING PLATES AVAILABLE IN FOUR TYPES, DESIGNATED N1, N2, N3, and N4.

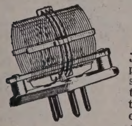
N1—will neutralize the HY114, HK24, RK31, HK54, TW75, and similar tubes.
N2—will neutralize the 75T, 35T, 808, RK35, 852, and similar tubes.
N3—will neutralize the 801, T-TZ20, T-TZ40, RK18, HK154, 811, 812, T55, 100TH, 250TH, 806, 810, and similar tubes.
N4—will neutralize the 833, T200, 805, GL152, 838, 203A, RK52, and similar tubes

Type	Capacity Per Section Max.	Capacity Per Section Min.	Capacity Sections in Series Max.	Capacity Sections in Series Min.	Net Price
"A" TYPE—.500" AIRGAP					
CX11A	11	8	8	6	$15.03
CX20A	20	11	13	8	18.39
CX30A	30	14	18	10	21.12
CX40A	40	18	23	12	23.76
CX49A	49	21	28	14	27.36
CX59A	59	24	33	16	29.13
CX68A	68	27	38	18	31.80
CX77A	77	30	43	20	34.53
CX87A	87	34	48	22	37.17
CX96A	96	37	53	24	39.84
CX105A	105	40	58	26	42.57
CX115A	115	43	62	29	45.21
CX124A	124	46	68	30	47.94
"B" TYPE—.375" AIRGAP					
CX11B	11	8	9	6	14.61
CX22B	22	11	15	8	17.88
CX34B	34	14	21	10	20.61
CX45B	45	17	28	12	23.22
CX58B	58	20	33	13	25.80
CX70B	70	23	38	15	28.47
CX82B	82	26	45	17	30.96
CX94B	94	29	50	19	33.69
CX106B	106	32	56	20	36.21
CX118B	118	36	62	22	38.79
CX130B	130	39	68	24	41.52
CX141B	141	42	74	26	44.10
CX153B	153	45	80	27	46.68
"C" TYPE—.250" AIRGAP					
CX13C	13	8	10	6	14.25
CX30C	30	11	18	8	17.46
CX45C	45	13	26	9	20.07
CX62C	62	16	34	11	22.56
CX78C	78	19	42	12	25.17
CX95C	95	22	50	14	27.75
CX111C	111	25	59	15	30.18
CX127C	127	28	67	17	32.79
CX143C	143	31	75	18	35.31
CX159C	159	33	83	20	37.74
CX175C	175	36	91	21	40.47
CX192C	192	39	100	23	42.99
CX208C	208	42	110	24	45.42

Standard plate thickness in all models, 1/16". • Available on special order, 3/32" plates at 10% additional. • Special features. • Explanation: The type of each condenser designates its capacity and plate spacing as follows: CX100 indicates 100 mmfd. per section. • Letters A, B, C, or D denotes plate spacing: A—.500", B—.375", C—.250", D—.187". Following N# denotes Neutralizing plates.

"BABY" AIR INDUCTORS

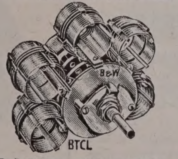
(25 WATT RATING)



Just the thing for crowded layouts, portables, field transmitters! The smallest, most efficient, most practical 25-Watt coils ever available to amateurs. "BABIES" measure only 1½" x 1¼", are made by a special B&W process which insures perfect air-spacing, maximum strength, fine appearance and ultra-high efficiency with an absolute minimum of insulating material. Available in five types, from 10 to 160 meters. **Conservatively** rated. Universal 5-prong Alsimag 196 bases ....**Net Any Type $1.26**

Straight Coil	Center Tapped	End Linked	Center Linked	Inductance	*Capacity
160M	MC	MEL	MCL	...	100
80M	MC	MEL	MCL	40	50
40M	MC	MEL	MCL	14	35
20M	MC	MEL	MCL	3.5	35
15M	MC	MEL	MCL	2.7	35
10M	MC	MEL	MCL	1.1	30

*Total effective capacity required to effect resonance on low frequency end of specified band.

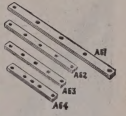


"BABY" TURRETS

35-WATT RATING

These compact 5-band switching units cover amateur bands from 10 to 80 meters. They may be tuned in all types of service with any of the 50 mmfd. midget condensers. Their sturdy construction and unique design assure permanent coil alignment and maximum efficiency with a minimum number of tubes. Four types—BTM, straight untapped BTCT, center tapped; BTEL, end linked and BTCL, center linked—provide vastly improved band-switching efficiency in low-power transmitters and exciter stages.
Net Any Type $10.14

B & W PLUG AND JACK BARS



Made of high quality steatite. Ample size to insure excellent strength. They provide experimenter with the same units that are used in B & W inductors. Can also be used as spreaders for feeders and other parts of the antenna system.

SPECIFICATIONS

Stock No.	Type	Length	Width	Thickness	Mounting Dimension	Used on Series	Net Price
3914	Plug	3½"	½"	⅜"		B	$0.20
3915	Jack	4½"	⅝"	⅜"	4⅛"	B	.60
3916	Plug	5½"	½"	⅜"		T	.30
3917	Jack	7"	¾"	⅜"	6½"	T	1.00
3918	Plug	6½"	9/16"	⅜"		TVH	.60
3919	Jack	8¼"	11/16"	⅜"	7¾"	TVH	1.10
3920	Plug	8¼"	¾"	⅜"		HD	1.10
3921	Jack	10¾"	1"	½"	9⅝"	HD	1.25

PRICE INDICATIONS ARE REVISIONS MADE NOVEMBER 15, 1950

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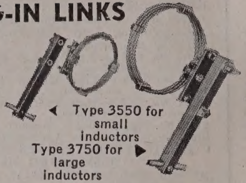
B & W NEW PLUG-IN LINKS

FOR IMPEDANCE MATCHING

Adaptable to all B & W Swinging Link assemblies, these B & W plug-in links solve the quick change problem. Just pull out one coil and plug in another with the required number of turns. Old link arm easily replaced with new plug-in type.


◀ Type 3550 for small inductors
Type 3750 for large inductors ▶

ORDERING NUMBERS FOR B & W PLUG-IN LINKS

For Types TVH, TVL, BVL Swinging Link Assemblies	Ordering No.	Price	For Type HDV Swinging Link Assemblies	Ordering No.	Price
Arm Only	3550	$ .70	Arm Only	3750	$1.40
Arm and Hinge	3565	1.00	Arm and Hinge	3765	1.80

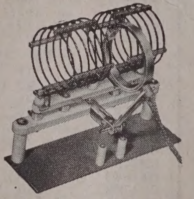
PLUG-IN LINK COILS

	Ordering No.	Price		Ordering No.	Price
1 turn	3551	$ .60	1 turn	3751	$1.25
3 turns	3553	.60	3 turns	3753	1.25
6 turns	3556	.60	6 turns	3756	1.25
10 turns	3560	.95	10 turns	3760	1.75

Above are standard. Other turns available on request.

B & W FARADAY SHIELDED LINKS

. . . fit all B & W variable link air inductors



These shielded links effectively reduce harmonic or spurious signal radiations normally transferred by capacity coupling.

Adaptable to all conventional link coupled circuits, the B & W Faraday Shielded Links materially aid in the reduction of TV and BC interference. They may be used with external antenna tuning units or, in conjunction with harmonic reduction filters of the low-pass or band-pass types.

It is impossible to specify the exact number of link turns required because loading is affected greatly by the antenna input impedance and this is not generally known with any degree of accuracy.

On 10 and 20 meters, a one turn link is normally satisfactory for 50 ohm lines, two turns for 75 ohm lines and three turns for lines having higher impedances. For average conditions our two turn link should suffice.

Cat. No.	No. Turns	Wattage	Price
FOR B & W TVL, TVH, AND BVL SERIES COILS			
3581	1 turn	500 watts	5.10
3582	2 turns	500 watts	5.10
3583	3 turns	500 watts	5.10
3588	Link arm assembly		2.40
3589	Link arm and hinge		2.70
FOR B & W HDVL SERIES COILS			
3781	1 turn	1000 watts	5.40
3782	2 turns	1000 watts	5.40
3783	3 turns	1000 watts	5.40
3788	Link arm assembly		2.70
3789	Link arm and hinge		3.00

B & W COIL MATERIALS

Stock lengths for cutting to size

Often an amateur or experimenter wants to make a special coil or to assemble his own coils. For such purposes, we offer three popular coil types in standard lengths. These can readily be cut to any desired length and mounted to meet your individual requirements.

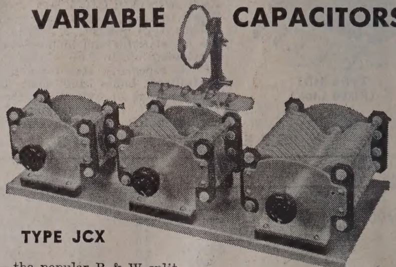
Stock No. 3905 — Standard Inductor, 2½" diameter, 6 turns per inch, 10 inches long, wound with #12 enameled wire.
Net Price $1.50

Stock No. 3906 — Standard Inductor, 2½" diameter, 8 turns per inch, 10 inches long, wound with #14 enameled wire.
Net Price $1.50

Stock No. 3907 — Standard Inductor, 2" diameter, 10 turns per inch, 10" long, wound with #16 enameled wire.
Net Price $1.50

These same coil types are also available wound with tinned wire.

B & W NEW, SMALL BUTTERFLY VARIABLE CAPACITORS



TYPE JCX

Now — the popular B & W split stator, butterfly type of variable condenser construction has been adapted to small, compact units for general ham and other uses!

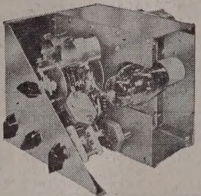
Having just 25% of the frontal area of CX types, these new B & W JCX Variable Capacitors are ideal for medium powered triode or tetrode stage plate circuit applications.

Featuring stainless steel shafts, heavy rounded aluminum plates and high quality insulating materials, the B & W Midget Butterfly will be a welcome addition for the amateur who is looking for peak efficiency in low and medium power transmitter stages.

"E" TYPE .125" AIRGAP

Type	Catalog Stock No.	Capacity Section in Series Max.	Capacity Section in Series Min.	Capacity Per Section Max.	Capacity Per Section Min.	Mounting Length	Net Price
JCX100E	100	80	15	99	23	5½	$10.80
JCX50E	101	25	10	42	13	3⅜	8.10
JCX25E	102	16	8	25	10	2¾	6.60

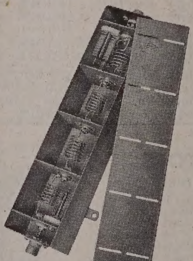
B & W FREQUENCY MULTIPLIER



Price: $85.00 Amateur Net. Complete with tubes. Dimensions: 6½" x 7" x 9¾".

This B & W all-band frequency multiplier solves the difficult problem of developing frequency step-up stages. Packaged unit covers 80-40-20-15-11 and 10 meter bands. Just flip a switch on the attractive reverse etched aluminum panel plate, to get the required band. Operates on either VFO or Crystal input and not less than 25 watt output.

B & W TVI LOW-PASS FILTERS



- **Provide extreme attenuation to all harmonics above 30 mc**
- **Eliminate individual filters for each band**
- **Handle 1 kilowatt with ease**
- **Insertion loss less than .25 db**

Three years of intensive study of TVI problems made possible the B & W Faraday Shielded Link. Its natural companion, the **B & W Low Pass Filter**, was developed concurrently and is now available. Properly installed in accordance with our recommendations, this filter enables you to attenuate all frequencies above 50 megacycles, approximately 75 db or more, throughout the entire television band.

The B & W Low Pass Filter consists of two "m" derived end sections and three mid-sections of constant K type. Each section is contained in a completely sealed copper compartment to prevent inductive transfer of unwanted frequencies from section to section. Complete installation instructions and recommendations to aid you in eliminating TVI are given in "Filter-Facts," packed in each unit. Individual copies of "Filter-Facts" are also available for 15 cents. Filters are supplied in hammered gray metal cabinets 2½" x 2½" x 12" and weigh 2¼ lbs.

The proper filter for the more common types of feed line systems are:

For single 52-ohm coax .... **Net Price $27.00**
Model 52, B & W Cat. No. 415

For single 75-ohm coax .... **Net Price $27.00**
Model 75, B & W Cat. No. 416

PRICE INDICATIONS ARE REVISIONS MADE NOVEMBER 15, 1950

B&W TEST EQUIPMENT and SPECIAL COMPONENTS

BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

B&W DISTORTION METER

Model 400

Net Price: $168.00.
Dimensions: 13¾" x 7¼" x 9½".

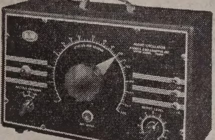
A sensitive instrument having a wide range of applications in the audio frequency measurements field. Ideal for measuring low level audio voltage and determining noise and harmonic content of same. Variable frequency selective filter provides a single frequency suppression circuit for the frequency range of 30 to 15,000 cycles. Small size, light weight and outstanding performance make this instrument an ideal unit for either laboratory or field work.

FEATURES

1. **Frequency Range:**
   (a) Distortion meter. For fundamentals from 30 to 15,000 cycles, measuring harmonics up to 45,000 cycles.
   (b) As voltmeter and D.B. meter from 30 to 45,000 cycles.
2. **Sensitivity:**
   (a) Noise and distortion measurements, minimum input .3 volts.
   (b) Voltmeter, full scale readings of .3, .1, .03, .01, .003 volts.
3. **Calibration:**
   For distortion measurements: ±.5 D.B. For voltage measurements: ±5% of full scale at 1000 cycles.

B&W AUDIO OSCILLATOR

Model 200



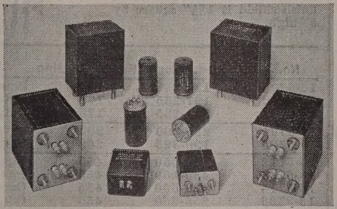
Net Price: $138.00.
Dimensions: 13¾" x 7¼" x 9½".

Ideal for use in distortion measurements, frequency measurements or in any application where a stable, accurately calibrated source of frequencies between 30 and 30,000 cycles is required. No zero reset or line calibration is required. Self-contained power supply. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet. Panel is of 1/16" reverse etched aluminum.

FEATURES

Voltage Output: 10 volts into a 500 ohm load.
Wave Form: RMS harmonics at 3 volts on 500 ohm load less than 1% on all frequencies between 50 and 15,000 cycles.
Frequency Response: Better than ±1 D.B. from 30 to 15,000 cycles with 500 ohm load.
Stability: Better than 1%.
Calibration: ±3% of scale reading.

B & W FILTERS — DISCRIMINATORS SPECIAL COMPONENTS



B & W toroidal type filters — high-pass, low-pass, band-pass, band-suppression and discriminators for RF or audio filtering . . . for line RF suppression . . . for harmonic attenuation . . . for teletype communications . . . for single side band equipment . . . for telemetering equipment, and many other uses. Manufactured to fulfill special requirements in both design and performance.

These units also supplied to meet Mil-T-27 specifications in Class A, Grade 1, where temperature and humidity are important factors.

B&W FREQUENCY METER

Model 300

Net Price: $126.00.
Dimensions: 13¾" x 7¼" x 9½".

An accurate and convenient means of making direct measurements of unknown audio frequencies up to 30,000 cycles. Integral power supply. Extremely useful for routine checking of audio oscillators or tone generators. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet.

FEATURES

Frequency Range: 0 to 30,000 cycles in 6 ranges.
Sensitivity: Minimum .25 volts input.
Wave Form: Will operate on any wave form with peak ratios of less than 8 to 1.
Calibration: When referenced against 60 cycles line frequency, all other frequencies will fall within 5%.

B & W LINEAR DETECTOR

Model 404 — Net Price $85.00
Dimensions: 8¾" x 7½" x 5"

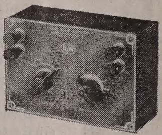
Provides combined RF detection and audio bridging circuits for use with any distortion meter, to measure distortion or noise in AM carriers or in balanced and unbalanced audio circuits. Includes a bridging transformer, a vacuum tube rectifier, a 40 D.B. pad adjustable in 10 D.B. steps, and a function selector switch.

FEATURES

RF Operating Range: 400 kc. to 30 mc.
Input: Single-ended; impedance 10,000 ohms.
Bridging Impedance: 6000 ohms; insertion loss 1 D.B.
Frequency: Essentially flat from 20 to 50,000 CPS.

B & W SINE WAVE CLIPPER

Model 250



Equipped with a pair of input terminals, a pair of output terminals, an output volume control and a selector switch.

Net Price: $10.00.
Dimensions: 2" x 4" x 5½".

SPEEDS ACCURATE ANALYSIS OF AUDIO CIRCUITS. SIMPLIFIES SELECTIONS OF COMPONENTS. SAVES VALUABLE TIME. Here's an instrument that will do most of the jobs usually assigned to a square wave generator costing about 10 times as much! The B & W Sine Wave Clipper provides a test signal particularly useful in examining the transient and frequency response of audio circuits. Designed to be driven by an audio oscillator, the clipper provides a clipped sine wave — hence the name "Sine Wave Clipper." Used in engineering work, repairs, or with equipment under development, it will quickly pay for itself many times over.

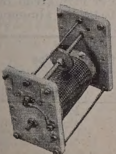
B & W TOROIDS

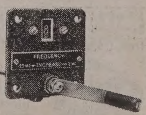
B & W toroidal* coils are available in frequency ranges from 1000 cycles to 200 KC, with inductance and Q value to your specific application requirements. Sizes for these toroids range from ⅞" to 3" diameter.

These coils have a specific application in low and medium frequency ranges and provide a high degree of stability vs. voltage and temperature. Available in either open, cased, potted or hermetically sealed types, wound on cores having any desired properties, including the latest high permeability cores. Where required, they may be designed to compensate for conditions of extreme temperature variations.

*Western Electric license

B & W ROTARY COILS AND CYCLOMETERS



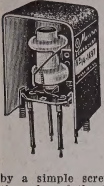


The B & W Rotary Coil offers a practical method of continuously varying circuit inductance over the entire range of the coil. Types are available for powers up to 1000 watts. B & W Cyclometer type counters for rotating and resetting these and other rotary units assure close accuracy. Write for details to Barker & Williamson, Inc., Upper Darby, Pa.

PRICE INDICATIONS ARE REVISIONS MADE NOVEMBER 15, 1950

Net

UNIVERSAL ADJUSTABLE COILS



These Adjustable - Inductance Ferrocart (iron-core) coils will replace the Broadcast band coils in practically any receiver. It is no longer necessary to order hard-to-get "exact duplicates" when an Antenna, R.F. or Oscillator coil requires replacement.

Continuously variable in inductance over a wide range, these coils will accurately "track" with the other coils in the receiver when properly adjusted. The exact inductance of the old coil is easily matched by a simple screwdriver adjustment, regardless of the value of the tuning condenser.

High "Q" iron cores used in these coils add gain and selectivity to the receiver. The oscillator coil provides complete adjustment for intermediate frequencies between 175 and 520 kc. May be used in either "cut-plate" tuning condenser or padded circuits. Available shielded or unshielded, furnished with complete instructions. 1¾" square by 2½" high.

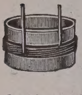
UNSHIELDED

No.	Description	List
14-1026	Universal Ant. Coil	$2.11
14-1027	Universal R.F. Coil	2.11
14-1028	Universal Osc. Coil	2.11

SHIELDED

No.	Description	List
14-7413	Universal Ant. Coil	$3.38
14-7558	Universal R.F. Coil	3.38
14-7560	Universal Osc. Coil	3.38

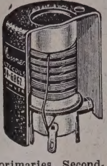
SLIP-OVER PRIMARIES



Designed to provide economical replacement of burned out primaries on all types of Antenna and R.F. coils. All windings are high-impedance type for improved performance. Sizes given below are outside diameter of coil over which the replacement winding will fit. Complete instructions for repair and replacement given.

No.	Size	List
14-6850	For 1¼" O.D. Coil	$0.48
14-6852	For 1" O.D. Coil	.42
14-6854	For ⅞" O.D. Coil	.42
14-6856	For ¾" O.D. Coil	.42
14-8418	For ½" O.D. Coil	.37

STANDARD ANTENNA R. F. COILS



Standard type air-core coils of superior construction, designed to cover the Broadcast band from 545 to 1620 kc with a 365-mmfd. tuning condenser. These coils make excellent replacement units and are used as original parts by discriminating set-builders and experimenters in the design and construction of Broadcast receivers.

All coils have high-impedance primaries. Secondaries are wound with Litz wire. Fully protected against humidity. Shielded coils are in non-magnetic cans, 1⅞" diameter by 2½" high.

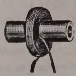
UNSHIELDED

No.	Type	List
14-1010	Standard Antenna Coil	$1.14
14-1011	Standard R.F. Coil	1.14

SHIELDED

No.	Type	List
14-1004	Standard Antenna Coil	$1.51
14-1005	Standard R. F. Coil	1.51

DOWEL TYPE PRIMARY



Popular replacement for burned out primaries in high impedance antenna coils. Universal wound on ¼" dia. by ½" long dowels moisture protected. Inductance 1700 uh.

No. 14-6865 List Price...... .48

FM-AM "COMPOSITE" I.F. TRANSFORMER

Contains a 455 kc. AM and a 10.7 mc. FM I.F. transformer. Can size: 1⅜" square x 2½" long. Spade bolt mounting.

16-6675 10.7 mc.-455 kc. I.F. Trans., List.................... $4.83

STANDARD OSCILLATOR COILS

QUALITY
No 14-
MADE

High-quality Broadcast band oscillator coils designed for use with any of the Antenna and R. F. coils listed above, using a 365-mmfd. tuning condenser. Frequency coverage is 545 to 1580 kc; units are provided for all popular intermediate frequencies.

Coils are mounted on bakelite base with tinned soldering lugs for connections. Unshielded coils have single-hole stud mounting. All coils are thoroughly impregnated to resist severe climatic conditions. Shielded coils are in cans. 1½" diameter by 1¾" high, black crackle finish.

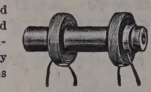
UNSHIELDED

No.	I.F. Freq.	Padder Required	List
14-3732	175 kc	900 mmf	$1.27
14-6590	262 kc	700 mmf	1.27
14-6592	370 kc	350 mmf	1.27
14-4034	456 kc	350 mmf	1.27

SHIELDED

No.	I.F. Freq.	Padder Required	List
14-4242	175 kc	900 mmf	$1.63
14-4243	456 kc	350 mmf	1.63
14-1033 Special Unshielded Osc. for 6SA7;	456 kc	350 mmf	$1.03

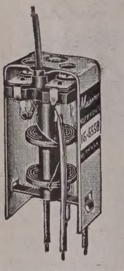
REPLACEMENT I. F. WINDINGS



Coils are wound on wood dowels, ⅜" diameter and 1¾" long; coupling is adjustable by sliding primary coil. Complete instructions furnished with each coil.

No.	Freq.	Type	List
16-6600	175	Standard	$1.03
16-6601	455	Standard	1.03
16-6602	175	Center-tap	1.33
16-6603	455	Center-tap	1.33

"PLASTIC" I. F. TRANSFORMERS



Particularly suitable for use in small receivers, where space is at a premium and yet superior performance is required, these remarkable transformers are only 1¼" square and 2½" high! Made in a complete series of frequency ranges and positions, they will provide results second to none in any type of receiver.

The one-piece molded plastic coil-form and trimmer-base eliminates many separate parts that were required with other types of construction. The assembly is, therefore, simpler and more rigid. The iron core series are highly rcommended for use in compact receivers and auto sets where only one I-F stage is permitted. It is not recommended that they be used in a two-stage system because of their high-gain which would cause instability and oscillation.

No.	Freq. Range	Peak Factory Setting	Selectivity Band Width 2x	10x	Use
16-6649	140-200	175	6.0	17.5	Input
16-6650	140-200	175	5.7	15.0	Interstage
16-6651	140-200	175	11.2	29.5	Output
16-6652	200-310	262	9.5	24.7	Input
16-6653	200-310	262	10.4	27.5	Interstage
16-6654	200-310	262	20.5	52.1	Output
16-6655	305-480	370	8.4	24.4	Input
16-6656	305-480	370	11.3	30.0	Interstage
16-6657	305-480	370	18.8	47.7	Output
16-6658	400-550	455	18.8	46.6	Input
16-6659	400-550	455	12.5	33.0	Interstage
16-6660	400-550	455	17.5	50.5	Output

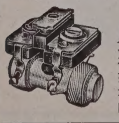
Air-Core "PLASTIC" I-F Transformers, List Price Each $1.69

IRON-CORE "PLASTIC" I-F's

16-6662	380-600	455	80	11.2	30.0	Input
16-6663	380-600	455	85	15.0	41.0	Output

Iron-Core "PLASTIC" I-F Transformers, List Price Each $2.54

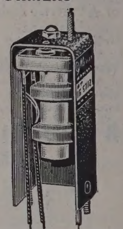
CARTWHEEL I. F. TRANSFORMER



A brand new, ultra-compact, unshielded I-F Transformer, complete with dual trimmers; finds useful application in many types of compact AC-DC or Midget type receivers. Only 1⅜" by 1$\frac{1}{32}$" by 1¼" high; one-piece molded plastic trimmer base; for 456-kc only.

No. 16-6661 List Price $1.69

STANDARD I. F. TRANSFORMERS



The Meissner series of Air-Core I. F. Transformers has been accepted as "standard" for general replacement purposes. Gain characteristics have been designed to correspond closely with average values found in the majority of commercial receivers. All transformers are double-tuned with ceramic-base, mica-dielectric trimmers. Windings are fully impregnated. Well-insulated RMA color-coded lead wires. Bright aluminum finish shield is 1⅜" square by 3" high.

No.	Freq. Range	Peak Factory Setting	Use
16-5700	121-235	175	Input
16-5702	121-235	175	Output
16-3731	121-235	175	Output C. T.
16-5704	220-360	262	Input
16-5706	190-325	262	Output
16-5712	425-650	455	Input
16-6133	435-1000	455	Interstage
16-5714	425-650	455	Output
16-3736	255-550	455	Output C. T.

List Price Each $2.54

FERROCART I. F. TRANSFORMERS

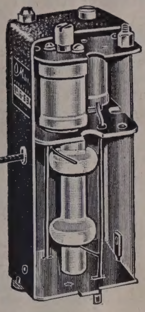
Designed primarily as original parts in high-gain receivers of superior quality, these transformers find consistent application in stepping up the performance of old receivers. The special powdered-iron core used in the coils permits higher "Q" with resultant increase in selectivity and gain. All units are double-tuned with ceramic-base, mica-dielectric trimmers. Windings are of high-grade Litz wire, thoroughly impregnated. Shield is bright aluminum finish, 1⅜" square by 3" high.

No.	Freq. Range	Peak Factory Setting	Use
16-5728	127-206	175	Input
16-5730	127-206	175	Output
16-5740	360-600	455	Input
16-5742	360-600	455	Output
16-8091	1050-2000	1500	Input-Interstage
16-8099	1050-2000	1500	Output

List Price Each $3.38

Meissner PRECISION-BUILT PRODUCTS

"ALIGN-AIRE" I-F TRANSFORMERS

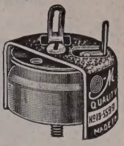


The result of years of engineering experience in designing high grade transformers for the finest commercial receivers! The exacting requirements of modern high-fidelity and communications type receivers demand units that can be depended upon under any and all conditions. They must be absolutely stable under temperature and humidity variation and unaffected by vibration. These requirements are all met by the "Align-Aire" I-F Transformer. Provides 3600 degrees of micrometer smooth trimmer adjustment instead of the usual 180 degree rotation! Accurate trimming can thus be readily accomplished. Available with special "Iron-core" design for maximum gain and selectivity. Double-tuned and offered in a complete range of frequencies for any application. Shield cans are black crackle finish, 2"x2"x4¾".

No.	Frequency Range (kc)	Peak Factory Setting	Gain Factory Setting	Selectivity Band Width 2X	10X	20X	Use
16-6643	415-540	456	77	7.0	16.0	22.0	Input
16-6123	415-540	456	29	7.0	18.0	24.4	Interstage
16-6645	415-540	456	105	9.0	25.6	36.2	Output
16-6139	415-540	456	100	9.5	23.2	33.5	Output C.T.

LIST PRICE, EACH $8.39

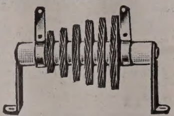
AIR-CORE R-F CHOKES



Accurately wound and individually tested; coils wound on specially treated forms, mounted on bakelite terminal base and thoroughly moisture proofed. Available in shields or without; both single - hole mounting. Shielded chokes have terminals thru top of can so unit may be mounted on inside wall of chassis. Shields are bright aluminum finish, 1⅜" square.

MH Induct.	Shielded No.	Shielded List	Unshielded No.	Unshielded List
2.5	19-5582	$1.09	19-1994	$0.79
5.5	19-5584	1.09	19-4551	.79
8.0	19-5588	1.14	19-2078	.85
10.0	19-1900	1.27	19-8770	.90
16.0	19-5590	1.33	19-1995	1.03
30.0	19-5592	1.45	19-2330	1.09
60.0	19-5594	1.63	19-3247	1.27
80.0	19-5596	1.69	19-2709	1.33

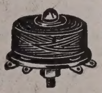
TRANSMITTER CHOKES



Highly efficient for Amateur and Commercial use; six lateral wound sections provide effective action over wide frequency range. Windings on ceramic form with tapped ends; mounting brackets included.

Cat. No.	Induct.	Current	Ohms	List
19-3019	2.8 MH	1000 MA	5.0	$3.38
19-3022	5.5 MH	500 MA	12.5	2.96
19-3025	5.9 MH	200 MA	34.9	2.96

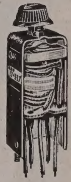
IRON-CORE R-F CHOKES



Universal-wound on special powdered-iron cores, these chokes provide maximum efficiency—lower DC resistance per MH. Coils are wax-impregnated; laminated bakelite terminal base; single-hole mounting; without shielding.

No.	MH	List	No.	MH	List
19-6834	2.5	$1.14	19-6844	60.8	$1.93
19-6840	10.0	1.45	19-6846	80.0	2.17
19-6842	30.0	1.69	19-6848	125.0	2.78

PHONO-OSCILLATOR COIL



For use in building either wireless or direct-connected phonograph-oscillator units for record reproduction through the radio receiver. Knob adjustment permits selection of clear frequency in the broadcast band. Coil is in bright aluminum shield, 1⅜" square by 3½" high.

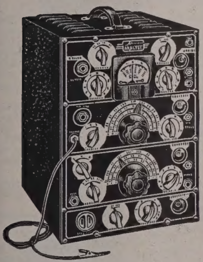
No. 17-9373 List $3.38

B. F. O. COIL

For use with standard I. F.'s in superhet receivers. They supply the "beat" note necessary to reception of C. W.; materially aid in tuning and locating weak stations. Mica trimmed. Freq. Range 290-650 KC. Peaked at 456 KC. In 1⅜" sq. x 3½" h. can with knob for pitch control.

No. 17-6753 List Price $2.96

MEISSNER "ANALYST"



THE MODERN SERVICE INSTRUMENT—Undoubtedly the most modern complete servicing instrument on the present day market. Handles the receivers of yesterday, today and tomorrow — with equal efficiency and facility! Entirely fundamental in its testing procedure. Will never become obsolete. **SAVES TIME — SAVES MONEY**—The use of the new Meissner ANALYST will not only permit you to make more money by handling a greater number of service jobs in a given time but it will give you additional assurance that these jobs will "stay sold." **SERVICES BY "SIGNAL TRACING"** — The Meissner ANALYST tests receivers and locates faults by the "Signal tracing" method —proven to be the fastest and most reliable method known at the present time. It is NOT, however, just another signal tracer! It is completely equipped with all devices that might be needed to make simultaneous checks on various parts of the receiver circuit. Five separate and distinct "channels" provide as many different functions; all controls are accurately calibrated with functions clearly indicated.

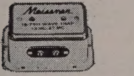
Complete—Ready to Go to Work

The Meissner ANALYST is completely wired, aligned and laboratory tested. Furnished complete with a full set of 12 tubes, it is all ready to be put into service the minute it is unpacked and connected to the 110-volt line! No alignment or adjustments are necessary—just read the instructions, hook it up and go to work!

Complete Book of Instructions, supplied with the new Meissner ANALYST, gives detailed directions for use of this instrument in locating all kinds of radio troubles.

No. 9-1040—New Meissner ANALYST, complete with tubes, prods, and Instruction Book; ready to operate. **Net Price**.................... $144.35

NEW MEISSNER WAVE-TRAPPERS

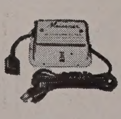


AVAILABLE IN 5 MODELS

6 to 13 mc, 13 to 27 mc, 27 to 54 mc, 54 to 108 mc, 108 to 216 mc. You can now attenuate interfering signals on fundamental or harmonic frequencies with these new, highly efficient tunable wave traps. Several may be connected in series if interference exists on more than one frequency. Efficient with any balanced or unbalanced line from 50 to 400 ohms impedance.

List Price $6.04

NEW MEISSNER LINE FILTERS

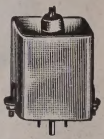


(Grounded & Shielded)

Reject interference from electric shavers, electric fans, food mixers, vacuum cleaners, etc. 300-watt rating.

List Price $7.85

F. M. COILS—I. F. TRANSFORMER



Permeability tuned; designed for use on newly assigned F. M. Frequencies. Mounted in 1-7/16" x ⅞" x 1-29/32" can. Tuned to 10.7 mc.

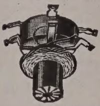
No. 16-6665 List Price $3.56

DISCRIMINATOR TRANSFORMER

Mounted in same size can as I.F. Transformer listed above. Permeability tuned to 10.7 mc.

No. 17-3484 List Price $4.71

"6SA7" OSCILLATOR COIL



Tapped type coil for currently popular 6SA7 tube. For use with 420 uufd. condenser and padder

14-1033 List $1.03

For use with 162 uufd. "cut" section condenser

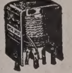
14-1053 List $1.03

"UNIVERSAL" ADJ. IND. OSCILLATOR COIL

A truly universal oscillator coil for 455 kc. I.F. Primary is tapped for use with any of 25 different type oscillator tubes. Instructions included.

14-1040 List $2.42

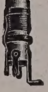
MIDGET SHIELDED ANT. AND R.F. COILS



A compact, super quality shielded antenna and R.F. coil. Provides full coverage of the broadcast band with a 365 tuning condenser. Special wound litz wire secondaries. High impedance primaries. Capacity coupling used to level gain over frequency range. Coil forms are bakelite ½" diameter; winding protected by wax impregnation. Shields are 1⅜" square x 2" high.

14-2436 Shielded Ant. Coil, List.......................... $1.51
14-2437 Shielded R.F. Coil, List.......................... $1.51

MIDGET UNSHIELDED B.C. ANT.—R.F. COILS

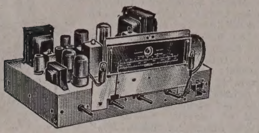


Highly efficient antenna and R.F. coils, especially designed for use where space is at a premium. Cover the regular broadcast band with a 365 uufd. tuning condenser. Coils have high impedance primaries and litz wire secondaries. Windings are impregnated for moisture protection and wound on ⅝" diameter x 1¾" long forms.

14-1022 Unshielded Ant. Coil, List.......................... $1.03
14-2023 Unshielded R.F. Coil, List.......................... $1.03

Meissner PRECISION-BUILT PRODUCTS

Meissner AM-FM TUNER MODEL 9-1091-C



High fidelity reception! Covers AM Broadcast Band from 527 to 1620, FM Band from 88 to 108 MC (channels 200 to 300). Frequency response is flat with plus or minus 2 db from 30 to 15,000 cycles! Input jack provided for crystal or high level magnetic type phonograph pickup. Extreme sensitivity and selectivity.

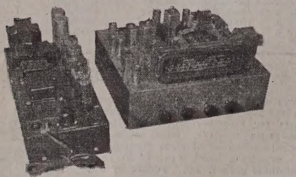
List Price $341.70

Meissner MODEL 8C FM RECEPTOR

Adds superb frequency modulation to any regular AM set. Precision built for simple connection to your present AM radio. Audio fidelity: Flat within plus or minus 2 db from 50 to 15,000 CPS. Frequency range. 88 to 108 MC. Power supply 115 volts AC.

List Price $91.15

MODEL 9-1093 AM-FM TUNER AND AMPLIFIER



A high-quality AM-FM tuner and amplifier that is hard to beat. Power output, 18 watts at less than 2% harmonic distortion. Audio fidelity flat within plus or minus 2 db from 50 to 15,000 CPS. Hum level 65 db below full output. Slide rule dial is calibrated in kilocycles (535 to 1620 KC) on the AM band and in megacycles (88 to 108 MC) on the FM band. Sensitivity less 20 microvolts.

A phonograph input jack controlled by a front switch is mounted in rear. The circuit is compensated for either magnetic or crystal pickup. The Tuner can also be used with the new GE Reluctance Pick-up because of a new phonograph preamplifier that has been incorporated in the circuit. Simply plug a 6SC7 in the socket provided. The 6SC7 is not supplied. A combination tone control provides bass boost up to 11 db at 40 CPS and treble attenuation up to 13 db at 10,000 CPS. Amplifier is designed for an 8 to 16-ohm speaker. Power supply: 105-125 volts, 50-60 cycles; consumption, 190 watts.

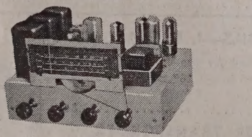
Tube Complement: 3-6SK7, 1-6SA7, 1-6H6, 5-6AG5, 1-6C4, 2-9001, 1-6AL5, 2-6J5, 1-6SN7-GT, 2-6L6 Power Amplifiers, 1 5Y3G Rectifier, 1-5V4G Rectifier and 1-6U5/6G5 Tuning Eye.

Chassis Mounting Space: Tuner — 14⅛″ w. x 12¼″ d. x 8⅜″ h. Amplifier — 7⅛″ w. x 16¼″ d. x 7″ h. (Allow clearance above amplifier for ventilation). Tuner weight is 18 lbs.; amplifier, 27 lbs.

Supplied complete with tubes, two antennas and all hardware required to mount chassis units in cabinet. Antennas consist of a low impedance, 12″ x 16″, noise reducing loop for AM broadcast and an indoor type folded dipole, 300-ohm, for FM broadcast. Cabinet and speaker not included.

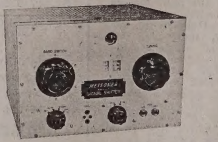
List Price $432.35

MODEL 6BK 3-BAND AC KIT



Frequency Range: 535 KC to 18 MC in 3 overlapping bands.
Sensitivity: 15 microvolts on all bands.
Audio Output: 3 watts maximum. 2 watts at 5% distortion.
Intermediate Frequency: 455 KC.
Tube Complement: 2-6SK7, 1-6SA7, 1-6SQ7, 1-6V6GT and 1-5Y3GT.
Size: Chassis size — 12″ x 10″ x 3″. Mounting space required — 12½″ w. x 7¼″ h. x 11½′ d.
Power Supply: 105 to 125 and 210 to 250 volts, 50 to 60 cycles. Power consumption, 55 watts.
Controls: Band switch, combination volume-line switch, continuous tone control and tuning control.
Dial: Slide rule, 5½″ x 1⅜″, calibrated in megacycles on all three bands. Dial edge lighted.
Speaker: Speaker not supplied with kit. Any good-quality PM type of speaker may be used which has an impedance of 3.2 ohms and the ability to handle the power of this set.
Assembly: Easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included.
Weight: 8½ lb. actual.
Net Price $44.30

New *Meissner* SIGNAL SHIFTER KIT



For the amateur with limited budget, the new MEISSNER Signal Shifter Kit is ideal, making it possible for him to save 50% by building it himself.

Everything is provided including tubes — even wire and solder! All coil strips are furnished, plus a blank for an additional band.

Directions for assembly are comprehensive and clear, supplemented with schematic diagram, a host of photos and pictographs, all large size and easy to read. Directions are so simple to follow that even the beginning ham will have no trouble.

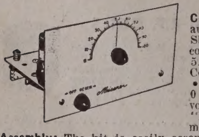
The only two difficult jobs are already completed. The complicated shielded turret assembly and the band spread gear mechanism come already built up — ready to install!

Only equipment needed is a pair of pliers, a screwdriver and a soldering iron.

No difficulty at all will be encountered to exactly duplicate the peak performance of the factory-built model.

Complete Meissner Signal Shifter Kit, Part No. 10-1207, Amateur Net $82 10

MODEL 2BK BATTERY TRAINER KIT



Circuit: Regenerative grid leak detector with resistance coupled pentode audio stage. • **Tube Complement:** 1-1T4 and 1-3V4. • **Tuning Range:** Shipped with coil to cover the broadcast range of 520 to 1530 KC. Other coils available to cover the following ranges: 175 to 540 KC, 1350 KC to 5.4 MC, 3.5 to 8 MC, 7.9 to 18.5 MC, and 15 to 34 MC. • **Controls:** Combination regenerative control battery switch and vernier tuning control. • **Dial:** 1½″ pointer swings through 180 degrees arc over scale graduated 0 to 100. • **Batteries Required:** Shipped less batteries. Requires 4½-volt "A" battery and 90-volt "B" battery. Battery drain: "A" 50 MA. "B" 5 MA. • **Headphones:** Shipped less phones. Uses any good-quality magnetic type phones having an impedance of 2,000 ohms or more. • **Assembly:** The kit is easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included. • **Size:** 7¾″ x 4¼″ tall x 4⅛″ deep. • **Weight:** 1½ lb. actual.

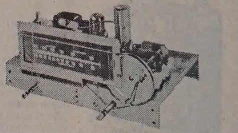
Net Price $10.65
Extra Coils: 170 to 540 KC and 540 to 1500 KC........ **List Price** 2.54
1.4 to 4.50 MC, 3.2 to 8.2 MC, 8 to 18 MC and 15 to 34 MC. **Weight each 1 oz.**.... **List Price** 1.03

MODEL 3BK AC-DC TRAINER KIT

Circuit: Regenerative grid leak detector with resistance coupled pentode audio stage and AC-DC type power supply. • **Tube Complement:** 1-6BJ6 and 2-50B5. • **Tuning Range:** Shipped with coil to cover the broadcast range of 520 to 1530 KC. Other coils available to cover the following ranges: 175 to 540 KC, 1350 KC to 5.4 MC, 3.5 to 8 MC, 7.9 to 18.5 MC and 15 to 34 MC. • **Controls:** Combination regenaration control-line switch and vernier tuning control. • **Dial:** 1½″ pointer swings through 180 degrees arc over scale graduated 0 to 100. • **Power Supply:** 105 to 125 volts, AC or DC. Power consumption, 18 watts. • **Headphones:** Shipped less phones. Uses any good-quality magnetic type phones having an impedance of 2,000 ohms or more. • **Assembly:** Easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included. • **Size:** 7¾″ x 4¼″ tall x 4½″ deep. • Weight: 1¾ lb. actual.

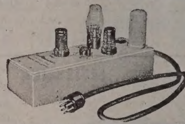
Net Price $12.25
Extra Coils: 170 to 540 KC and 540 to 1500 KC........ **List Price** 2.54
1.4 to 4.50 MC, 3.2 to 8.2 MC, 8 to 18 MC and 15 to 34 MC. **Weight each 1 oz.**.... **List Price** 1.03

MODEL 8CK RECEPTOR KIT



Frequency Range: New FM band, 88 to 108 MC.
Audio Fidelity: Flat within plus or minus 2 db from 50 to 15,000 CPS.
Sensitivity: 40 microvolts.
Audio Output: 3 volts R.M.S. at minimum usable signal input, 30 % modulation. For greater signal inputs, output voltages as high as 15 volts R.M.S. may be obtained without distortion.
Amplifier Requirements: Any high-quality audio power amplfier may be used which has high impedance input (100,000 ohms or greater) and which will produce full output with 3 volts R.M.S. audio input. The MEISSNER Model 4A and 4AK amplifiers are suitable for use with this **Model 8CK FM Receptor.**
Antenna Input Impedance: Standard 300-ohm balanced line.
Controls: Tuning control and combination volume control-line switch.
Tube Complement: 2 type 6AW6, 2 type 6BA6, 2 type 6C4, 1 type 6AL5 and 1 type 6X5GT/G.
Power Supply: 105 to 125 volts, 50 or 60 cycle AC. Consumption, 35 watts.
Dial: Sliderule, 5½″ x 1⅜″, calibrated in megacycles and in channel numbers. Edge lighted.
Assembly: Easily assembled from detailed pictorial diagram and simplified schematic. **Front end factory assembled and aligned.** Wire, hardware and solder included. IF Coils pre-aligned.
Weight: 4½ lb. actual.
Net Price $42.75

THE NEW FMX PHASE MODULATOR



The new MEISSNER FMX Phase Modulator is designed exclusively for use with the Model EX Signal Shifter. Combination of the two — the FMX Modulator and EX Signal Shifter — gives the radio amateur a complete low power phone and cw transmitter at a very low price. Higher power, up to one KW, can be obtained with a power amplifier driven by the Signal Shifter.

The deviation control of the FMX Phase Modulator allows a swing of 5 to 10 KC on all amateur frequencies including the 80-meter band. Input for high impedance crystal or dynamic mike is provided. Any class C amplifier that the Signal Shifter is capable of driving becomes a phase modulated amplifier.

The FMX Modulator is installed in the position normally occupied by the power supply, the latter becoming a remotely located unit.

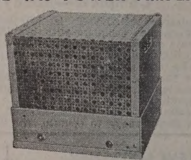
Plate and filament voltages for the FMX are secured from the Signal Shifter power supply.

Tubes required are 6SL7, 6SG7, and VR-150.

The FMX Phase Modulator is another precision-built product, designed by MEISSNER for the discriminating amateur who wants only the best.

Model FMX Phase Modulator, complete, less tubes, Amateur Net $19.00

MODEL 4AJ POWER AMPLIFIER



Fidelity: Flat within 2 db from 45 to 20,000 CPS.
Power Output: 20 watts with 1.5% harmonic distortion.
Power Input: 105-125 volts, 50-60 cycles only.
Power Consumption: 87 watts.
Hum and Noise: 150 db below full output.
Output Impedance: 4, 8, 15, 250 and 500 ohms. Unbalanced.
Controls: On-off power switch and pilot lamp on front skirt. All other connections made at rear. Volume control on rear skirt with screwdriver slot adjustment.
Input: High impedance (500,000 ohms) through standard RMA phono jack.
Input Requirements: 3 volts RMS for full output.
Tube Complement: 1-6SN7GT, 2-6L6G, 1-5Y3GT.
Size: 10″ x 8¾″ x 10″ deep.
Weight: 17 lb. actual.
Cover: Well ventilated protective cover.
Finish: Etched aluminum.
List Price $115.70

MODEL 4AK POWER AMPLIFIER KIT

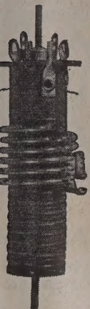
Easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included.

Net Price $42.10

STANWYCK COILS Mfrd. by STANWYCK WINDING CO.

TELEVISION - I.F. - ANT. - R.F. - F.M. - OSCILLATOR COILS

TELEVISION COILS



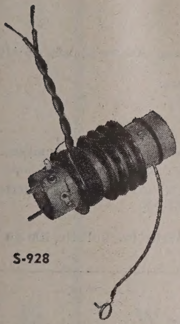
S-949

These components when used in a properly designed circuit can provide a gain of approximately 10,000 × in the picture I.F. amplifier with overall response as illustrated. The sound I.F. system can supply a gain of approximately 7,000 × from the converter grid to the grid of the last I.F. tube and a discriminator slope sensitivity of approximately 0.08 volts/kc. with 1.0 volt signal level at the last I.F. amplifier tube grid. The overall sound I.F. and discriminator response is linear over 150 mc.

TELEVISION REPLACEMENT COMPONENTS

R.C.A. REPLACEMENTS

R.C.A. PART No.	STANWYCK PART No.	DESCRIPTION	LIST PRICE
211-T1	S-948	9 K. V. Horizontal H.V. Output (Flyback)	$7.70
203-L1	S-943	Video Peaking Coil	.50
203-L2	S-944	Video Peaking Coil	.50
203-L3	S-945	Video Peaking Coil	.50
203-L4	S-946	Video Peaking Coil	.50
202-K2	S-949	1st Pix I.F.	3.00
202-K3	S-950	2nd Pix I.F.	2.10
202-L1	S-951	3rd and 4th Pix I.F.	.75
202-K4	S-952	Cathode Trap	2.55
201-K1	S-953	Sound I.F.	2.10
203-K1	S-954	Sound Disc.	2.55
202-K1	S-955	Converter Transformer	2.65
204-L1	S-956	Filament Choke	14
201-R1	S-957	Horizontal Width Control	95
201-R3	S-958	Linearity Control	.95
208-T8	S-959	Syncrolok	2.75
203-R1	S-966	Syncoguide	2.00

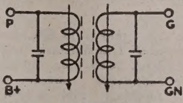


S-928

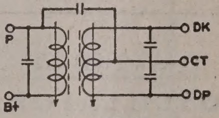
REPLACEMENTS FOR MOTOROLA - TELETONE - HALLICRAFTERS AND OTHER TRANSFORMLESS TELEVISION RECEIVERS

Stanwyck No. S-928—4.5 K.V. (4500-Volt) R.F. Power Supply Transformer	8.25
Stanwyck No. S-930—10 K.V. (10,000-Volt) R.F. Power Supply Transformer	11.55

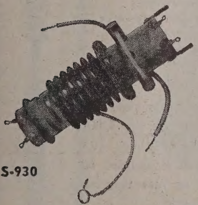
S-958 LINEARITY CONTROL — Directly interchangeable with R.C.A. No. 201-R3, this linearity control has extremely wide inductance variation and can be set to provide a linear operating condition in the horizontal deflection circuit. **List Price, $0.95**



SFM-601



SFM-602



S-930

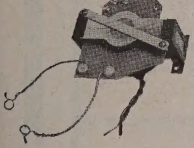
HIGH VOLTAGE COILS

S-928 4.5 Kv. POWER TRANSFORMER—A 4.5 Kv. R.F. power transformer of high efficiency for use in electrostatic deflection circuits employing a 7″ tube. List Price, $8.25

S-930 10 Kv. R.F. POWER TRANSFORMER—A 10 Kv. R.F. power transformer thoroughly vacuum impregnated for efficient operation. Mechanically designed for "corona-less" performance at full rated output. List Price, $11.55

S-948 HIGH VOLTAGE FLYBACK—This horizontal output transformer is similar to the R.C.A. No. 211-T1. Used in electromagnetic deflection circuit, it provides approximately 9 Kv. for excellent picture brilliancy in a 10″ or 12″ tube. List Price, $7.70

S-968 HORIZONTAL OUTPUT TRANSFORMER similar to R.C.A. No. 211-T3 (Wired same as S-948). List Price, $7.70



S-948

F.M. COILS

S-605 RATIO DETECTOR 10.7 mc.—To meet the critical demands for a sensitive and unusually stable F.M. detector, the S-605 was developed. Embodying every characteristic of a high quality product, this detector will outperform similar products. A peak to peak band width of 350 kc. with linearity exceeding plus or minus 125 kc. results in unusual quality of audio reproduction. High "Q" iron cores, stable ceramic capacitors plus ceramic construction throughout result in the ultimate for fine F.M. reproduction.

List Price, $4.95

S-601 F.M. DISCRIMINATOR—Identical to I.F. electrically and mechanically. The electrically centered secondary results in perfect symmetry between positive and negative peaks. High output and excellent discrimination are obtained. A high quality transformer for production or replacement. List Price, $4.70

S-609 F.M. CHOKE—An excellent parasitic suppressor in the oscillator plate circuit. List Price, $0.45

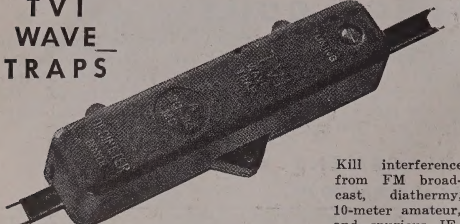
971 4.5 Mc. MIDGET RATIO DETECTOR. List Price, $3.30

977 HORIZONTAL FREQUENCY AND PHASE COIL. List Price, $2.75

999 G-E TYPE FLYBACK. List Price, $11.00

DECIMETER Progressive Products

TVI WAVE TRAPS



Kill interference from FM broadcast, diathermy, 10-meter amateur, and spurious IF. DeciMeter TVI Wave Traps are easy to install — they slide over lead-in — require no cutting of wire, and no ground connection.

In three ranges:

A — 20 MC. to 26 MC.
B — 25 MC. to 35 MC.
C — 88 MC. to 108 MC.

List price, any range $4.95 Write for Bulletin RM-11

DM-430 DIVERSE ADAPTOR

. . . brings diversity reception to the ham rig at low cost. The DM-430 is connected to two antennas of different characteristics, and automatically and instantly selects the best antenna for best reception. Minimizes deep fading in HF. Ideal for any communications receiver. Used without tuning.

- Range of 3 to 30 Megacycles.
- Neon bulb indication of antenna being used.
- For AM and FM phone signals and frequency-shift keying.
- For either or both balanced or unbalanced antennas.

Net price, assembled $29.50

Kit 14.95 Write for Bulletin RM-12

DM-240-A OSCILLATOR

. . . makes 13 CM. receivers and transmitters practical. Uses 2C40 tube. Precise adjustments control tuning, feedback, and output coupling. Supplied complete with all hardware and instructions.

- Tuning range of 2000 to 2500 MC.
- One watt output.

Net price $19.50 *(less tube)*

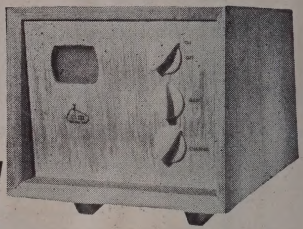
Write for Bulletin RM-15

DECALS for ELECTRONICS

World's largest assortment of Decals for Electronics — over 200 different title plates, dial plates, alphabets and numerals, high-voltage signs in red, call letters in black and gold, and television terms. Printed in neat, opaque letters on clear, tough backing. Top surface has protective coating which provides high resistance to wear. Superior adhesive qualities.

- Water-type "slip-off" decals.
- Adhere to any clean surface.
- Economical to use.
- Improve appearance and safety of equipment.
- Self-service display assortment for jobbers.

Write for Bulletin RM-14



The New TV "PROFESSIONAL" PREAMPLIFIER

Here is the preamp that does everything a preamp should do—an entirely different approach to and solution of the problems of preamplification.

Exclusive Features:

- Balanced circuit — less noise pickup.
- Adjustable gain to suit all conditions.
- Constant band width amplifies sound and picture equally on all channels.
- Three tuned circuits reject interference.
- Shielded transformer reduces line noise.
- Channel switch — factory tuned coils.
- Picture increased up to 5 times over noise.
- Glareless illuminated dial — no squinting at switch numbers.
- Handsome cabinets — complement all TV receiver cabinets.

POSITIVELY GUARANTEED TO IMPROVE RECEPTION IN FRINGE AREAS.

List price $59.50 Write for Bulletin RM-16.

The DM-103-W "SLIPSTICK" WAVEMETER

The Slipstick gives quick, accurate frequency readings on oscillators, receivers, or transmitters in the UHF field. A sturdy, every-day tool for the engineer and experimenter. Easy to use, the Slipstick is coupled to the oscillator, receiver, or transmitter by inserting its tip into the rf field, or the antenna circuit.

- Enormous range — 90 to 3000 MC.
- Rapid, direct-reading scale.
- 2% accuracy or better; sturdy construction.
- Polystyrene insulation for permanence and low loss.

Net price $16.50 Write for Bulletin RM-13.

DECIMETER
INC.
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PRICES

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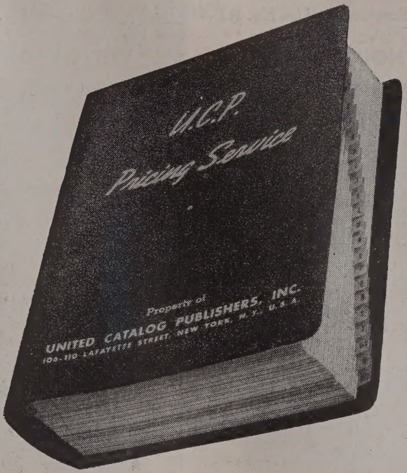
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Loose-leaf, flexible binder. Contains over 1100 pages.

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DELIVERY

Delivery is often dependent on the availability of raw materials. So check with your distributor for delivery information.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" CABINET RACKS—for 19″ Rack Panels

These are professional type racks that have been used on many commercial installations, and make a DeLuxe job of any amateur or broadcast transmitter. The racks are of all-steel construction, welded into an integral unit, to give a lifetime of service.

All panel mounting screws are concealed by means of a full length corner trim on each side at the front. In keeping with modern design, this front trim is rounded on the vertical corners. The rear corners are finished with regular angle trim. The front of the rack is trimmed with chrome moulding top and bottom. The door has a grille at top and bottom, and is hung on sturdy loose-joint hinges; it is held closed by two flush snap-action catches. Additional ventilation is provided by louvres at the sides. The panel mounting angle irons are 3/16″ thick, with mounting holes accurately drilled and tapped 12/24 thread on multiple 1¼″—½″ spacings. The rack is made from 1/16″ thick cold rolled steel, rigidly braced and reinforced throughout; the bottom is $\frac{7}{64}$″ thick steel. A rectangular opening is provided in the bottom for conduits, leads, etc. A duplex receptacle and outlet box are provided in the back under the door.

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

RACKS WITHOUT LOUVRES: To permit racks to be set up in gangs or rows of two or more, the louvres at sides are omitted. Racks may be joined by a flat trim fastened to front of adjacent racks, overlapping both racks. Where specified, front joining trim will be substituted in place of adjacent corner trim at same price. Front joining Trims cannot be used on racks with front doors.

Roller Truck No. RT-415 may be used for all 15¼″ deep racks. Use No. RT-418 for all 18″ deep racks. Standard shelves are available for all racks listed.

WITH LOUVRES

*BLACK RIPPLE ENAMEL

15¼″ Deep Racks

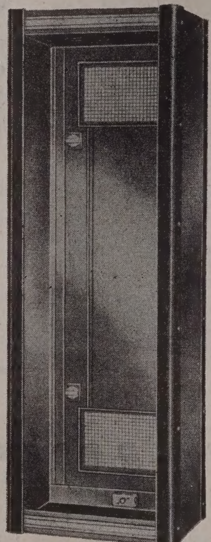
Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
R-3675	42⅞x22x15¼″	36¾″	150	**$54.00**
R-6625	67⅜x22x15¼″	61¼″	210	**72.00**
R-8325	83⅛x22x15¼″	77″	240	**93.00**

18″ Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
R-3618	42⅞x22x18″	36¾″	160	**60.00**
R-6618	67⅜x22x18″	61¼″	230	**78.00**
R-8318	83⅛x22x18″	77″	280	**99.00**

*If slate grey ripple enamel is required substitute letters "RG" instead of "R" when ordering.

WITHOUT LOUVRES



*BLACK RIPPLE ENAMEL

15¼″ Deep Racks

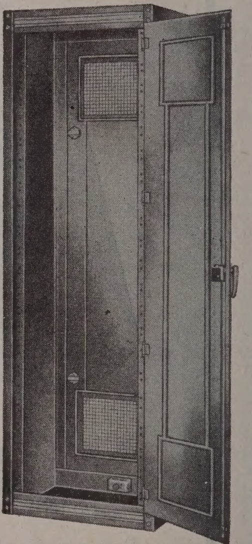
Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
P-3675	42⅞x22x15¼″	36¾″	150	**$54.00**
P-6625	67⅜x22x15¼″	61¼″	210	**72.00**
P-8325	83⅛x22x15¼″	77″	240	**93.00**

18″ Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
P-3618	42⅞x22x18″	36¾″	160	**60.00**
P-6618	67⅜x22x18″	61¼″	230	**78.00**
P-8318	83⅛x22x18″	77″	270	**99.00**

*If slate grey ripple enamel is required, substitute letters "PG" instead of "P" when ordering.

WITH FRONT DOORS



*BLACK RIPPLE ENAMEL

Racks are 22″ wide, 18″ deep. Panels mount 2″ from front allowing 14″ clear inside depth behind panels to rear door.

The 2" dimension may be modified without charge.

	Catalog F-6618	**Number F-8318**
Overall Height	67⅜	83⅛
Available panel space	61¼	77
Clear inside width (front)	19⅛	19⅛
Clear inside width (rear)	17¾	17¾
Net Price	**$105.00**	**$129.00**

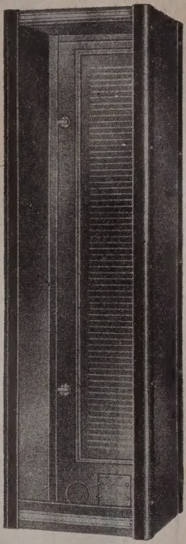
*If slate grey ripple enamel is required, substitute letters "FC" instead of "F" when ordering.

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" TRANSMITTER RACKS

STANDARD TYPE—for 19″ & 30″ Rack Panels



Similar to standard type "C" racks listed on page J-66 except that they have been reinforced at rear corners for use with heavier apparatus. At the rear, knockouts are provided for conduit and 4″ square duct, as well as a double convenience outlet with receptacle. Knockouts are also supplied at sides for conduit, suitable for entry of cables when units are ganged. The rear door, which is removable, has ample louvres for ventilation, which are covered on the inside with mesh screening. Front trim rounded on vertical corners. Racks are regularly supplied with corner trim for use as a single unit, but will be furnished with suitable front connecting strips for ganging in rows of two or more without additional charge.

SHELVES: Shelf No. R-2219 is designed to fit racks G-2218 and G-2219. This shelf is listed on Page J-71.

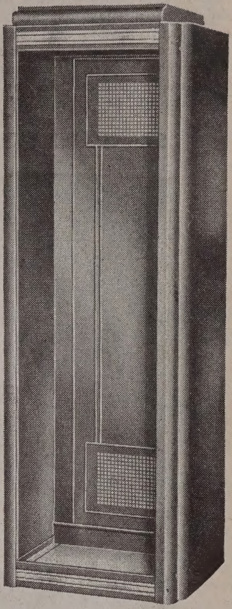
ROLLER TRUCKS: Roller truck No. RT-412 is designed to fit racks G-2218 and G-2219. This roller truck is listed on Page J-69.

PANELS: Type "C" panels to fit the G-2218 and G-2219 racks are listed on page J-70. For cost of 30″ blank panels to fit the G-3024 rack, add 100% to prices of 19″ panels on page J-70.

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

Catalog No.	Overall Size	Panel Space	Clear Depth	Ship. Wt. Lbs.	Net Price
G-2218	76⅛ x 22 x 18″	70 x 19″	16⅞″	270	$105.00
G-2219	83⅛ x 22 x 18″	77 x 19″	16⅞″	290	117.00
G-3024	76⅛ x 33 x 24″	70 x 30″	22⅞″	450	174.00

DELUXE TYPE—for 19″ Rack Panels



These new enclosed type racks combine rugged construction with modern styling and improved design. Made from 1/64″ steel, rigidly braced and reinforced throughout. Bottom is 7/64″ thick. Panel mounting angles are 3/16″ steel, drilled and tapped 12/24 thread on standard 1¼–½″ spacings. Front vertical trims to cover panel screws are quick detachable type. Racks may be grouped without front joining trims. Rear door is hung on slip-joint hinges; door held closed with locking type chrome plated handle; keys supplied. Large opening in bottom for conduits, etc.

SHELVES: Shelf No. R-2218 is designed for 18½″ racks and R-2224 for 24″ racks. These shelves are listed on Page J-71.

ROLLER TRUCKS: Use RT-418 for all 18½″ deep racks. Use RT-424 for all 24″ deep racks. These roller trucks are listed on Page J-69.

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

NOTE: Clear inside width at front and rear of all racks is 17¾″. Clear inside depth of 18½″ racks is 16½″; clear inside depth of 24″ racks is 22″.

18½″ Deep Racks

Catalog No.	Finish	Overall Size	Panel Space	Shpg. Wt. Lbs.	Net Price
P-6918	Black Ripple	69⅝ x 23⅝ x 18½″	61¼ x 19″	230	$ 94.50
PG-6918	Slate Grey Ripple	69⅝ x 23⅝ x 18½″	61¼ x 19″	230	94.50
P-7818	Black Ripple	78⅜ x 23⅝ x 18½″	70 x 19″	255	103.50
PG-7818	Slate Grey Ripple	78⅜ x 23⅝ x 18½″	70 x 19″	255	103.50
P-8518	Black Ripple	85⅜ x 23⅝ x 18½″	77 x 19″	280	117.00
PG-8518	Slate Grey Ripple	85⅜ x 23⅝ x 18½″	77 x 19″	280	117.00

24″ Deep Racks

Catalog No.	Finish	Overall Size	Panel Space	Shpg. Wt. Lbs.	Net Price
P-6924	Black Ripple	69⅝ x 23⅝ x 24″	61¼ x 19″	260	$111.00
PG-6924	Slate Grey Ripple	69⅝ x 23⅝ x 24″	61¼ x 19″	260	111.00
P-7824	Black Ripple	78⅜ x 23⅝ x 24″	70 x 19″	290	120.00
PG-7824	Slate Grey Ripple	78⅜ x 23⅝ x 24″	70 x 19″	290	120.00
P-8524	Black Ripple	85⅜ x 23⅝ x 24″	77 x 19″	320	135.00
PG-8524	Slate Grey Ripple	85⅜ x 23⅝ x 24″	77 x 19″	320	135.00

Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

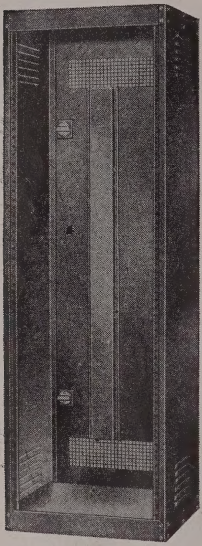
ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "A" ENCLOSED RELAY RACKS FOR 19" RACK PANELS

All of the racks on this page are shipped "knocked-down" for easy assembly with all necessary bolts supplied. Made for standard 19" wide panels, they are substantially constructed from 1/16" cold rolled steel; panel mounting angles are of $\frac{7}{64}$" steel, accurately drilled on universal centers for either "Amateur" or type "C" panels, tapped for 10/32 machine screws. Panels fit into a recess, so that edges are not exposed. Louvres in sides and screen sections in rear door provide ample ventilation. Rear door is hung on sturdy loose-joint hinges, and closed by a flush snap catch. Panel mounting screws and washers supplied with each rack.

STANDARD TYPE



This completely enclosed rack will give your job the "professional appearance" so desirable on transmitters, test equipment, public address systems, etc.

ROLLER TRUCK: No. RT-401 shown on Page J-69 is designed to fit these racks.

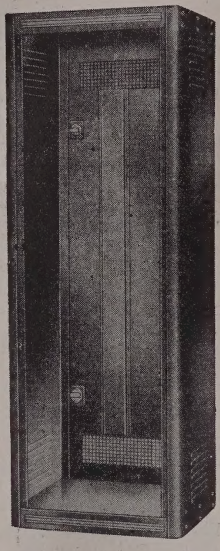
SHELF: Rack Shelf No. ER-2012 listed on Page J-71 is designed to fit these racks.

*BLACK RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
ER203	42 x21x16½"	36¾"	85	$27.50
ER205	66½x21x16½"	61¼"	120	42.30
ER207	82¼x21x16½"	77"	145	52.50

*Slate grey ripple is optional

ROUNDED CORNER TYPE



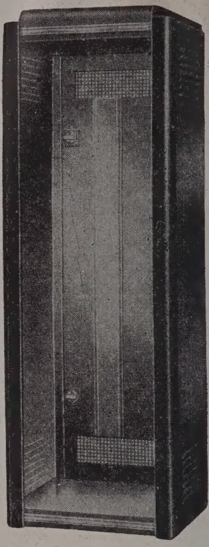
The ideal streamlined rack for your next transmitter or P.A. system. The vertical corners at the front of the rack are rounded, and the top and bottom are nicely trimmed with chrome finished mouldings. The uniform slate grey ripple finish gives the assembly a superb exterior appearance. May be mounted on Roller Truck No. RT-411. Shelf available is No. ER-2112.

*SLATE GREY RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
ER213	42 x22x16½"	36¼"	85	$32.70
ER215	66½x22x16½"	61¼"	125	48.60
ER217	82¼x22x16½"	77"	150	58.50

*Black ripple is optional.

DELUXE TYPE



Produced in the new "streamlined" style, this rack is fully in keeping with modern design. The removable vertical corner trims are rounded and cover the panel mounting screws, the same as is used on our Type "C" commercial racks. The top, which has also been "streamlined," is perforated at the back to provide additional ventilation. The top and bottom are trimmed with chrome finished mouldings. May be mounted on Roller Truck No. RT-412. Shelf available is No. ER-2212.

*SLATE GREY RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
ER223	43¼x22x18"	36¾"	90	$46.50
ER225	67¾x22x18"	61¼"	135	57.00
ER227	83½x22x18"	77"	165	69.00

*Black ripple is optional.

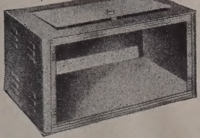
ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

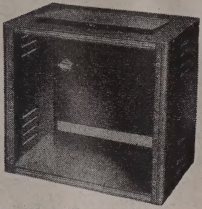
PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

DELUXE TYPE "A" DESK PANEL CABINET RACKS

For Standard 19″ Rack Panels

Black Ripple Finish





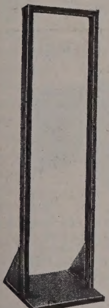
Streamlined styling. In keeping with our other Deluxe racks, the vertical front corners are rounded and the top and bottom are trimmed with chrome finished mouldings. Panels fit into a recess, so that the edges are not exposed. Panel mounting holes accurately drilled on universal centers, for either "Amateur" or type "C" panels; holes are tapped for 10/32 machine screws. May be used with any chassis up to 13″ x 17″ in size. All cabinets constructed of 1/16″ thick sheet steel. Louvres provide ample ventilation through sides and back. Piano type hinges are used on the top doors, which are provided with snap catches. Panel mounting screws and washers are furnished. Black ripple enamel is standard. Slate grey is optional at same price.

Cat. No.	Overall Size	Panel Space	Net Price
	With door in top only		
DL128	10½ x 21½ x 15″ deep	8¾″	**$12.00**
DL1210	12¼ x 21½ x 15″ deep	10½″	13.50
DL1225	14 x 21½ x 15″ deep	12¼″	14.55
DL1413	15¾ x 21½ x 15″ deep	14″	16.20
	With door in top and door on rear panel		
DL1713	19¼ x 21½ x 15″ deep	17½″	19.20
DL2613	28 x 21½ x 15 deep	26¼″	22.50
DL3513	36¾ x 21½ x 15″ deep	35″	24.90

TYPE "A" CHANNEL RELAY RACKS

For Standard 19″ Rack Panels

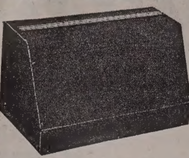
Black Ripple Finish



Ideal for use on all types of transmitters and public address systems. Substantially constructed of 7/64″ pressed steel. Vertical members and top cross-brace securely welded together. Base is 22″ deep and extends both front and rear on the RR-195 rack; it is 19″ deep on the RR-193 rack. Panel mounting holes accurately drilled on universal centers for either "Amateur" or type "C" panels, tapped for 10/32 machine screws. Ample supply of panel mounting screws and finishing washers supplied.

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
RR-195	73¼x20x20⅞″	71¾″	85	**$20.70**
RR-193	38¼x20x18⅜″	36¾″	57	17.40

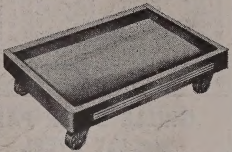
SLOPING FRONT CABINETS



Adaptable as instrument cases for studios, laboratories, etc. Top corner rounded and trimmed with chrome moulding. Slate grey ripple finish. A chassis may be mounted to front panel and removed as a unit. Rear of case ventilated, with opening for connections. Prices do not include chassis.

Cat. No.	H. W. D.	Size of Chassis	Net Price
SF-500	8 x 8 x 8″	7 x 7 x 2″	**$3.84**
SF-501	8 x 10 x 8	7 x 9 x 2	**4.26**
SF-502	8 x 14 x 8″	7 x 13 x 2	**4.59**
SF-503	9 x 18 x 8″	7 x 17 x 3″	**6.60**
SF-504	12 x 18 x 12″	10 x 17 x 3″	**8.40**

DE LUXE TYPE ROLLER TRUCKS FOR RACKS



Designed for use on our racks. Overall size 3″ wider than racks for better distribution of weight. Has rubber composition wheels. Finished in slate grey ripple, with chrome trim.

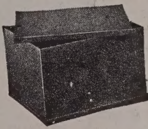
Cat. No.	Will Fit Rack No.	Net Price
RT-410	DL-2613, DL-3513	**$ 9.00**
RT-411	ER-213, ER-215, ER-217	**10.20**
RT-412	All 18″ deep racks	**11.40**
RT-415	All 15¼″ deep racks	**11.55**
RT-418	All 18½″ deep racks	**12.75**
RT-424	All 24″ deep racks	**13.80**

STANDARD TYPE ROLLER TRUCK FOR RACKS

Our Standard Type Roller Truck is the same as the above, except that the corners are straight, and that the chrome trim is not on it.

Cat. No.	Will Fit Rack No.	Net Price
RT-401	ER-203, ER-205, ER-207	**$8.25**

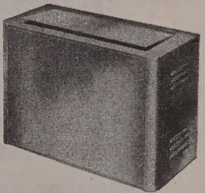
STEEL UTILITY CANS



Can be used for monitors, shield cans, etc. Made of sheet steel with spot welded reinforced corners. Tops and bottoms removable with self-tapping screws. Black ripple enamel finish.

Cat. No.	Overall Size	Ship. Wt. Lbs.	Net Price
UC- 565	5½ x 6 x 5½″	3	**$1.20**
UC- 596	5 x 9 x 6″	5	**1.65**
UC-8107	8 x 10 x 7″	6	**2.49**
UC-8101	8 x 10 x 10″	7	**3.00**
UC-1128	11 x 12 x 8″	9	**3.30**

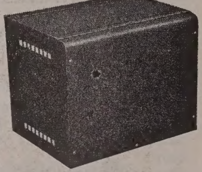
ROUNDED CORNER TYPE



Front vertical corners are streamlined, and a panel type door is provided. Rear opening allows for necessary leads, etc. Slate grey ripple finish. Prices do not include chassis.

Cat. No.	H. L. D.	Panel Size	For Chassis	Net Price
CA-200	8 x 10 x 8″	8 x 8″	7 x 7 x 2″	**$3.60**
CA-201	8 x 12 x 8″	8 x 10″	7 x 9 x 2″	**3.80**
CA-202	8 x 16 x 8″	8 x 14″	7 x 13 x 2″	**5.07**
CA-203	9 x 17 x 11″	9 x 15″	10 x 14 x 3″	**7.89**
CA-204	12 x 20 x 12″	12 x 18″	10 x 17 x 3″	**9.30**

STANDARD TYPE



Full piano hinged doors, front panels removable. Top corner at front is rounded. Finished in black ripple. Prices do not include chassis bases.

Cat. No.	H. L. D	For Chassis	Net Price
CA-100	7¼ x 10½ x 6″	5½ x 9½ x 1½″	**$2.88**
CA-101	7¼ x 8 x 8″	7 x 7 x 2″	**2.88**
CA-102	7¼ x 10 x 8″	7 x 9 x 2″	**3.30**
CA-103	7¼ x 14 x 8″	7 x 13 x 2″	**3.75**

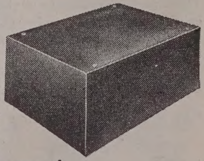
TYPEWRITER DESK PANELS

(NOT ILLUSTRATED)

These tables are similar in construction to our standard desk type shown on Page J-70, except that a recess 4½″ deep is provided for using a standard typewriter. Shipping weight is 40 lbs.

Cat. No.	Width	Depth	Finish	Net Price
BY-2220	22″	20″	Black enamel	**$19.50**
AY-2220	22″	20″	Aluminum grey	**21.60**

STEEL UTILITY CASES



These cases have flat tops and bottoms, which are removable. Made from 20 gauge sheet steel, with flanged edges and spot-welded corners. Finished in black ripple enamel.

Cat. No.	Overall Size	Ship. Wt. Lbs.	Net Price
MC- 442	4 x 4 x 2″	2	**$0.75**
MC- 453	4 x 5 x 3″	3	**.87**
MC- 654	6 x 5 x 4″	3	**1.15**
MC- 596	5 x 9 x 6″	5	**1.65**
MC- 666	6 x 6 x 6″	3	**1.20**
MC-8101	8 x 10 x 10″	7	**2.70**
MC-1128	11 x 12 x 8″	9	**3.00**
MC-8107	8 x 10 x 7″	6	**2.22**

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" RACK PANELS—19" WIDE

Unless otherwise indicated, these panels are made from 1/8" thick steel and are uniformly slotted to fit type "C" cabinet racks and all type "A" racks. They will also fit any other rack equipment having multiple 1¼" - ½" spacings or what is commonly termed as "W.E. spacing." They may be obtained in either black ripple enamel or slate grey ripple enamel. Panels can be furnished in aluminum grey lacquer at extra charge.

BLANK PANELS
1/8" STEEL

These panels are made from 1/8" thick steel and are uniformly slotted to fit type "C" cabinet racks made for 19" panels, and all type "A" racks. They will also fit any other rack equipment having multiple 1¼" x ½" spacings or what is commonly termed as "W.E. spacing." They may be obtained in either black ripple enamel or slate grey ripple enamel.

Cat. No. Black	Cat. No. Grey	Height	Net Price
6600	G-6600	1¾"	$0.66
6601	G-6601	3½"	.75
6602	G-6602	5¼"	.93
6603	G-6603	7"	1.08
6604	G-6604	8¾"	1.32
6605	G-6605	10½"	1.59
6606	G-6606	12¼"	1.89
6607	G-6607	14"	2.16
6608	G-6608	15¾"	2.46
6609	G-6609	17½"	2.70
6610	G-6610	19¼"	3.00
6611	G-6611	21"	3.30

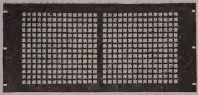
BLANK PANELS
1/8" ALUMINUM

These panels are similar to those listed above except that they are made from 1/8" aluminum. They can also be supplied from 3/16" stock, at an additional cost of 60%.

Unpainted panels with etched finish (caustic dip) are available at same price.

Cat. No. Black	Cat. No. Grey	Height	Net Price
6675	G-6675	1¾"	$0.75
6676	G-6676	3½"	1.08
6677	G-6677	5¼"	1.59
6678	G-6678	7"	1.92
6679	G-6679	8¾"	2.31
6680	G-6680	10½"	2.91
6681	G-6681	12¼"	3.39
6682	G-6682	14"	3.90
6683	G-6683	15¾"	4.35
6684	G-6684	17½"	4.80
6685	G-6685	19¼"	5.25
6686	G-6686	21"	5.70

GRILLE PANELS
1/8" STEEL

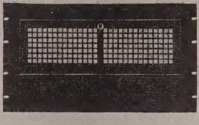


This modern type ventilating grille is stamped into the panel itself; it is not a pieced assembly.

Cat. No. Black	Cat. No. Grey	Panel Size	Grille Size	Net Price
P-661	G-661	5¼"	3⅜ x 14⅜"	$2.64
P-662	G-662	7	4⅞ x 14⅜"	2.85
P-663	G-663	8¾"	6⅞ x 14⅜"	3.45
P-664	G-664	8¾"	*3⅞ x 14⅜"	3.15
P-665	G-665	10½"	8⅜ x 14⅜"	3.75
P-666	G-666	10½"	*5⅞ x 14⅜	3.45
P-667	G-667	12¼"	*7⅜ x 14⅜"	3.90

*Allows 3½" space at bottom for chassis mounting.

GRILLE DOOR PANELS
1/8" STEEL



These panels have flush hinged doors with modern type ventilating grille. Doors are equipped with piano hinges, knob and concealed catch. All doors start 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No. Black	Cat. No. Grey	Panel Size	Door Size	Net Price
P-680	G-680	8¼"	4½ x 15⅜"	$5.40
P-681	G-681	10½"	6 x 15⅜"	5.85
P-682	G-682	12¼"	7½ x 15⅜"	6.45

SOLID DOOR PANELS
1/8" STEEL

These panels have flush hinged doors with full length piano hinges; they are equipped with a knob and concealed catch. All doors are located 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No. Black	Cat. No. Grey	Panel Size	Door Size	Net Price
P-670	G-670	8¾"	4½ x 15⅜"	$4.20
P-671	G-671	10½"	6 x 15⅜"	4.50
P-672	G-672	12¼"	7½ x 15⅜"	4.95

RECESSED METER PANELS
1/8" STEEL

These panels are made so that the meters may be recessed from the front of the panel. Meters are protected by a plate glass insert, allowing ¾" clearance in back of panel. A blank bakelite sub-panel is provided. The clear sub-panel space is 4⅛"x15" on the 19" wide panel which is sufficient for 4-3" meters. On the 24" and 30" wide panel the clear sub-panel space is 5¾"x20" and 5¾"x26" respectively.

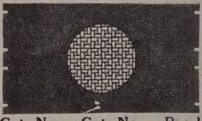
Cat. No. Black	Cat. No. Grey	Size	Net Price
P-690	G-690	5¼" x 19"	$ 5.85
P-691	G-691	7" x 24"	9.75
P-692	G-692	7" x 30"	13.20

METER PANELS
1/8" STEEL

All meter panels are 5¼" x 19".

Cat. No. Black	Cat. No. Grey	No. of Holes	Meter Size	Net Price
MP-632	MG-632	3	2"	$1.29
MP-652	MG-652	5	2"	1.80
MP-633	MG-633	3	3"	1.29
MP-653	MG-653	5	3"	1.80

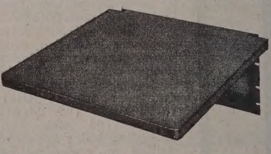
SPEAKER PANELS
1/8" STEEL



To fit either 6", 8", 10", or 12" speakers. The opening is covered with a steel grille.

Cat. No. Black	Cat. No. Grey	Panel Size	Speaker Size	Net Price
SP- 875	SG- 875	8¾ x 19"	6"	$2.46
SP-1050	SG-1050	10½ x 19"	8"	3.15
SP-1225	SG-1225	12¼ x 19"	10"	3.75
SP-1400	SG-1400	14 x 19"	12"	4.35

STANDARD DESK PANELS



Tables are rigidly made of 1/16" thick steel. Securely mounted to regular ⅛" steel panels, size 10½" x 19". Tables 22" wide give full working space across front of racks when mounted in place.

Cat. No.	Width	Depth	Finish	Net Price
BT-2220	22"	20"	Black enamel	$13.80
BT-2216	22"	16"	Black enamel	13.50
AT-2220	22"	20"	Aluminum grey	15.90
AT-2216	22"	16"	Aluminum grey	14.20

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

BLANK STEEL CHASSIS BASES

STANDARD TYPE

Construction is the same as our heavy-duty chassis. Stamped from one piece of cold rolled steel, and have four solid sides with welded corners. Bottom edges are flanged in on four sides to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from #20 gauge steel, except those marked (*) which are stamped from 1/16" steel exactly like our heavy-duty type.

Black Ripple Cat. No.	Net Price	Size	Zinc Plated Cat. No.	Net Price
B-4500	$0.78	5½x9½x1½"	C-4500	$0.78
B-4507	.78	5x 7x2"	C-4507	.78
B-4508	1.08	5x10x3"	C-4508	1.08
B-4509	1.26	6x14x3"	C-4509	1.26
B-4510	.90	7x 7x2"	C-4510	.90
B-4511	1.08	7x 9x2"	C-4511	1.08
B-4512	1.11	7x11x2"	C-4512	1.11
B-4513	1.20	7x13x2"	C-4513	1.20
B-4514	1.44	7x15x3"	C-4514	1.44
B-4518	1.29	4x17x3"	C-4518	1.29
B-4515	1.56	7x17x3"	C-4515	1.56
B-4502	1.41	8x12x3"	C-4502	1.41
B-4531	1.44	8x17x2"	C-4531	1.44
B-4532	1.56	8x17x3"	C-4532	1.56
B-4525	1.50	10x12x3"	C-4525	1.50
B-4524	1.59	10x14x3"	C-4524	1.59
B-4528	1.59	10x17x2"	C-4528	1.59
B-4529	2.04	10x17x4"	C-4529	2.04
B-4526	1.65	10x17x3"	C-4526	1.65
B-4533*	2.25	11x17x2"	C-4533*	2.25
B-4534*	2.46	11x17x3"	C-4534*	2.46
B-4516	1.71	12x17x2"	C-4516	1.71
B-4517	2.04	12x17x3"	C-4517	2.04
B-4530	2.25	12x17x4"	C-4530	2.25
B-4535*	2.46	13x17x2"	C-4535*	2.46
B-4536*	2.85	13x17x3"	C-4536*	2.85
B-4537*	3.24	13x17x4"	C-4537*	3.24

* Made from 1/16" thick steel.

BOTTOM PLATES

Bottom plates have holes to match the chassis, and have pressed "bumpers" at the corners.

Black Ripple Cat. No.	Zinc Plated Cat. No.	Size	Net Price
BP-4507	CP-4507	5x 7"	$0.38
BP-4502	CP-4502	8x12"	.66
BP-4500	CP-4500	5½x9½"	.36
BP-4508	CP-4508	5x10"	.39
BP-4509	CP-4509	6x14"	.54
BP-4510	CP-4510	7x 7"	.39
BP-4511	CP-4511	7x 9"	.42
BP-4512	CP-4512	7x11"	.51
BP-4513	CP-4513	7x13"	.57
BP-4514	CP-4514	7x15"	.63
BP-4518	CP-4518	4x17"	.51
BP-4515	CP-4515	7x17"	.66
BP-4531	CP-4531	8x17"	.66
BP-4525	CP-4525	10x12"	.66
BP-4524	CP-4524	10x14"	.69
BP-4528	CP-4528	10x17"	.87
BP-4527	CP-4527	10x23"	1.14
BP-4533	CP-4533	11x17"	.90
BP-4516	CP-4516	12x17"	.96
BP-4535	CP-4535	13x17"	1.02

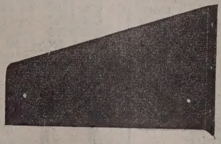
SHELVES FOR CABINET RACKS

(NOT ILLUSTRATED)

These shelves are designed to fit the racks shown on Pages J-66, J-67, J-68 and J-69. They are constructed for mounting inside the rack, with side bolt mounting. All shelves are 1" high and finished in black ripple enamel. Shipping weight of all shelves is 15 lbs.

Cat. No.	Will Fit Rack No.	Net Price
ER-2012	ER-203, ER-205, ER-207	$2.55
R-2015	All 15¼" Deep Racks	4.35
R-2018	All 18" Type C Racks	4.50
ER-2112	ER-213, ER-215, ER-217	3.15
R-2128	Desk Panel Racks on Page J-69	2.55
ER-2212	ER-223, ER-225, ER-227	3.15
R-2215	FD-215, FD-217	3.15
R-2218	All 18½" Deep Racks	4.20
R-2219	G-2218, G-2219	4.50
R-2224	All 24" Deep Racks	5.10

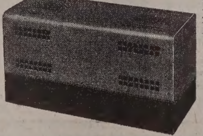
CHASSIS MOUNTING BRACKETS



These brackets will fit any of the chassis listed above, as the mounting holes are drilled to match. Panels must be at least 7" high. Finished in black enamel.

Cat.No.	Dimensions	Shpg. Wt.	Net Price
SB- 78	For 8" Base	2 lbs.	$0.78
SB-710	For 10" Base	2 lbs.	1.05
SB-711	For 11" Base	3 lbs.	1.14
SB-713	For 13" Base	3 lbs.	1.32
SB-717	For 17" Base & larger	5 lbs.	2.04

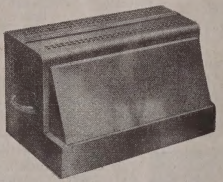
STANDARD TYPE
Amplifier Foundation Chassis



Rounded corners effectively streamline the covers on these units. Grille type ventilation gives them a modern appearance. Chassis stamped from one piece of cold rolled steel, with corners securely spot welded. Covers finished in slate grey, chassis in black ripple enamel. Chassis are drilled for bottom plates.

Cat.No.	Size	Depth of Cover	Shpg. Wt.	Net Price
F-510	5x10x3"	6"	9 lbs.	$2.70
F-615	6x14x3"	6"	10 lbs.	3.00
F-717	7x17x3"	6"	11 lbs.	3.75
F-1012	10x12x3"	6"	11 lbs.	3.75
F-1017	10x17x3"	6"	11 lbs.	4.50
F-1317	13x17x3"	6"	15 lbs.	5.40

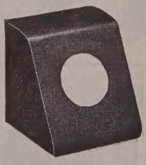
SLOPING FRONT TYPE
Amplifier Foundation Chassis



Latest trend in amplifier design. Combination of sloping front panel and streamlined cover enables you to build up a job similar to that used on commercial de-luxe type amplifiers. All parts finished in slate grey ripple enamel trimmed with chrome moulding and handles. Front panel removable and protrudes 3" from face of screen cover. Chassis supplied complete WITH bottom plates.

Cat. No.	Chassis Size	Screen Cover	Net Price
F10120	10x12x3"	6½" high	$6.90
F10170	10x17x3"	6½" high	7.80
F13170	13x17x3"	6½" high	8.85

STEEL METER CASES

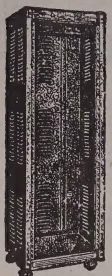


These meter cases may be obtained for 2" and 3" meters, in both single and triple units. They are substantially made of steel, with welded joints, and black ripple enamel finish. Top front corner is rounded.

Cat. No.	Meters	Meter Hole	Net Price
SM-12	Single 2"	2¼"	$1.14
SM-32	Three 2"	2¼"	2.76
SM-13	Single 3"	2 13/16"	1.14
SM-33	Three 3"	2 13/16"	2.76

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

BUD DE LUXE RELAY RACKS



These relay racks are made of 16 gauge steel with ⅛" panel supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

The front and back of the top, the two sides and the door are well louvered to provide adequate ventilation. Snap catches are positioned on the door. A stream-lined appearance is achieved by the use of rounded corners and red-lined chrome trim. The relay rack is shipped knocked-down and complete with all necessary hardware for assembly. All standard 19" panels will fit these racks.

A SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS ON THE BOTTOM SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY. Bud RC-7756 casters will fit this unit. Casters are not included in price of cabinet. These relay racks are supplied in either black or grey wrinkle finish. The overall width is 22" and the depth is 17¼" on all sizes listed.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1774	42 1/16"	36¾"	90 lbs.	$32.70
CR-1771	47 5/16"	42"	100 lbs.	37.45
CR-1772	66 9/16"	61¼"	135 lbs.	48.60
CR-1773	82 5/16"	77"	155 lbs.	58.50

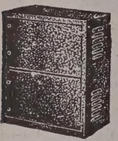
BUD DE LUXE CABINET RACKS

These cabinet racks have rounded corners and attractive red-lined chrome trim. There is a recessed, hinged door on the top with a snap catch. These cabinet racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear.

Adequate ventilation is assured by means of louvered sides and a two inch opening in the bottom of the back extends the entire width. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM TO MINIMIZE MARRING OF A TABLE TOP. These relay racks are furnished in either black or grey wrinkle finish. Depth 14¾", width 22". Will fit standard 19" panels.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1741	10 9/16"	8¾"	29 lbs.	$12.00
CR-1740	12 5/16"	10½"	31 lbs.	13.70
CR-1742	14 1/16"	12¼"	32 lbs.	14.55
CR-1739	15 13/16"	14"	36 lbs.	16.20
CR-1743	19 5/16"	17½"	40 lbs.	19.20
CR-1727	22 13/16"	21"	45 lbs.	20.83
CR-1744	28 3/16"	26¼"	50 lbs.	22.50
CR-1728	33 9/16"	31½"	55 lbs.	24.00
CR-1745	36 13/16"	35"	60 lbs.	24.90

BUD JUNIOR CABINET RACKS

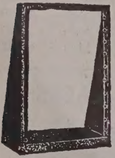


This cabinet rack is a multi-purpose unit that is inexpensive. The cabinet is constructed to accommodate two panels, one is 10½" by 18 5/16", the other 8¾' by 18 5/16", these panels are supplied with the cabinet. The BUD Junior Cabinet Rack is spacious enough to accommodate a chassis up to 10" by 17"

The rear of the cabinet is covered by a hinged door with a locking device. The cabinet is furnished in black wrinkle finish only.

Catalog No.	Overall Height	Depth	Width	Shipping Wt.	Dealer Cost
RC-1749A	21 1/16"	10½"	19⅞"	25 lbs.	$15.95

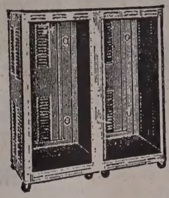
BUD DESK TYPE RELAY RACKS



Perfect for table mounting of low and medium power transmitters, public address systems, and other electronic instruments. Rack has strong chassis for mounting heavy components. Shipped knocked-down, with necessary hardware, easy to assemble. Standard notched 19" wide panels can be used, panels set in recess so that no edges are exposed. Furnished in black wrinkle finish only. Depth 12".

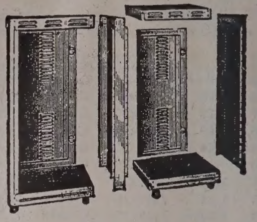
Catalog No.	Height	Panel Space	Shipping Wt.	Dealer Cost
RR-1248	24"	21"	15 lbs.	$6.71
RR-1249	31"	28"	17 lbs.	8.38

NEW BUD ADD-a-RACK SERIES



It has always been necessary to buy special racks without louvers on one side to obtain a maximum of panel space with a minimum of floor space. Now, you no longer need to buy a whole new cabinet when you want additional panel space. Through our new and exclusive Add-a-Rack series, BUD not only offers additional racks at a lower cost, but provides you with a sturdier, better looking assembly.

The illustration at top shows two Add-a-Rack cabinets assembled together. The illustration below shows the unique and ingenious method of adding a unit to your present equipment. Instead of buying an entire new outfit, you purchase only four parts: (1) a door (2) a top (3) a bottom and (4) an Add-a-Rack coupling-unit. The right (or left) hand side of your present relay rack is removed and replaced by the Add-a-Rack coupling-unit: next, a top and bottom is fastened into place, and the side taken from the first rack is fastened onto the second rack which has been added. Place the additional door into position and you have two racks properly and efficiently coupled together. In the same simple way, more racks can be added at any time and every one will be in a CONTINUOUS ONE-PIECE assembly.



This series is available in two ways. (1) a double unit consisting of two racks and the Add-a-Rack coupling unit, (2) Add-a-Rack unit, consisting of a door, a top, a bottom and an Add-a-Rack coupling-unit. These units are furnished with all necessary assembling and panel mounting hardware.

Add-a-Rack Unit	Used to Add-a-Rack to	Dealer Cost
AR-1778	CR-1774	$31.00
AR-1775	CR-1771	36.00
AR-1776	CR-1772	45.00
AR-1777	CR-1773	55.00

Complete unit consisting of the knocked-down parts necessary for two relay racks coupled together.

CR-1779	two coupled relay racks same size as CR-1774	$ 63.70
CR-1780	two coupled relay racks same size as CR-1771	73.45
CR-1786	two coupled relay racks same size as CR-1772	93.60
CR-1799	two coupled relay racks same size as CR-1773	113.50

Bud RC-7756 Casters will fit this unit. Casters are not included in price of cabinet.

BUD TELEPHONE TYPE RELAY RACKS

Nos. RR-1263 and RR-1264 are made of ⅛" steel channels, three inches deep and are held together by angle cross pieces of the same material. The design of the base has been improved to incorporate a chassis type bottom, together with the usual side angles, making the rack stronger and more stable.

RR-1265 is heavy duty and is made of heavy channel iron supported by two ⅜" thick iron angles that are bolted to the channels to provide additional support to the unit. Supplied in black wrinkle finish only. All racks accommodate standard 19" panels in accordance with standards set by RMA.

Catalog No.	Height	Depth	Panel Space	Shipping Wt.	Dealer Cost
RR-1263	35½"	22"	31½"	38 lbs.	$17.60
RR-1264	70½"	22"	66½"	48 lbs.	20.06
RR-1265	72½"	15"	66½"	97 lbs.	38.10

BUD VENTILATING GRILLE PANELS

Made of ⅛" thick steel. The grille is stamped into the panel itself, and is recommended for use where additional ventilation is desirable. All panels are 19" long, furnished in either black or grey wrinkle finish.

Catalog No.	Height	Grille Size	Dealer Size
PS-808	5¼"	3⅜" x 14⅜"	$2.64
PS-809	7"	4⅞" x 14⅜"	2.85
PS-810	8¾"	*3⅞" x 14⅜"	3.45
PS-811	10½"	*5⅞" x 14⅜"	3.65
PS-812	12¼"	*7⅜" x 14⅜"	3.90

* Allows 3½" space for chassis mounting.

BUD CHASSIS MOUNTING BRACKETS

Mounting brackets are essential to insure proper support of the chassis. Formed of heavy gauge steel, cut away at the bottom to provide chassis clearance so that chassis can be mounted flush against panel. Finished in Black. Numbers MB-450 and MB-451 designed for chassis height of 4" Sold in pairs only.

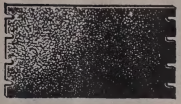
Catalog No.	Height	Depth	Dealer Cost Per Pair
MB-458	6½"	8"	$0.85
MB-448	6½"	10"	1.10
MB-459	6½"	11"	1.20
MB-449	6½"	12"	1.45
MB-460	6½"	13"	1.35
MB-450	8½"	10"	1.60
MB-451	8½"	13"	1.70

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

These pages show only a few of many BUD Products. For complete catalog, write
BUD RADIO INC., Dept. ANH, 2118 E. 55th St., Cleveland 3, Ohio

BUD STANDARD RELAY RACK PANELS



Made of Steel or Aluminum. Steel Panels are made of high grade steel 1/8" thick. Aluminum Panels are made of 1/8" thick Aluminum. All Panels are 19" wide. Furnished in either Black or Grey Wrinkle. Aluminum panels 3/16" thick may be had if desired at 60% increase in cost over 1/8"

STEEL

Catalog No.	Height	Dealer Cost
PS-1250	1¾"	$ .66
PS-1251	3½"	.75
PS-1252	5¼"	.93
PS-1253	7"	1.08
PS-1254	8¾"	1.30
PS-1255	10½"	1.55
PS-1256	12¼"	1.85
PS-1257	14"	2.15
PS-1258	15¾"	2.45
PS-1259	17½"	2.70
PS-1260	19¼"	3.00
PS-1261	21"	3.30

ALUMINUM

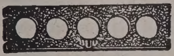
Catalog No.	Height	Dealer Cost
PA-1101	1¾"	$ .75
PA-1102	3½"	1.08
PA-1103	5¼"	1.38
PA-1104	7"	1.80
PA-1105	8¾"	2.10
PA-1106	10½"	2.49
PA-1107	12¼"	2.85
PA-1108	14"	3.18
PA-1109	15¾"	3.60
PA-1110	17½"	3.99
PA-1111	19¼"	4.35
PA-1112	21"	4.65

BUD ENCLOSED METER PANEL

PS-439 Meter Panel is designed to give maximum protection to meters. The steel panel has a large cut-out, behind which is mounted a blank Masonite sub-panel. This sub-panel has a meter mounting area of 4⅛" x 15⅛" — sufficient space to mount four 3" meters. The meters are protected by a glass insert that mounts in slides. Due to danger from breakage during shipment, this glass is not supplied with the panel. The glass insert should be cut 16" long x 4⅝" wide. Finished in either Black or Grey Wrinkle.

Cat. No.	Length	Width	Dealer Cost
PS-439	19"	5¼"	$5.85

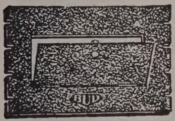
BUD STEEL METER PANELS



All meter panels are 5¼" high, 19" wide, available in either black or grey wrinkle finish. Small holes fit either 2" square or round meters, large holes fit either 3" square or round meters.

Catalog No.	Number of Holes	Diameter	Type Material	Dealer Cost
PS-440	3	2.334"	Steel	$1.30
PS-441	5	2.334"	Steel	1.85
PS-442	3	2.835"	Steel	1.30
PS-443	5	2.835"	Steel	1.85

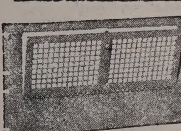
BUD METAL DOOR RACK PANELS



If it is desirable to have accessibility to component parts on the chassis, this panel is very useful. Door opening on No. 615—15⅜" x 6"; door opening on No. 616—15⅜" x 7½". These panels are available in either Grey or Black Wrinkle finish. Panels are made of 1/8" high grade sheet steel.

Catalog No.	Length	Width	Dealer Cost
PS-615	19"	10½"	$4.50
PS-616	19"	12¼"	4.95

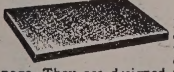
BUD VENTILATED DOOR RACK PANEL



These panels have a generous perforated area in the door, providing adequate ventilation for adjacent units. The panels are 19" long and available in either Black or Grey Wrinkle finish. Door opening on P. S. 814 15⅜" x 6". Opening on P. S. 815 15⅜ x 7½.

Cat. No.	Height	Door Height	Dealer Cost
PS-814	10½"	6"	$5.85
PS-815	12¼"	7½"	6.45

BUD RACK SHELVES

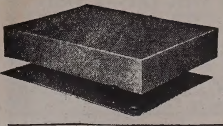


Heavy power supplies, modulator units, etc., can be mounted on these rack shelves which are supported in the cabinet by the chassis-supporting angles listed on this page. They are designed to slide in from the rear of the cabinet. Made of heavy gauge steel, finished in Black Wrinkle Enamel only.

Catalog No.	Width	Height	Depth	Dealer Cost
CB-1976	19"	1"	15"	$3.10
CB-1977	19"	1"	12"	2.35

BUD HEAVY DUTY CHASSIS

(Furnished with Bottom Plates)



These chassis, made of heavy gauge steel, are intended for applications requiring unusual sturdiness and where large weights are involved. Available in either Black Wrinkle finish or Electro-Zinc Plate.

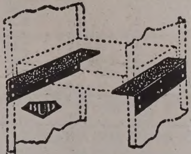
Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Dealer Cost
CB-1757	CB-1764	8"	17"	2"	$2.90
CB-1758	CB-1765	8"	17"	3"	3.15
CB-1759	CB-1766	11"	17"	2"	3.30
CB-1760	CB-1767	11"	17"	3"	3.65
CB-1761	CB-1768	13"	17"	2"	4.00
CB-1762	CB-1769	13"	17"	3"	4.40
CB-1763	CB-1770	13"	17"	4"	4.84

BUD TRIANGULAR MOUNTING BRACKETS

For panel and chassis assemblies where large weights are involved, these Triangular Mounting Brackets make convenient supports. Constructed of heavy steel. Black finish. Sold in pairs only.

Cat. No.	Height	Depth	Dealer Cost Per Pair
MB-1266	5"	5"	$0.80
MB-1267	7"	7"	.91
MB-1268	9"	9"	1.10

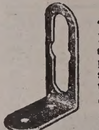
BUD CHASSIS SUPPORTING ANGLES



When heavy weights are encountered in chassis construction, Bud Chassis Supporting Angles will distribute the weight on the sides of the rack and relieve the panel. Made in two sizes from Black Painted Steel, 1/8" thick. Sold in pairs only.

Cat. No.	Length	Width	Dealer Cost Per Pair
SA-1349	14½"	3"	$1.75
SA-1350	12"	3"	1.65

BUD MOUNTING BRACKETS

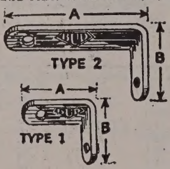


These Brackets are designed to permit the mounting of Midget Condensers, volume controls, etc., at any desired position under or on top of a chassis, at the proper distance from the chassis. Bracket is made of steel, cadmium-plated. AB-550 same as AB-549 except that slot does not have ½" hole in center.

Cat. No.	Height	Width	Slot	Dealer Cost
AB-549	2"	3/4"	⅜" & ½"	$ .07
AB-550	2"	3/4"	⅜"	.07

BUD ANGLES AND BRACKETS

A wide selection in sizes of these angles provides for numerous uses as brackets in all types of radio transmitter and receiver construction, and other electronic equipment. Made of Brass, Nickel Plated.



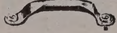
TYPE 2

				Dealer Cost Per 100
AB-633	2"	⅝"	3/8"	$5.00
AB-634	3"	¾"	3/8"	6.00
AB-635	4"	¾"	3/8"	7.25

TYPE 1

Cat. No.	Height	Depth	Width	Dealer Cost Per 100
AB-444	½"	½"	3/8"	$2.50
AB-445	¾"	¾"	3/8"	3.14
AB-446	1"	1"	3/8"	3.46
AB-447	1½"	1½"	3/8"	4.45
AB-631	1"	½"	3/8"	3.40
AB-632	1½"	⅝"	3/8"	4.00

BUD IMPROVED UTILITY HANDLES



These handles are designed to provide sufficient strength and comfortable hand-grip. They are made from aluminum tubing and are given an etched aluminum finish. Made in two sizes and furnished complete with screws, washers and nuts.

Catalog Number	Overall Length	Overall Width	Mtg. Hole Center	Dealer Cost
UH-70A	5⅛"	¾"	4⅝"	$ .33
UH-71A	3¾"	¾"	3¼"	.27

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

These pages show only a few of many BUD Products. For complete catalog, write
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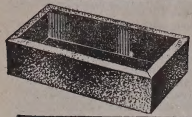


BUD STEEL CHASSIS BASES

These chassis are made from one piece of steel, all corners are reinforced and spot welded. The four sides are folded on bottom for additional strength—this also permits a bottom plate to be attached if desired. Furnished in either Black Wrinkle or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Gauge	Dealer Cost
CB-628	CB-629	5″	7″	2″	22	$ .85
CB-644	CB-645	5″	9½″	2½″	22	.90
CB-788	CB-776	5″	9½″	1½″	22	.80
CB-604	CB-605	5″	10″	3″	22	1.05
CB-789	CB-1191	7″	7″	2″	22	.90
CB-790	CB-1192	7″	9″	2″	22	1.05
CB-791	CB-1193	7″	11″	2″	20	1.10
CB-792	CB-793	7″	12″	3″	20	1.25
CB-646	CB-1194	7″	13″	2″	20	1.20
CB-647	CB-1198	5″	13½″	2½″	20	1.30
CB-649	CB-1189	7″	15″	3″	20	1.45
CB-665	CB-666	8½″	15″	3″	20	1.65
CB-1068	CB-1066	4″	17″	3″	20	1.30
CB-648	CB-1199	7″	17″	2½″	20	1.55
CB-701	CB-702	8″	10″	2½″	20	1.42
CB-703	CB-704	8″	12″	2½″	20	1.50
CB-650	CB-774	8″	17″	2″	20	1.45
CB-651*	CB-775	8″	17″	3″	20	1.55
CB-652	CB-1195	10″	12″	3″	20	1.50
CB-653	CB-779	10″	14″	3″	20	1.60
CB-654*	CB-769	10″	17″	2″	20	1.60
CB-636*	CB-637	10″	17″	3″	20	1.60
CB-655*	CB-1196	10″	17″	3″	18	1.85
CB-656	CB-1197	10″	23″	3″	18	2.44
CB-657*	CB-770	11″	17″	2″	18	2.00
CB-658*	CB-771	11″	17″	3″	18	2.20
CB-663*	CB-661	12″	17″	2″	18	1.70
CB-664*	CB-662	12″	17″	3″	18	2.00
CB-659*	CB-772	13″	17″	2″	18	2.35
CB-660*	CB-773	13″	17″	3″	18	2.55
CB-640*	CB-641	10″	17″	4″	18	2.04
CB-642*	CB-643	13″	17″	4″	18	3.00
CB-623	CB-624	10″	17″	5″	18	3.65
CB-625	CB-626	13″	17″	5″	18	4.00

* Indicates chassis which are punched to accommodate Chassis Mounting Brackets.

BUD OPEN-END CHASSIS

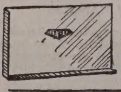
Primarily intended to be used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used with ends folded over 3/8″ for additional strength. Finish is Electro-Zinc Plating.

Cat. No.	Depth	Width	Height	Fits Cab. No.	Dealer Cost
CB-38	7″	6″	2″	C-1584	$ .66
CB-30	5″	7″	1½″		.60
CB-41	7″	7″	1½″	C-973	.73
CB-39	7″	8″	2″	C-1585	.84
CB-996	5½″	9″	1½″	C-993	.70
CB-976	7½″	9″	1½″	C-999, C-1746	.95
CB-40	7″	10″	2″	C-1586	.90
CB-997	7″	11″	1½″	C-994, C-1747	1.00
CB-998	7″	13″	1½″	C-995, C-1748	1.16
CB-34	10¾″	14″	2″	C-975A	1.44
CB-35	7¾″	15″	2″	C-1190A	1.38

BUD CHASSIS DECKS

These chassis are suitable for use in carrying cases and utility cabinets. Each unit is folded over 1½″ on the front, 1/2″ on the side and made from Zinc Plated steel. Also useful for interstage shielding and supports in regular panel and chassis layouts.

Cat. No.	Width	Depth	Fits Cab. No.	Dealer Cost
CB-522	4¾″	5½″	CU-1098	$ .52
CB-523	4¾″	4½″	CU-1099	.50
CB-524	6¾″	6½″	CU-879	.64
CB-525	5¾″	5½″	CU-1124, CC-1096	.60
CB-526	8¾″	7½″	CU-880	.92
CB-527	9¾″	7½″	CU-881	.95
CB-528	7¾″	6½″	CU-882	.75
CB-36	6½″	6½″	CC-1097	.66
CB-37	8¾″	6½″	CC-1100	.82



BUD INTERSTAGE SHIELDS

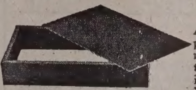
These shields are useful on receiver and transmitter chassis for eliminating interstage coupling and isolating individual circuits. Formed angles on front and bottom facilitate mounting on either chassis or panel. Both angles punched with two mounting holes.

Cat. No.	Height	Depth	Dealer Cost
IS-1246	5½″	7″	$ .60
IS-1247	5½″	10″	.66
IS-1245	6½″	10″	.60

BUD ALUMINUM CHASSIS

The construction and design of these chassis is exactly the same as our steel chassis. The aluminum chassis are welded on government approved spot welders that are the same as used in the welding of aluminum airplane parts. As a result, you can depend on BUD Aluminum Chassis to do a perfect job. Etched Aluminum finish. The gauges in table below are aluminum gauges.

Catalog Number	Depth	Width	Height	Gauge	Dealer Cost
AC-430	4″	6″	3″	18	$1.02
AC-431	4″	6″	2″	18	1.02
AC-432	4″	17″	3″	16	1.83
AC-402	5″	7″	2″	18	.84
AC-429	5″	7″	3″	18	1.05
AC-403	5″	9½″	2″	18	.99
AC-421	5″	9½″	3″	18	1.17
AC-404	5″	10″	3″	18	1.20
AC-422	5″	13″	3″	18	1.26
AC-433	6″	17″	3″	16	1.89
AC-405	7″	7″	2″	18	.99
AC-406	7″	9″	2″	18	1.08
AC-407	7″	11″	2″	18	1.20
AC-408	7″	12″	3″	18	1.41
AC-409	7″	13″	2″	18	1.26
AC-411	7″	15″	3″	16	2.04
AC-423	7″	17″	2″	16	1.83
AC-424	8″	12″	3″	16	1.71
AC-425	8″	17″	2″	16	1.89
AC-412	8″	17″	3″	16	2.22
AC-413	10″	12″	3″	16	1.89
AC-414	10″	14″	3″	16	2.40
AC-415	10″	17″	2″	16	2.28
AC-416	10″	17″	3″	16	2.58
AC-426	11″	17″	2″	14	2.37
AC-417	11″	17″	3″	14	3.00
AC-418	12″	17″	3″	14	3.18
AC-419	13″	17″	2″	14	2.82
AC-420	13″	17″	3″	14	3.36
AC-427	10″	17″	4″	14	2.97
AC-428	13″	17″	4″	14	3.84



BUD REMOVABLE TOP CHASSIS

Amateurs and experimenters who make periodic changes can do so with a minimum of waste by just discarding the top that has been drilled and replacing it with a new top. Supplied in Black Wrinkle finish or Electro-Zinc Plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Dealer Cost
CB-196	CB-193	10″	17″	3″	$3.30
CB-197	CB-194	10″	17″	4″	3.65
CB-251	CB-210	13″	17″	3″	3.45
CB-252	CB-211	13″	17″	4″	4.25
REPLACEMENT CHASSIS TOPS					
RT-198	RT-195	10″	17″	1/16″	$1.25
RT-253	RT-212	13″	17″	1/16″	1.55

BUD CHASSIS BOTTOM PLATES

These bottom plates make excellent dust covers and protect all wiring and component parts under the chassis. Each plate has four formed bosses that prevent sharp edges from scratching the table top. Supplied in Black Wrinkle finish or Electro-Zinc Plated finish.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Width	Length	Dealer Cost
BP-705	BP-706	5″	7″	$ .46
BP-680	BP-667	5″	9½″	.43
BP-536	BP-538	5″	10″	.46
BP-681	BP-668	7″	7″	.60
BP-682	BP-669	7″	9″	.62
BP-683	BP-670	7″	11″	.71
BP-537	BP-539	7″	12″	.68
BP-684	BP-671	7″	13″	.75
BP-685	BP-672	5″	13½″	.60
BP-516	BP-513	7″	15″	.75
BP-541	BP-540	8½″	15″	.76
BP-1069	BP-1067	4″	17″	.60
BP-686	BP-673	7″	17″	.86
BP-707	BP-708	8″	10″	.75
BP-709	BP-710	8″	12″	.86
BP-687	BP-674	8″	17″	.90
BP-688	BP-675	10″	12″	.90
BP-517	BP-514	10″	14″	.85
BP-689	BP-676	10″	17″	1.10
BP-690	BP-677	11″	17″	1.10
BP-691	BP-678	12″	17″	1.20
BP-692	BP-679	13″	17″	1.40
BP-518	BP-515	10″	23″	1.40

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

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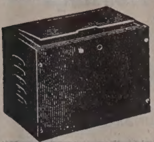
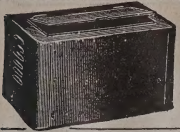
BUD INSTRUMENT & RECEIVER CABINETS



Each cabinet has an evenly recessed hinged cover with convenient finger lift. The panel on front of cabinet is readily attached with self-tapping screws. Louvers provide ample ventilation. These Cabinets are finished in Black Wrinkle only. For chassis to fit these cabinets see Open End Chassis listed on other page.

Cat. No.	Height	Width	Depth	Dealer Cost
C-973	7"	8"	8"	$3.20
C-993	7"	10"	8"	3.48
C-994	7"	12"	8"	4.00
C-995	7"	14"	8"	4.20
C-1190	8"	16"	8"	6.00
C-975	9"	15"	11"	6.00

BUD STREAMLINED CABINETS



Distinctive features of these cabinets are the rounded front corners and recessed hinged top. All parts built into this cabinet are easily accessible. Overall height, 8". Depth, 8¼". Finished in Black Wrinkle only. Suitable chassis may be found under listing of Open End Chassis on other page.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1789	8" x 8"	10½"	8"	$3.25
C-1746	8" x 10"	12½"	8"	4.00
C-1747	8" x 12"	14½"	8"	4.50
C-1748	8" x 14"	16½"	8"	5.15
C-1790	8" x 16"	18½"	8"	5.75

BUD DELUXE STREAMLINED CABINETS

These cabinets are identical with those listed above, except that they have a 1/2" vertical chrome strip at each side of the panel, and are supplied in Gray Wrinkle Enamel only.

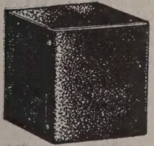
Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1791	8" x 8"	10½"	8"	$4.15
C-1781	8" x 10"	12½"	8"	4.62
C-1782	8" x 12"	14½"	8"	4.95
C-1783	8" x 14"	16½"	8"	6.18
C-1792	8" x 16"	18½"	8"	6.50

BUD METAL CARRYING CASES

These carrying cases have many uses. An easy grip handle is fastened to the top. Front and back panels are removable. Steel welded construction assures maximum strength with minimum weight, an important requirement for portable work. Finish is Black Wrinkle only. For chassis to fit these cabinets see Chassis Decks on other page.

Cat. No.	Depth	Width	Height	Dealer Cost
CC-1095	5"	6"	9"	$2.48
CC-1091	5"	9"	6"	2.48
CC-1096	6"	7"	12"	2.90
CC-1092	6"	12"	7"	3.42
CC-1097	7"	7¾"	15"	3.60
CC-1100	8"	10"	10"	3.42
CC-1093	7"	15"	9"	5.00

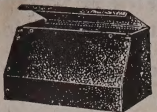
BUD STREAMLINED SCOPE AND UTILITY CABINETS



These are attractive cabinets that are adaptable to a variety of uses. All cabinets are supplied with chassis. Prices shown below include chassis. The chassis height on all except CU-1991 and CU-1992 is 1½". CU-1991 is designed for 3" cathode ray tube and has a hinged cover to provide easy access to tube or other components. Chassis height is 2". CU-1992 is designed for a 5" cathode ray tube and also has a hinged cover. Chassis height, 3".

Catalog Number	Width	Depth	Height	Dealer Cost
CU-1990	5½"	8¼"	8"	$3.50
CU-1984	7½"	8¼"	8"	3.52
CU-1985	9½"	8¼"	8"	3.92
CU-1986	11½"	8¼"	8"	4.30
CU-1987	13½"	8¼"	8"	5.00
CU-1988	15⅛"	8¼"	8"	5.50
CU-1989	17⅛"	8¼"	8"	6.25
CU-1991	7½"	13"	8"	6.60
CU-1992	9½"	19"	12"	6.60

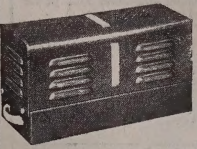
BUD SLOPING PANEL CABINETS



The entire front panel is removable if desired. This cabinet is also provided with a hinged top for easy accessibility to tubes or other parts that are mounted on chassis. All cabinets are finished in Black Wrinkle only.

Catalog Number	Height	Width	Depth	Fits Chassis	Dealer Cost
C-1584	6½"	7 1/16"	7¼"	7" x 6" x 2"	$3.15
C-1585	6½"	9 1/16"	7¼"	7" x 8" x 2"	3.58
C-1586	6½"	11 1/16"	7¼"	7" x 10" x 2"	3.96
C-1892	8"	13 1/16"	8½"	8" x 12" x 2½"	4.75
C-1893	10"	18 1/16"	10½"	10" x 17" x 3"	6.66

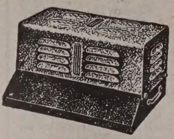
BUD STREAMLINED AMPLIFIER FOUNDATIONS



Use this unit to obtain beauty in an amplifier and similar apparatus. Each foundation consists of a standard chassis on which is mounted a removable top cover. Chromium trim is used to add additional attractiveness to the equipment. All chassis are 3" high and complete units are 9" high. Sturdy Easy Grip handles are attached to chassis, excepting No. 1750 where handle is attached to top. Finished in either Black or Grey Wrinkle.

Cat. No.	Width	Depth	Dealer Cost
CA-1750	10 1/16"	5"	$3.90
CA-1751	12 1/16"	7"	5.06
CA-1752	17 1/16"	7"	5.50
CA-1753	17 1/16"	10"	6.33

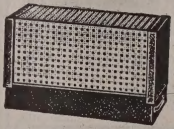
BUD SLOPING PANEL AMPLIFIER FOUNDATIONS



Each foundation consists of a 4" sloping front chassis on which is mounted a removable top cover. The top cover contains grilled cutouts and louvers for adequate ventilation. The CA-1980 has a handle mounted on top of cover. All others have handles mounted on chassis. All chassis are 3½" high and all units are 9½" overall height. Cover is finished in Grey Wrinkle with chrome trim and the chassis is finished in Black Wrinkle.

Cat. No.	Top Depth	Chassis Length	Chassis Depth	Dealer Cost
CA-1980	5"	10"	8"	$5.10
CA-1981	7"	12"	10"	5.94
CA-1982	7"	17"	10"	6.85
CA-1983	10"	17"	13"	7.50

BUD AMPLIFIER FOUNDATIONS



Each unit consists of a regular chassis on which is attached a perforated metal cover which provides a lot of ventilation. Chassis have easy grip handles attached to same. Finished in Black Wrinkle only

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-699	8 5/16"	9⅝"	5⅛"	2½"	$3.85
CA-1125	8 5/16"	13⅝"	5⅛"	2½"	4.25
CA-1126	8 5/16"	17⅛"	7⅛"	2½"	5.50
CA-1127	8 13/16"	17⅛"	10⅛"	3"	7.15
CA-1128	8 13/16"	12⅛"	10⅛"	3"	6.05

BUD BOX SHIELDS

This shield has many uses: Shielding power transformers and chokes, and for covering and protecting various other components in power supplies, transmitters, receivers and other electronic units.

Top and sides are one-piece steel. No. BS-1244 has perforated steel ends for ventilation. BS-1891 has solid ends. Flanges at bottom provide for mounting. Finished in Black Wrinkle Enamel only.

Cat. No.	Ends	Length	Depth	Height	Dealer Cost
BS-1244	Ventilated	7½"	4½"	5"	$1.60
BS-1891	Solid	7½"	4½"	5"	1.65

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

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BUD RADIO INC., Dept. ANH, 2118 E. 55th St., Cleveland 3, Ohio

Bud Leads The Field With A Complete Line of Sheet Metal Housings For Equipment Using Miniature Tubes

CABINETS, CHASSIS AND AMPLIFIER FOUNDATION CASES

BUD MINIATURE UTILITY CABINETS *with attached Chassis*

Filling a long wanted need for a small cabinet with a chassis attached to the front panel, these cabinets are indispensable when building electronic devices using miniature tubes. Front and rear panels are removable and fastened with self-tapping screws, permitting easy accessibility. Especially useful for HF converters, television amplifiers and power supplies. Finished in black wrinkle.

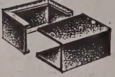
Cat. No.	Height	Width	Depth	CHASSIS SIZE			Dealer Cost
C-1793	4"	4"	2"	1"	3⅛"	1⅞"	$1.05
C-1794	4"	5"	3"	1"	4⅛"	2⅞"	1.15
C-1795	5"	4"	3"	1¼"	3⅛"	2⅞"	1.15
C-1796	6"	5"	4"	1¾"	4⅛"	3⅞"	1.43
C-1797	5"	6"	4"	1¼"	5⅛"	3⅞"	1.43
C-1798	6"	6"	6"	1¾"	4⅞"	5⅞"	1.48

BUD SLOPING PANEL UTILITY BOX

A compact, sloping panel cabinet, providing a streamlined appearance and enough space to house conveniently a 2 or 3 miniature tube amplifier or gadget. A ⅜" flange around the rear opening of the cabinet provides a convenient back cover mounting. Designed to accommodate a Bud miniature chassis. Finished in black wrinkle.

Cat. No.	Height	Width	Depth	Use Chassis No.	Dealer Cost
C-1602	4"	4"	4¼"	CB-1617	$1.20
C-1603	4"	5"	4¼"	CB-1618	1.30
C-1604	4"	6"	4¼"	CB-1619	1.40
C-1605	4"	7"	4¼"	CB-1620	1.50

BUD HANDY BOXES

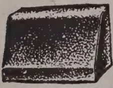


Something new in box design permits a large number of small components to be *easily* wired or serviced. The cover is held by 4 self-tapping screws. Black wrinkle finished steel.

Cat. No.	Height	Width	Depth	
HB-1621	2¼"	4¼"	1½"	$ .90
HB-1622	2"	4"	2¾"	1.00

BUD SLOPING PANEL UTILITY CABINET

A metal box that can be used for numerous purposes. Finished in Black Wrinkle Enamel only.



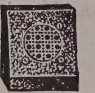
Cat. No.	Height	Width	Depth	Dealer Cost
C-1578	4¼"	4"	4"	$1.00
C-1579	4¼"	5"	4"	1.15
C-1580	4¼"	6"	4"	1.32
C-1581	4¼"	7"	4"	1.59

BUD STREAMLINED MULTI-PURPOSE CABINETS

Handsome streamlined metal cabinet, finished in grey wrinkle. Back of Cabinet open for ventilation.

Cat. No.	Height.	Width	Depth	Use Chassis No.	Dealer Cost
C-1784	4½"	3⅝"	3⅛"	CB-1623	$1.65
C-1785	4½"	7⅛"	3⅛"	CB-1628	1.93
C-1787	6½"	5½"	3½"	CB-1625	1.70
C-1788	4½"	5½"	3½"	CB-1625	1.75

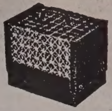
BUD MIDGET SPEAKER CASES



A safe, convenient housing for midget 2" and 3" speakers. Size 4" wide, 4" deep, 4¼" high. Furnished in Black Wrinkle Finish only.

Catalog Number	Hole Diameter	Speaker Size	Dealer Cost
CS-1685	2 3/16"	2"	$1 50
CS-1686	2 13/16"	3"	1 50

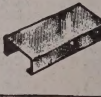
BUD MINIATURE AMPLIFIER FOUNDATION



With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is a 5" x 7" x 2". The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Finished in black wrinkle.

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-1754	6"	7"	5"	2"	$ 3.00

BUD ALUMINUM MINIATURE CHASSIS



These small, open end aluminum chassis are just the thing for miniature tube applications or sub-assemblies. Made of hard aluminum with ¼" flange on bottom, allowing the chassis to be fastened down or a bottom plate to be attached. Extremely useful for small receivers, outboard uses, such as narrow band FM adapters or any use where space is limited. Finish is etched aluminum.

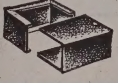
Cat. No.	Depth	Width	Height	Fits Cabinet No.	Dealer Cost
CB-1623	2⅝"	2¾"	1¼"	C-1784	$ .30
CB-1624	1¾"	3⅛"	1"	CU-883	.33
CB-1625	3¼"	4½"	2"	C-1788	.36
CB-1626	2¾"	4⅛"	1"	CU-728	.36
CB-1627	3¾"	4⅛"	1½"	CU-729	.36
CB-1628	3"	6⅛"	1¼"	C-1785	.42
CB-1629	5¾"	4⅞"	1½"	CU-1098	.45
CB-1617	4"	3⅛"	1"	C-1602	.36
CB-1618	4"	4⅛"	1"	C-1603	.39
CB-1619	4"	5⅛"	1"	C-1604	.42
CB-1620	4"	6⅛"	1"	C-1605	.45

BUD STREAMLINED METER CASES

Designed for all applications requiring a modern meter case. All cases have a sloping front with top corner rounded. Meter cases CM-1241 and CM-1242 have insulators on top for leads to meter. CM-1965 and CM-1966 are furnished without indicators. Finished in Black Wrinkle.

Catalog Number	Hole Diameter	Fits Meter Size	Dealer Cost
CM-1241	2 3/16"	2"	$1.25
CM-1242	2 13/16"	3"	1.25
CM-1965	2 3/16"	2"	.95
CM-1966	2 13/16"	3"	.95

BUD MINIBOXES



There are thousands of uses in the fields of radio and electronics for these new boxes. They are made from heavy gauge aluminum. The design of the box permits installation of more components than would be possible in the conventionally designed box of the same size. It is of two piece construction, each half forming three sides. The flange type construction assures adequate shielding. Available in etched aluminum finish and gray hammerloid finish.

Gray Cat. No.	Etched Cat. No.	Length	Width	Height	Dealer Cost
CU-2100	CU-3000	2¾"	2⅛"	1⅝"	$ .63
CU-2101	CU-3001	3¼"	2⅛"	1⅝"	.63
CU-2102	CU-3002	4"	2⅛"	1⅝"	.66
CU-2103	CU-3003	4"	2¼"	2¼"	.87
CU-2104	CU-3004	5"	2¼"	2¼"	.90
CU-2105	CU-3005	5"	4"	3"	.99
CU-2106	CU-3006	5¼"	3"	2⅛"	.96
CU-2107	CU-3007	6"	5"	4"	1.23
CU-2108	CU-3008	7"	5"	3"	1.38
CU-2109	CU-3009	8"	6"	3½"	2.01
CU-2110	CU-3010	10"	6"	3½"	2.49
CU-2111	CU-3011	12"	7"	4"	2.94
CU-2112	CU-3012	17"	5"	4"	3.45
CU-2113	CU-3013	10"	2"	1⅝"	.99
CU-2114	CU-3014	12"	2½"	2¼"	1.35
CU-2115	CU-3015	4"	2"	2¾"	.84
CU-2116	CU-3016	4¼"	2¼"	1¼"	.87

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

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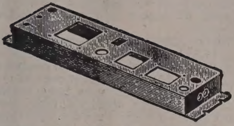
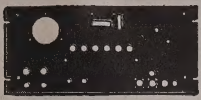
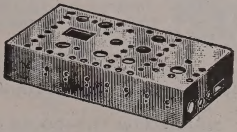
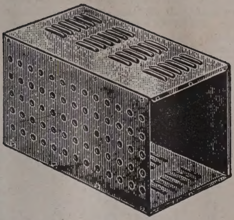
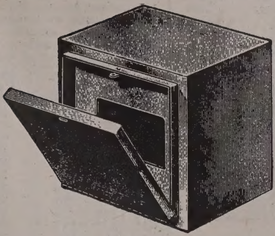
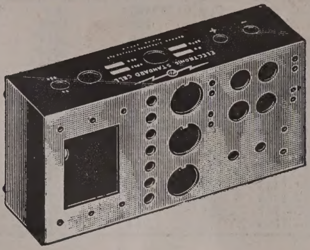
BUD RADIO INC., Dept. ANH, 2118 E. 55th St., Cleveland 3, Ohio

New, Improved PRODUCTION FACILITIES

for Special Sheet Metal Fabrication

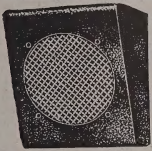







NOW, BUD RADIO, through its Metal Products Division, offers greatly increased facilities for the production of special sheet metal items. New machinery has been added, departments have been modernized and streamlined and new methods have been developed.

We make over 400 different sheet metal products, as stock items. Often a slight change in one of our standard models will eliminate the necessity of special tools and dies, thereby reducing costs. Since we produce thousands of sheet metal products every month for ourselves and for leading firms throughout the country we are able to effect economies in production which mean lower price and faster delivery.

Our expanded facilities, expert workmanship, years of experience and manufacturing, "know-how" assure high quality products. In addition, our engineering staff is always available for consultation and advice. Send us your blue prints for estimates.

Illustrated above are a few examples of specially fabricated sheet metal products.

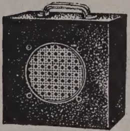


BUD WALL OR TABLE TYPE SPEAKER CASE

A distinctive line of new metal speaker cabinets with reproduction capabilities equal to wood cabinets. All troubles with wood warping and splitting are eliminated.

Keyway holes are provided for wall mounting and four embossed feet on the bottom are provided to prevent damaging table surfaces. Finished in Brown Wrinkle only.

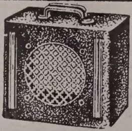
Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1948	3½"	4"	7½"	6½"	4¼"	$2.85
CS-1939	4"	5"	7½"	6½"	4¼"	3.00
CS-1940	4¾"	6"	9½"	8"	5⅝"	3.40
CS-1941	6½"	8"	11½"	9½"	7"	3.90
CS-1942	8½"	10"	13½"	11½"	8¼"	4.50
CS-1943	10½"	12"	15½"	13½"	9¾"	5.00



BUD GENERAL SPEAKER CABINETS

In making permanent or portable public address installations, this line of speaker cabinets will be found very useful. No baffle required with these speaker housings. Quality of reproduction is equal to that of fine wood speaker cases. Construction is of heavy, cold-rolled steel. A carrying handle is attached to each cabinet for portable purposes. Finished in Black Wrinkle Enamel only

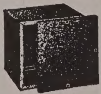
Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-471	4¾"	6"	9"	9"	6"	$3.45
CS-472	6½"	8"	11"	11"	7"	4.35
CS-473	8¹³⁄₁₆"	10"	13"	13"	8"	5.50
CS-474	11"	12"	15"	15"	8"	7.40



BUD STREAMLINED SPEAKER CASES

For an attractive Speaker Housing that is portable, choose these Speaker Cases. No baffle required with these Speaker Cases. Quality of reproduction is equal to that of a good wood speaker housing. Front vertical corners are rounded and the speaker opening is covered with artistic metal grille. Two trips of chrome trim are mounted on front. Drilled to take size of speaker intended for case. Black or Grey Wrinkle finish.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1935	4¾"	6"	8"	9"	6"	$3.50
CS-1936	6½"	8"	9¾"	11"	7"	4.50
CS-1937	8¹³⁄₁₆"	10"	11½"	13"	8"	5.70
CS-1938	11"	12"	13½"	15"	8"	7.00



BUD METAL UTILITY CABINETS

The large number of sizes available makes this line useful for all sorts of electronic equipment, monitors, frequency meters, etc. These cabinets have two removable sides for easy accessibility and are finished in Black Wrinkle.

Cat. No.	Depth	Width	Height	Dealer Cost
CU-883	2"	4"	4"	$ .85
CU-728	3"	5"	4"	.95
CU-729	4"	5"	6"	1.20
CU-1098	6"	6"	6"	1.30
CU-1099	5"	6"	9"	1.86
CU-879	7"	8"	10"	2.30
CU-1124	6"	7"	12"	2.46
CU-880	8"	10"	10"	2.90
CU-881	8"	11"	12"	3.60
CU-882	7"	9"	15"	4.10

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.

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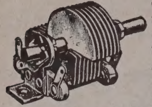
BUD MIDGET CONDENSERS



Small size, sturdy construction and high mechanical and electrical efficiency are the outstanding features. Insulation used is Steatite. Rotor and Stator plates are brass and are electro-soldered to their respective rods. All metal parts are cadmium plated. These condensers have both front and rear bearings and are furnished in either mid-line type plates (straight line wave length), or semi-circular plates (straight line capacity).

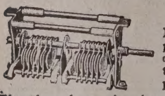
SEMI-CIRCULAR TYPE—DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Min.	Air Gap	Number Plates	Dealer Cost
MC-1850	15	3	.024"	3	$1.53
MC-1852	33	4	.024"	5	1.65
MC-1853	50	5	.024"	7	1.92
MC-1855	100	7	.024"	14	2.10
MC-1856	140	7	.024"	19	2.43
MC-1858	190	9	.024"	27	2.58
MC-1859	235	10	.024"	33	2.91
MC-1860	300	12	.024"	43	3.18
MC-1861	15	4	.060"	5	1.65
MC-1862	35	5	.060"	11	2.10
MC-1863	50	7	.060"	15	2.31
MC-1864	75	9	.060"	23	2.70
MC-1865	100	12	.060"	31	2.94
MC-1866	35	8	.095"	15	2.43
MC-1867	50	10	.095"	23	2.76
MC-1868	75	13	.095"	33	3.18

MID-LINE TYPE—DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Min.	Air Gap	Number Plates	Dealer Cost
MC-900	25	4	.024"	4	$1.71
MC-902	35	5	.024"	6	1.74
MC-903	50	6	.024"	8	2.01
MC-904	75	7	.024"	11	2.10
MC-905	100	7	.024"	15	2.28
MC-906	140	7	.024"	20	2.61
MC-908	190	9	.024"	27	2.73
MC-909	250	11	.024"	36	2.97
MC-910	300	13	.024"	43	3.33
MC-565	15	4	.060"	5	2.01
MC-897	35	6	.060"	11	2.10
MC-898	50	7	.060"	16	2.40
MC-899	75	8	.060"	23	2.76
MC-941	100	11	.060"	31	3.00
MC-965	35	8	.095"	15	2.49
MC-966	50	12	.095"	23	2.70
MC-967	75	14	.095"	33	3.18

BUD JUNIOR DUAL SECTION CONDENSERS

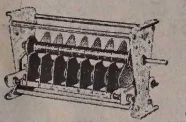


Rotor contact is made by a four-finger, plated pressure spring placed at the center of the rotor shaft between the two sections, thereby providing perfect balance and improving the high frequency characteristics. The tie-rods are insulated at both ends with Steatite insulators to prevent inductive loops in condenser frame. All other constructional features and materials are the same as used on Junior single section condenser.

Catalog Number	Capacity Per Section Max. MMFD.	Min. MMFD.	No. Plates Per Section	Air Gap	Length Over-all	Dealer Cost
JC-1550A	20	3	3	.051"	4 5/32"	$7.05
JC-1551A	50	5	7	.051"	4¾"	7.56
JC-1552A	70	6	9	.051"	5 1/16"	7.80
JC-1553A	100	7	13	.051"	5 21/32"	8.25
JC-1554A	145	9	19	.051"	6 9/16"	9.00
JC-1569A	200	10	25	.051"	7 15/32"	9.75
JC-1556A	250	12	33	.051"	8 21/32"	10.50
JC-1570A	25	4	5	.078"	4 11/16"	6.00
JC-1572A	55	8	11	.078"	5 29/32"	6.72
JC-1573A	80	9	15	.078"	6 23/32"	7.98
JC-1561A	110	10	21	.078"	7 15/16"	9.81
JC-1562A	150	11	29	.078"	9 9/16"	11.40
JC-1574A	20	5	7	.144"	5⅞"	9.00
JC-1575A	40	8	13	.144"	7 29/32"	9.60
JC-1576A	55	10	17	.144"	9¼"	10.02
JC-1566A	18	6	7	.175"	6¼"	8.25
JC-1567A	40	11	15	.175"	9 7/16"	9.00

Panel Space for mounting Junior Condensers, 2¾" wide by 2⅞" high.

BUD GIANT TRANSMITTER CONDENSER—SINGLE SECTION



Modern design, plus precision production methods, makes BUD GIANT TRANSMITTER CONDENSERS the first choice of critical engineers for use in such applications as broadcast transmitters, high-power trans-oceanic communications equipment, and many other types of highly specialized electronic devices.

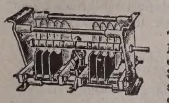
BUD GIANT TRANSMITTER CONDENSERS are built with a sturdy frame consisting of 3/16″ thick aluminum end plates, connected by 5/8″ diameter duraluminum rods. Formed brackets at top and bottom of end plates provide for mounting these units, and permit placing of associated inductances directly on the condenser.

Rotor and stator plates are accurately stamped from 0.064″ thick highly polished aluminum with all edges rounded to minimize corona loss and danger of peak-voltage flash-over. The plates are separated by accurately machined duraluminum spacers that insure a constant air-gap throughout the entire length of the condenser.

The large two-finger rotor-contact spring, made from plated spring brass, assures positive contact with noise-free operation. Steatite bars insulate the stator, and are placed well outside the electrostatic field to keep dielectric losses at a minimum.

Catalog Number	Max. Cap. MMFD	Min. Cap. MMFD	No. of Plates	Air Gap	Mtg. Hole Spcg.	Over-All Length	Dealer Cost
GC-1800	195	24	15	.250″	8½″	12⅜″	$26.13
GC-1801	345	32	27	.250″	12¼″	16⅛″	37.02
GC-1802	530	48	41	.250″	16⅝″	20½″	49.68
GC-1803	55	19	7	.500″	7½″	11⅜″	20.85
GC-1804	95	25	15	.500″	12″	15⅞″	29.10
GC-1805	150	33	21	.500″	15⅝″	19¼″	34.98
GC-1806	255	52	35	.500″	23¼″	27⅛″	49.02
GC-1807	50	22	9	.750″	10⅝″	14½″	24.21
GC-1808	75	27	13	.750″	13⅞″	17¾″	29.34
GC-1809	110	40	19	.750″	18¾″	22⅝″	32.67
GC-1810	160	50	29	.750″	26⅞″	30¾″	46.86
GC-1811	55	30	11	1.000″	14¾″	18⅝″	28.11
GC-1812	85	40	17	1.000″	21⅛″	25″	36.05
GC-1813	105	45	23	1.000″	27½″	31⅜″	44.43

BUD GIANT TRANSMITTER CONDENSERS—DUAL SECTION



These GIANT DUAL-SECTION TRANSMITTER CONDENSERS compare in quality with the GIANT SINGLE-SECTION TUNING CONDENSERS described above, and have the same general constructional features. Insulated tie-rods in these split-stator units eliminate closed loops in the frame.

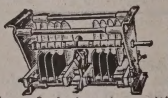
The rotor-contact consists of four fingers made from heavy-plated spring brass, placed in the center of the rotor assembly under heavy spring tension. This construction reduces series resistance and improves the efficiency of the unit at the higher frequencies.

When these dual condensers are used in split-stator circuits, the capacity is reduced to one-half the listed value and the voltage ratings are doubled.

Catalog Number	Cap. Per Sec. Max.	Min.	No. Plates Per Sec.	Air Gap.	Mtg. Hole Spcg.	Overall Length	Dealer Cost
GC-1815	110	15	9	250″	11 1/16″	15″	$34.10
GC-1816	215	23	17	.250″	16 1/16″	20″	47.19
GC-1817	320	30	25	.250″	21 1/16″	25″	60.51
GC-1818	55	18	7	500″	13¾″	17 11/16″	33.87
GC-1819	80	22	11	.500″	18¼″	22 3/16″	41.67
GC-1820	110	25	15	.500″	22¾″	26 11/16″	45.22
GC-1821	30	15	5	.750″	13½″	17 7/16″	30.12
GC-1822	52	20	9	.750″	20″	23 15/16″	41.13
GC-1823	70	25	13	.750″	26½″	30 7/16″	46.92
GC-1824	35	18	7	1.000″	19¾″	23 11/16″	39.21

Panel space for mounting Giant Condenser 6¾″ wide by 8 13/16″ high.

BUD MASTER TRANSMITTING CONDENSERS—Dual Section



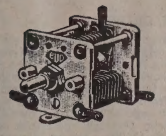
While the general style and construction is identical with the single Master units, all tie-rods in this series are insulated by glazed Steatite pillars, thus completely eliminating all closed metallic loops in the condenser frame. A special outstanding feature, developed by BUD engineers, is that of placing the positive double wiping rotor contact between the two sections at the center of the rotor. These features contribute to perfect circuit balance and eliminate the majority of difficulties encountered in ultra-high frequency equipment due to parasitics, circulating currents and poor neutralization. Use BUD condensers throughout and be trouble free.

Catalog Number	Cap. Per Sec. Max.	Min.	No. Plates Per Sec.	Air Gap.	Mtg. Hole Spcg.	Over-all Length	Dealer Cost
BC-1635A	25	9	5	.200″	6 13/32″	8 1/32″	$13.91
BC-1636A	35	12	7	.200″	7 13/32″	9 1/32″	14.70
BC-1637A	50	13	11	.200″	9 13/32″	11 1/32″	15.96
BC-1638A	75	16	15	.200″	11 13/32″	13 1/32″	17.28
BC-1633A	100	20	21	.300″	14 13/32″	16 1/32″	19.35
BC-1634A	50	15	13	.300″	12 13/16″	14 7/16″	17.43

Panel space to mount Master Condensers 3¾″ wide by 4⅞″ high.

These pages show only a few of many BUD Products. For complete catalog, write
BUD RADIO INC., Dept. ANH, 2118 E. 55th St., Cleveland 3, Ohio

BUD "CE" MIDGET CONDENSERS
SINGLE SECTION DOUBLE BEARING



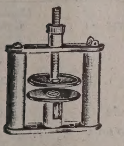
These Midget Condensers were designed to meet the rigid requirements in design of efficient ultra-high frequency electronic devices and precision laboratory equipment. Brass rotor and stator plate stacks are assembled into permanent units by means of electro-soldering, which assures long life and accurate plate spacing. End-plates of Steatite insulate the mounting bushings and angles from the rotor and stator assemblies. A large front sleeve bearing and rear ball thrust bearing provide for smooth rotation. Special wiper contact provides noise-free tuning. All metal parts are cadmium plated.

Rotor plates are semi-circular shaped.

Provision for either panel or base mounting.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD	Air Gap	No. of Plates	Over-all Length	Dealer Cost
CE-2000	15	4	.030"	3	2½"	$1.98
CE-2001	35	6	.030"	7	2 23/32"	2.22
CE-2002	50	7	.030"	9	2 27/32"	2.49
CE-2003	75	8	.030"	14	3 5/32"	2.76
CE-2004	100	9	.030"	18	3 11/32"	3.00
CE-2005	150	10	.030"	27	3 13/16"	3.21
CE-2006	200	11	.030"	35	4¼"	3.81
CE-2007	250	12	.030"	44	4¾"	4.05
CE-2008	300	15	.030"	52	5 3/16"	4.29
CE-2011	15	5	.060"	5	2¾"	2.07
CE-2012	35	7	.060"	11	3¼"	2.31
CE-2013	50	8	.060"	15	3 9/16"	2.70
CE-2014	75	10	.060"	23	3¼"	3.12
CE-2015	100	13	.060"	31	4 9/16"	3.63
CE-2016	35	9	.095"	15	4 1/16"	2.82
CE-2017	50	10	.095"	23	5 1/32'	3.12
CE-2018	75	14	.095"	33	6 7/32"	3.66

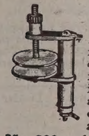
BUD NEUTRALIZING AND HIGH FREQUENCY TUNING CONDENSERS



This line of condensers will fill every neutralizing and high frequency tuning requirement that modern circuits pose. The two-pillar construction makes this unit unusually sturdy and eliminates any possibility of capacity variation due to vibration. The movable plate is adjusted by means of the threaded shaft to which it is attached, and it is permanently locked in any position by the lock-nut provided. Any loose thread is taken up by a special nut and locked to give smooth operation. All metal parts are of aluminum. Plates have rounded edges. Steatite insulation is used.

Catalog Number	Plate Diameter	MMFD. Capacity Max.	Min.	Dealer Cost
NC-1000	1 27/32"	11	1	$2.58
NC-1001	2 13/16"	24	2	3.75
NC-1002	4¾"	27	6	5.25

BUD FEED-THROUGH AND BASE MOUNTED NEUTRALIZING CONDENSERS

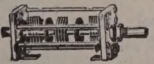


In circuits utilizing tubes with the grid lead terminated in the base, feed-through type of neutralizing condenser is particularly suited. One hole is required for mounting of feed-through condensers. Neutralizing condenser illustrated in feed-through type. Plates are made of aluminum rounded at edges to cut down losses. After proper tuning is attained, movable plate can be locked with the knurled nut.

No. 890 and No. 852 are ideal neutralizers for popular low power beam tubes. No. 890 condenser is base mounted only.

Catalog Number	Plate Diameter	Size Hole for Mtg.	MMFD. Capacity Max.	Min.	Dealer Cost
NC-852	1"	5/16"	6	.5	$1.26
NC-853	1 27/32"	13/32"	11	1	2.73
NC-890	1"	....	6	.5	1.23

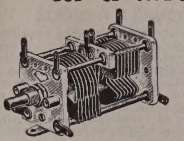
NEW BUD THREE-GANG TINY MITE CONDENSERS



Hams, Radio Constructors and Experimenters can find many uses for these compact, three-gang condensers. Designed particularly for high frequency use, they are adaptable for use in converters, preselectors and receivers covering the Amateur, Television and F.M. bands. Well constructed with soldered brass plates and ceramic brackets. Rotor shaft extended 1/4" at rear. Height 1 5/16". Width 1 3/16". Length behind panel 3⅜". Mounting holes 2 3/16" apart.

Catalog Number	Cap. Per Section Max.	Min.	No. of Plates Per Section	Dealer Cost
LC-1845	11	5	3	$3.81
LC-1846	17	5	4	4.32
LC-1847	25	6	5	4.71

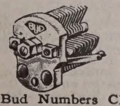
BUD "CE" TYPE DUAL MIDGET CONDENSERS



These well constructed dual condensers are similar in design to the double-bearing "CE" types. They feature a rotor wiping contact placed at center of the rotor assembly to assure maximum efficiency at ultra-high frequency. Opposed rotor construction assures perfect counterbalance and provides even torque at any position of rotation. Steatite insulation eliminates closed induction loop in frame.

Catalog Number	PER SECTION Max. Cap.	Min. Cap.	No. of Plates	Air Gap	Distance Behind Panel	Dealer Cost
CE-2032	35	6	7	.030"	3 1/32"	$2.97
CE-2033	50	7	9	.030"	3¼"	3.27
CE-2034	75	8	14	.030"	3 21/32"	3.63
CE-2035	100	9	18	.030"	4 3/32"	4.14
CE-2036	150	10	27	.030"	5 3/16"	4.80
CE-2039	15	5	5	.060"	3 1/32"	3.45
CE-2040	35	7	11	.060"	4 1/32"	3.96
CE-2041	50	8	15	.060"	4 23/32"	4.35

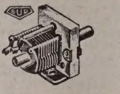
BUD TINY MITE PADDERS



For applications requiring a constant padder capacity under all temperature and humidity conditions, these units are ideal. They lend themselves readily to I. F. transformer applications, fixed tuned circuits for exciters, ganged condenser air trimers, and plug-in-coil padding as they fit inside of standard 1½" diameter coil forms, Bud Numbers CF-125, CF-126 and CF-310. Rotor and stator assemblies are made up of brass plates (0.015" thick) and rods electrically soldered into a solid unit and then are bright cadmium plated. Insulation is Steatite. Each unit may be adjusted in capacity by either a screw-driver or a 1/4" hex. wrench.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-2076	15	2	.017"	5	$1.32
LC-2077	25	2.5	.017"	7	1.56
LC-2078	35	3	.017"	10	1.74
LC-2079	50	3.9	.017"	14	1.92
LC-2080	75	4.5	.017"	20	2.28
LC-2081	100	5.5	.017"	27	2.64
LC-2082	140	6.5	.017"	37	3.21

BUD TINY MITE TUNING CONDENSER
SINGLE SECTION

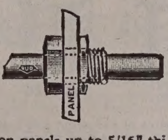


This series of condensers has been designed for applications where space or weight are limiting factors and for tuning of ultra-high frequency circuits. Rigid construction, close fitting bearing, positive rotor contact and Steatite insulation are the outstanding features. Cadmium plated, soldered, brass plates and rods insure high frequency efficiency.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-1640	8	2.5	.017"	3	$1.35
LC-1641	15	3	.017"	5	1.47
LC-1642	25	4	.017"	9	1.53
LC-1643	35	5	.017"	13	1.77
LC-1644	50	6	.017"	19	1.86
LC-1645	75	7	.017"	29	2.01
LC-1646	100	9	.017"	37	2.19
LC-1648	10	4	.037"	7	1.50
LC-1649	15	5	.037"	11	1.63
LC-1650	25	5.5	.037"	17	1.92
LC-1651	35	6	.037"	21	2.10
LC-1652*	50	8	.037"	35	2.64
LC-1653	6	3.5	.073"	5	1.59
LC-1654	15	5.5	.073"	15	1.92
LC-1655*	25	9	.073"	27	2.61

*Denotes double bearing.

PANEL BEARING ASSEMBLIES



on panels up to 5/16" thi
shaft.

Nos. PB-530 and PB-531 consist of a regular ¼" shaft bearing with 6" and 3" length of ¼" brass rod inserted and held in place by washers to prevent shaft from shifting. These two assemblies will facilitate the panel control of condensers, potentiometers, etc., which must be mounted a distance from the panel. Bearing fits in 13/32" hole and on panels up to 5/16" thick. No. PB-532 is bearing only without shaft.

Catalog Number	Overall Length	Distance in front of panels	Dealer Cost
PB-530	6"	4¾"	$ .36
PB-531	3"	1¾"	.31
PB-532	Bearing Only	....	.12

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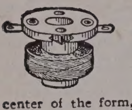
LATTICE WOUND R. F. CHOKES



For all general purpose applications requiring a high quality choke at a reasonable price, this line finds wide acceptance. Each choke is wound from silk-covered enameled copper wire on a white ceramic bobbin. Leads are terminated with two convenient soldering lugs. Chokes can be mounted with a 6-32 screw through the center of the form, and each winding is thoroughly impregnated against moisture. The wide range of sizes fills practically every choke requirement in standard radio circuits. Choke base diameter 1 1/16", distance between ends of leads 1 5/8".

Catalog Number	Inductance mh.	D. C. Res. Ohms	Current M. A.	Height	Dealer Cost
CH-1212	2.5	28	125	11/16"	$ .44
CH-1213	3.4	36	125	11/16"	.55
CH-1214	5.5	46	125	11/16"	.55
CH-1215	8.	60	125	11/16"	.66
CH-1216	10.	65	125	11/16"	.72
CH-1217	16.	84	125	11/16"	.75
CH-1218	30.	190	100	15/16"	.85
CH-1219	60.	279	90	15/16"	.96
CH-1220	80.	332	80	15/16"	1.00

TRANSMITTING CHOKES

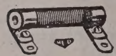
Here are two heavy duty R. F. Chokes that can really take it in high powered transmitter plate circuits. Each choke is wound on 9/16" dia. Steatite rod, has connection lugs and a mounting foot.

All chokes have a heavy ceramic coating which prevents moisture absorption and enables them to withstand momentary overloads without collapsing the individual pies.

Consists of five graduated pies wound in continuous winding. Care has been taken to prevent any of the pies from being resonant on an amateur band and to keep the distributed capacity at a minimum. Overall height 3 1/4".

Catalog Number	Inductance	Current Capacity	D. C. Resistance	Dealer Cost
CH-568	2.2 mh.	1 amp.	5 ohms	$1.98
CH-569	4.3 mh.	.6 amp.	12 ohms	1.80

ULTRA HIGH FREQUENCY R. F. CHOKES



These chokes were designed to meet the requirements of builders of ultra-high frequency receivers and transmitters. Consists of ceramic rod with a single layer winding terminated with strap leads at each end. Particularly suitable for use on 2 or 6 meters. CH-570 is supplied with a mounting foot and is sometimes used as a filament choke in certain types of high frequency oscillator and amplifier circuits.

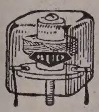
Catalog Number	Inductance mh.	Max. Current	D. C. Resistance	Lengths	Dealer Cost
CH-925	5.7 uh.	750 ma	1.4 ohms	1 1/2"	$ .30
CH-570	1.5 uh.	1.7 a	0.2 ohms	2 3/4"	1.20

BUD SMALL JACKS

These panel mounting jacks are desirable for control panels and similar applications where space is at a premium. Parts are accurately machined, with nickel plated finish and contacts are formed from spring brass. Each jack comes complete with insulated washers and will accommodate standard plugs. Overall length 1 5/8".

Catalog No.	Contacts	Distance Behind Panel	Dealer Cost
J-1038	2	15/16"	$ .33
J-1058	3	15/16"	.55

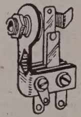
IRON CORE R. F. CHOKES



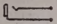
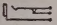
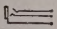
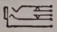
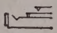
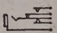
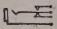
The efficiency of any circuit requiring an R. F choke will be definitely improved by utilizing one of these chokes with a finely divided molded metallic core. The improved "Q" possible with this construction results from the D. C. resistance of these chokes being from 40 to 50% less for a given inductance than for regular air-core types. Thus, the D. C. voltage drop through the choke is considerably less, yet the choking action is equally as good. Windings are made with silk-covered enameled wire terminated on convenient soldering lugs, and the chokes are mounted in small square shield cans measuring 1 3/8" x 1 3/8" x 1 7/16".

Catalog Number	Inductance mh.	D. C. Resistance Ohms	Current ma.	Dealer Cost
CH-1277	1.5	11.5	125	$ .93
CH-1278	2.5	16.	125	.96
CH-1279	3.4	19.5	125	1.05
CH-1280	5.5	27.5	125	1.05
CH-1281	8.	36.	125	1.11
CH-1282	10.	42.5	125	1.11
CH-1283	16.	53.	125	1.23
CH-1284	30.	82.	100	1.29
CH-1285	60.	131.	100	1.44
CH-1286	80.	163.	90	1.53
CH-1287	125.	221.	90	1.80
CH-294	Shield Can Only		....	.21

BUD ALL PURPOSE JACKS



Although small in size, this is one of the finest lines of jacks available. The careful design and high quality materials used in these components assure long, dependable service. Circuit opening contacts are made of pure silver and the laminated bakelite insulation prevents breakdown between springs at all ordinary voltages. Supplied with panel insulating washers. Height 1 7/8", distance behind panel 7/8".

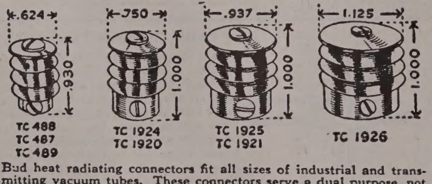
Catalog Number	Circuit Design	Contact Arrangement	Dealer Cost
J-1324		Open Circuit	$ .33
J-1325		Closed circuit	.39
J-1326		3-Contact open circuit	.42
J-1327		Break contact on tip and ring spring	.53
J-1328		Separate make-contact springs	.53
J-1329		Break contact on tip spring — separate make-contact spring	.57
J-1330		Break-make contact on tip spring	.54

BUD MIDGET JACK

The construction of this jack allows its use in applicatons having limited space behind the panel. The spring brass contact assures a good connection. These jacks come with insulating washers and accommodate standard phone plugs.

Catalog No.	Type	Distance Behind Panel	Dealer Cost
J-232 A	Open Circuit	13/16"	$ .35
J-233 A	Closed Circuit	13/16"	.40

HEAT RADIATING PLATE AND GRID TUBE CONNECTORS



Bud heat radiating connectors fit all sizes of industrial and transmitting vacuum tubes. These connectors serve a dual purpose, not only are they useful to make connections to plate or grid terminals, but they provide a large heat radiating surface that will dissipate heat from the glass seal and tube element.

Eight sizes fit all grid and plate leads and also provide sufficient heat radiation for any tube operating in the range of 50 to 2000 watts. All radiators are machined from special aluminum rod. Edges are rounded to minimize corona loss.

Table below lists Connectors to fit various Tubes

Cat. No.	Hole Size for Lead	Heat Radiating Connectors to Fit the Following Tubes	Dealer Cost
TC-488	.052	3C24, 24, 24G, 25T, 27	$ .36
TC-487	.062	UH50, HK24, 304B, 829B, 832A, 834	.36
TC-489	.072	35T, 35TG, 75TH, HK254, HK257B, 484, 8001	.36
TC-1924	.125	HK57, 152TH	.50
TC-1920	.375	4-125A, 150TH, 2-150D, 250R, 250TH, 250TL, 420A, 802, 803, 804, 807, 808 Grid, 814, 815, 828	.50
TC-1925	.125	304TH, 304TL	.60
TC-1921	.570	ZB60, HF60, HF100, 111H, 211H, 203H, HF175, HF300 Grid, 100R, HK357C, 450TH, 454, 750TH, 805, 806, 808, 809, 810, 811, 812, 813, 828, 833, 866, 854, 1500T, 2000T, 1054, 5331, 5332, 8000, 8003, 8005	.60
TC-1926	.810	WL468, WL463, WL460, HF200, HF201, HF300	.80

NOTE: TC-1923 Heat Radiating Connector with hole size of .110" is still in our line and can be furnished. . . Dealer Cost $ .50

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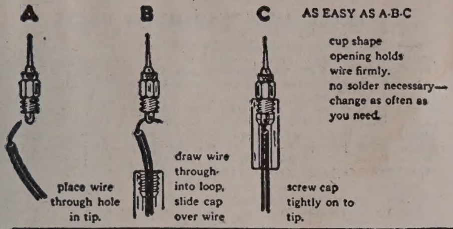

A
B
C
AS EASY AS A-B-C
cup shape opening holds wire firmly. no solder necessary— change as often as you need.
place wire through hole in tip.
draw wire through into loop, slide cap over wire
screw cap tightly on to tip.

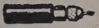
NEW SENSATIONAL!

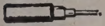
BUD "VISE-GRIP" TEST PRODS

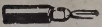
(Pat. applied for)

No longer is it necessary to use a soldering iron or screw-driver to replace a broken or worn lead on a test prod or plug. To install a wire in this unique, patented prod, merely insert end of wire in hole. screw down handle to finger tightness and a positive contact is assured. By far the fastest, most efficient way of doing this job.

BUD VISE-GRIP TEST PRODS WITH 1" PLASTIC HANDLE


Cat No. 93


Cat. No. 94

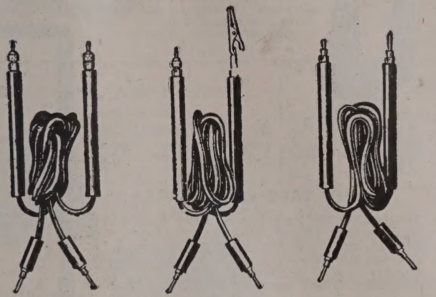

Cat. No. 477

Prod is made of brass rod, and is nickel plated. 1" plastic handle is threaded at one end and prod screws into same.

Needle Chuck — Black or Red.
Cat. No TP-93..............Dealer Cost $ .21
Phone Tip — Black or Red
Cat. No TP-94..............Dealer Cost $ .18
Banana Plug — Black or Red.
Cat. No TP-477A.........Dealer Cost $ .18

BUD SUPER TEST LEADS

All BUD Super Test Leads use BUD "Vise-Grip" Prods that screw into the highly polished 4" or 1" plastic handles on each end of the leads. The finest, flexible, kinkless, rubber covered wire obtainable is used on all BUD Test Leads.



No. TL-178 is supplied with 4" handles at one end of the wires with removable needle points and on other end 1" handle with phone tips.
Cat. No. TL-178........................Dealer Cost $1.35

No. TL-179—4" handles, one with removable needle point and the other with phone tip and removable alligator clip. 1" handles with phone tips.
Cat. No. TL-179.......................Dealer Cost $1.65

No. TL-180 have 4" plastic handles with phone tips on one end. Other end, 1" handles with phone tips as illustrated above.
Cat. No. TL-180........................Dealer Cost $1.29

BUD INSULATED FLEXIBLE COUPLINGS

Tandem operation of two or more units is readily accomplished through the use of these couplers. Direct shaft alignment is not essential, and all couplers are made to fit 1/4" shafts.

Catalog No.	Diameter	Height	Insulation	Dealer Cost
FC-795	1 1/16"	11/16"	Ceramic	$ .48
FC-845	1 1/16"	5/8"	Bakelite	.33
FC-855	1½"	11/16"	Bakelite	.39

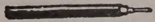
BUD HIGH VOLTAGE FLEXIBLE COUPLINGS

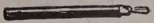
A new type spring construction in these couplings permits a wide gap between shaft connections, freedom from back-lash, and unusual flexibility. The springs are attached to glazed Steatite discs 1½" in diameter and 3/16" thick, and the overall diameter of the finished coupling is 1 15/16". Coupling accommodates standard 1/4" shaft. Springs are also attached to Bakelite discs 1½" in diameter.

Catalog No,	Insulation	Dealer Cost
FC-614	Steatite	$ .65
FC-619	Bakelite	.50

BUD VISE-GRIP TEST PRODS WITH 4" PLASTIC HANDLE

Cat. No. 95


Cat. No 96


Cat. No. 97

Prods are identical to those described on the left. Plastic handle is 4" long and made of the best material obtainable.

Needle Chuck — Black or Red.
Cat. No. TP-95......Dealer Cost $ .30
Phone Tip — Black or Red.
Cat. No TP-96 ...Dealer Cost $ .27
Banana Plug — Black or Red.
Cat. No. TP-97......Dealer Cost $ .30

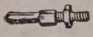
BANANA PLUGS AND JACKS

(Brass Nickel Plated)

Banana plug jack, threaded 1/4 – 28, supplied with nut and solder lug.
Cat. No. PJ-949
Dealer Cost $ .10

Banana plug
Overall Length 1¼"
Shank threaded 6–32, supplied with 6–32 nut.
Cat. No. PL-470
Dealer Cost $ .15

PJ-949


PL-470

PJ-478

PL-469

Insulated banana plug jack, complete with insulated washers, solder lug and nut.
Cat. No. PJ-478
Dealer Cost $ .17

Banana plug. Shank tapped for 6–32 screws. Nickel plated.
Cat. No. PL-469
Dealer Cost $ .10

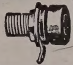
GIANT BANANA PLUGS AND JACKS FOR HEAVY DUTY APPLICATIONS

Giant banana jack, complete with nut and solder lug. For mounting, drill 3/8" hole.
Cat. No. PJ-963
Dealer Cost $ .17

Giant plug, tapped 10–32. Positive spring action assures firm contact.
Cat. No. PL-962
Dealer Cost $ .20

PJ-963

PL-962

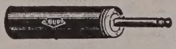
PJ-476


PL-475A

Giant insulated banana plug jack, complete with insulated washers, solder lug and nut. To mount, drill 1/2" hole.
Cat. No. PJ-476A
Dealer Cost $ .24

High voltage insulated banana plug. Over all length 2⅞". Excellent for heavy duty applications.
Cat No. PL-475A
Dealer Cost $ .30

BUD PHONE PLUGS



All metal parts on these excellent phone plugs are machined from brass, and are nickel plated. Unshielded plugs have handles of black bakelite; shielded types have attractive brass knurled handles, bright nickel plated.

No. FP-1946 is supplied *Without a Handle*, and is used as an adapter between a female microphone cable connector and a regular plug jack.

Catalog Number	Contacts	Handle	Overall Length	Bushing Diam.	Dealer Cost
FP-230	2	Bakelite	2¾"	3/4"	$ .30
FP-282	2	Shielded	2⅞"	3/4"	.75
FP-1057	3	Bakelite	2¾"	3/4"	.84
FP-284	3	Shielded	2⅞"	3/4"	1.10
FP-1946	2	None	1 7/16"	11/16"	.24

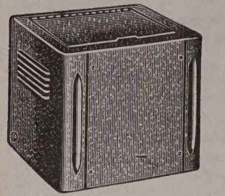
These pages show only a few of many BUD Products. For complete catalog, write
BUD RADIO INC., Dept. ANH, 2118 E. 55th St., Cleveland 3, Ohio

SINCE 1921 — INSULINE CORP. OF AMERICA — ICA — TRADE MARK

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA DE LUXE HINGED STEEL CABINETS



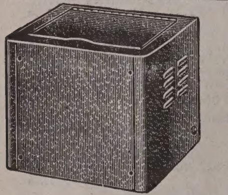
The cabinets have rounded corners with specially designed Chrome plated "Air-Gate" ventilators on sides; and vertical Chrome Plated Trim moulding on front. Modern grille type ventilators are provided on the back panels which also have an opening on the bottom to allow for leads, cable connections, etc.

Bottoms have 4 embossed feet.

Finished in a beautiful Marine Gray Ripple Enamel.

No.	H. W. D.	Panel Size	Dealer Cost
3860	8" x 10" x 8"	8" x 8"	$ 4.15
3861	8" x 12" x 8"	8" x 10"	4.67
3862	8" x 14" x 8"	8" x 12"	4.95
3863	12" x 20" x 12"	12" x 18"	10.66

ICA STANDARD HINGED STEEL CABINETS



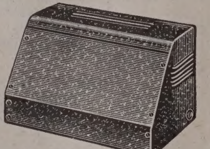
Designed in the same style and appearance as the De Luxe cabinets shown above except that the Chrome Trim is eliminated. Sides and backs have ventilating louvres. Backs have opening for cable connections, etc. Top panel hangs on full sized piano type hinge. Bottoms have 4 embossed feet. Finished in Marine Gray Ripple Enamel.

No.	H. W. D.	Panel Size	Dealer Cost
3925	8" x 10" x 8"	8" x 8"	$3.60
3926	8" x 12" x 8"	8" x 10"	3.90
3927	8" x 14" x 8"	8" x 12"	4.58
3928	12" x 20" x 12"	12" x 18"	9.96

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Numbers	Dlr. Cost
4024	7" x 7" x 2"	3860 and 3925	$ .90
4004	7" x 9" x 2"	3861 and 3926	1.08
4005	7" x 11" x 2"	3862 and 3927	1.12
4033	10" x 17" x 3"	3863 and 3928	1.63

ICA DE LUXE SLOPING PANEL CABINETS



The top corners are rounded and trimmed with an attractive striped chrome trim. The sides of the cabinets have the beautiful "Air-Gate" Chrome ventilators.

The front panel is removable so that the chassis can be attached to it and used as one unit.

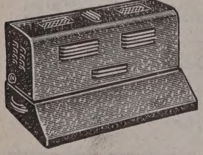
Beautifully finished in Marine Gray Ripple Enamel.

No.	H. W. D.	Dealer Cost
3990	8" x 8" x 8"	$4.88
3991	8" x 10" x 8"	5.75
3992	8" x 14" x 8"	7.00
3993	12" x 18" x 12"	9.41

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Number	Dlr. Cost
4024	7" x 7" x 2"	3990	$ .90
4004	7" x 9" x 2"	3991	1.08
4007	7" x 13" x 2"	3992	1.20
4033	10" x 17" x 3"	3993	1.63

ICA DE LUXE SLOPING CHASSIS AMPLIFIER UNITS

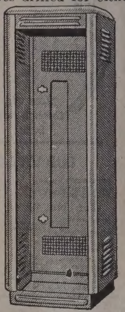


Chassis are sloped and are equipped with beautiful chrome trimmed handles. Slope provides ample space for mounting instruments. The top covers have beautiful Chrome Plated "Air-Gate" Ventilators with striped chrome trim. Supplied with ventilating louvres on sides and back. Have raised rectangular screen opening on the tops, embellished with chrome moulding. Marine Gray Ripple finish. Chassis Ht. 3½"; Slope 4".

No.	Over-all Size	Chassis.. Bottom	Dealer Cost	Bottom Plate No.	Dealer Cost
3962	7" x 17" x 9½"	10" x 17"	$7.55	1681	$ .85
3963	10" x 14" x 9½"	13" x 14"	8.00	1683	.92
3964	10" x 17" x 9½"	13" x 17"	8.30	1685	1.07

ICA DE LUXE TRANSMITTER RACKS

New modern design, streamlined transmitter and public address racks. Removable vertical corner mouldings are rounded and completely cover panel edges and mounting screws. Chrome trim. Rack is made of 1/16" cold rolled steel. Panel mounting angles drilled for either Amateur or Western Electric type panels. Screen ventilators on rear door and louvres afford ample ventilation. Easily assembled. Supplied in Marine gray ripple finish. Black ripple finish furnished only on specification.



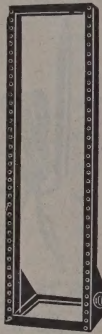
No.	Dealer Cost	Overall Size	Panel Space	Interior Width	Interior Depth	Shipping Weight
3865	$48.20	43¼"x22"x18"	36¾"x19"	17⅝"	16¾"	110 Lbs.
3866	$59.94	67¾"x22"x18"	61¼"x19"	17⅝"	16¾"	162 Lbs.
3867	$71.49	83½"x22"x18"	77"x19"	17⅝"	16¾"	190 Lbs.

TABLE MOUNT RELAY RACKS

Sturdily constructed heavy duty table rack with one piece base. Accurately drilled mounting holes. Finished in black ripple. Supplied "KNOCKED DOWN" with all necessary hardware.

No.	W. H. D.	Panel Space	Dlr. Cost
3910	21" x 25" x 12"	21" x 19"	$6.60
3911	21" x 32" x 12"	28" x 19"	8.25

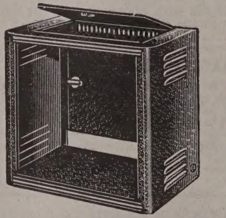
OPEN FACE RELAY RACK



For standard 19" Rack Panels. Black Ripple Finish. Rigidity assured with top cross-brace and vertical sections strongly welded. Designed for P.A. units, various types of transmitters, etc. Sturdily made of ⅛" thick steel. Base depth: 22". Accurately drilled mounting holes.

No.	Size Overall	Panel Space	Dlr. Cost
3912	73½" x 20" x 20⅞"	71¾"	$22.36

ICA MULTI-USE METAL CABINETS



An ideal unit for public address systems, transmitters, receivers, test equipment, etc. Has rounded corners on front of Cabinet. Trimmed with handsome chrome trim moulding. Equipped with hinge doors, and nickel-plated snap locks. Completely assembled, ready for use. Finished in Black or Marine Gray Ripple Enamel. Black will be supplied unless Gray is specified.

SINGLE UNITS — Dlr. Cost

No. 3880 .... $12.00
Size 10½" x 21" x 15" Deep.
Door on top only. Panel space 8¾" x 19".

No. 3881 .... 14.58
Size 14" x 21" x 15" Deep.
Door on top only. Panel space 12¼" x 19".

DOUBLE UNIT

No. 3882 .... 19.16
Size 19¼" x 21" x 15" Deep.
Doors on top and rear. Panel space 17½" x 19".

TRIPLE UNIT

No. 3883 .... 22.49
Size 28" x 21" x 15" Deep.
Door on rear panel only. Panel space 26¼" x 19".

QUADRUPLE UNIT

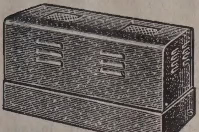
No. 3884 .... 25.00
Size 36¾" x 21" x 15" Deep.
Door on rear panel only. Panel space 35" x 19".

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA STANDARD AMPLIFIER FOUNDATION UNITS

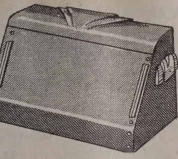


Top covers have rounded corners. The front, sides and back are equipped with louvre ventilators. The tops have raised screen openings for additional ventilation.

Finished in beautiful Marine Gray Ripple Enamel. Height of Chassis 3″.

No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3980	5½″ x 10″ x 9″	$2.70	1677	$ .50
3981	8″ x 12″ x 9″	4.00	1679	.85
3982	7″ x 17″ x 9″	4.33	1681	.85
3983	10″ x 14″ x 9″	4.66	1683	.92
3984	10″ x 17″ x 9″	5.00	1685	1.07

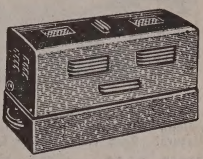
FUTURA STREAMLINED SLOPING PANEL CABINETS



Can be used as instrument cases in studios, laboratories, etc. Raised "Futura" design — streamlined corners. Ventilator openings for cable connectors. Removable front panel. Finished in Marine Gray Ripple enamel with chrome moulding.

No.	H.	W.	D.	Dlr. Cost
3840	8″	8″	8″	$6.16
3841	8″	10″	8″	7.00
3842	8″	14″	8″	8.50
3843	8″	18″	8″	10.43
3844	12″	18″	12″	11.63

ICA DE LUXE AMPLIFIER FOUNDATION CHASSIS

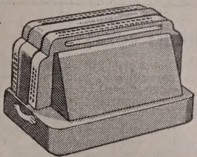


Top covers have rounded corners and fronts are embellished with the newly created Chrome plated "Air-Gate" Ventilators. Additional ventilation is obtained through the raised screen openings on the top as well as louvres on both sides and back.

Have beautiful Chrome mouldings and Chrome handles. Finished in Marine Gray Ripple Enamel. Height of Chassis 3″.

No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3971	5½″ x 10″ x 9″	$3.90	1677	$ .50
3972	8″ x 12″ x 9″	5.00	1679	.85
3973	7″ x 17″ x 9″	5.50	1681	.85
3974	10″ x 14″ x 9″	5.67	1683	.92
3975	10″ x 17″ x 9″	6.33	1685	1.07

"SUPER" STREAMLINED SLOPING-FRONT AMPLIFIER CHASSIS

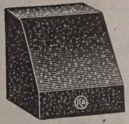


New, modern design amplifier chassis. Front panel sloped with streamlined top cover. Removable front panel Marine Gray Ripple finish with Chrome trim. Bottom plates supplied. Top cover 6½″ high.

No.	Chassis Size	Dlr. Cost
3930	10″ x 12″ x 3″	$7.25
3931	10″ x 17″ x 3″	8.33
3932	13″ x 17″ x 3″	9.58

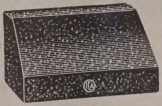
ICA SLOPING PANEL CABINETS

Small—Compact



3905

New streamlined cabinets, rugged, small and compact, have various uses such as speaker cabinets, oscillator cases, input stages, small receivers, teletalk systems, monitors, etc.

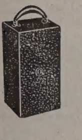


3906

Beautifully designed, with rounded corners and finished in marine gray ripple.

No.	W.	H.	D.	Dlr. Cost
3905	$4\frac{3}{16}$″	4½″	4¼″	$1.00
3906	7½″	4½″	4¼″	1.67

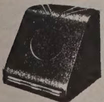
ICA PORTABLE STEEL CABINETS



Ideal for housing oscillators, transceivers, test equipment, etc. Both front and back panels are removable and are held with self-tapping screws which are supplied. Equipped with leather handle. Finished in black ripple.

No.	Size	Dlr. Cost
No. 3850	12″ x 7¾″ x 7″	$2.90
No. 3851	15″ x 7¾″ x 7″	3.63

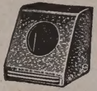
STREAMLINED METER CASES



Modern streamlined cases, with raised "futura" design on top of cabinet. Finished in Marine Gray Ripple Enamel and trimmed with chrome band.

No.	D.	W.	H.	Meter Hole	Dealer Cost
3997	4¼″	$4\frac{3}{16}$″	4½″	$2\frac{3}{16}$″	$1.98
3998	4¼″	$4\frac{3}{16}$″	4½″	$2\frac{13}{16}$″	1.98

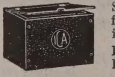
ICA DE LUXE METER CASES



Finished in Marine Gray Ripple Enamel with rounded tops and trimmed with beautiful Chrome band. Available for 2″ or 3″ meters.

No.	D.	W.	H.	Meter Hole	Dealer Cost
3995	4¼″	$4\frac{3}{16}$″	4½″	$2\frac{3}{16}$″	$ .95
3996	4¼″	$4\frac{3}{16}$″	4½″	$2\frac{13}{16}$″	.95

ICA HINGED COVER CABINETS



Supplied in knocked-down form for easy handling. Easily assembled.

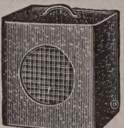
Finished in Black Ripple Enamel.

No.	W.	D.	H.	Dlr. Cost
3825	9″	5″	6″	$3.30
3826	10″	8″	7″	3.92
3828	12″	8″	7″	4.46
3829	12″	11″	8″	5.30
3830	14″	8″	7″	5.30
3831	18″	12″	9″	6.63

CHASSIS FOR ICA CABINETS

No.	W.	D.	H.	For Cabinet No.	Dlr. Cost
4000	8½″	4¾″	1½″	3825	$.77
4004	9″	7″	2″	3826	1.08
4005	11″	7″	2″	3828	1.12
4007	13″	7″	2″	3830	1.20
4023	17″	11″	3″	3831	2.20

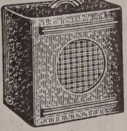
ICA STANDARD SPEAKER CABINETS



Finished in Black Ripple Enamel with plain black steel handles to match.

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3942	10″ x 10″ x 6″	4¾″	6″	$3.42
3943	12″ x 12″ x 7″	6½″	8″	4.33
3944	14″ x 14″ x 8″	9″	10″	5.58
3945	16″ x 16″ x 8″	11″	12″	7.33

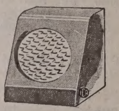
ICA DE LUXE SPEAKER CABINETS



Features rounded corners; neatly chrome trimmed front; equipped with chrome handle. Steel grille. Marine Gray Ripple finish.

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3935	10″ x 10″ x 6″	4¾″	6″	$3.92
3936	12″ x 12″ x 7″	6½″	8″	5.00
3937	14″ x 14″ x 8″	9″	10″	6.13
3938	16″ x 16″ x 8″	11″	12″	7.50

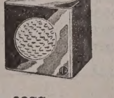
MIDGET SPEAKER CASES



Especially designed for the smaller type speakers. Beautifully finished in gray ripple with attractively embossed grille. Speaker mounts on special removable internal chassis, punched for proper speaker opening. This unit fastens to side of cabinet with no visible screws to mar cabinet front. Facilitates ease of assembly. Measures 4¼″ d. x $4\frac{3}{16}$″ w. x 4½″ l.

No.	Description	Hole Dia.	Dlr. Cost
3986	For 2″ speakers	$2\frac{3}{16}$″	$1.60
3987	For 3″ speakers	$2\frac{13}{16}$″	1.60

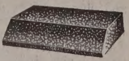
COMPOSITE SPEAKER CABINET



A neatly designed composite unit to house either a 4″ or 5″ speaker. Measures 7″ w. x 4″ d. x 7″ h. Gray ripple finished steel with embossed grille. Removable back plate has key ways for easy hanging.

No. 3988............................Dealer Cost $3.33

ICA SLOPING FRONT CHASSIS



Has a sloping front for mounting instruments. Has the effect of a beautiful open cabinet receiver, or amplifier unit, when used without top covers. Heavy Duty Steel, finished in Black Ripple Enamel.

No.	Top of Base	Bottom of Base	Hgt.	Size of Slope	Dlr. Cost
3320	7x17″	10x17″	3½″	4″	$2.53
3321	10x14″	13x14″	3½″	4″	2.83
3322	10x17″	13x17″	3½″	4″	3.27

Net

SINCE
1921

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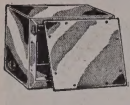
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

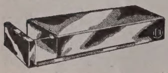
ALUMINUM . . . STEEL CABINETS



Popular utility cabinets now available in aluminum in gray hammertone and natural finish. Excellent for amplifiers, monitors, input stages, meters, transceivers, etc. Removable front and back covers may be fastened to cabinet with self-tapping screws provided. Also supplied in steel with black ripple finish.

Aluminum Natural	Dealer Cost	Aluminum Gray Hammertone	Dealer Cost	Size W.	L.	H.	STEEL Black Ripple	Dealer Cost
29840	$1.00	29810	$1.13	4″ x	4″ x	2″	3810	$ .85
29841	1.13	29811	1.30	4″ x	5″ x	3″	3811	.95
29842	1.47	29812	1.63	4″ x	6″ x	5″	3812	1.20
29843	1.53	29800	1.72	6″ x	6″ x	6″	3800	1.30
29844	2.20	29801	2.50	9″ x	6″ x	5″	3801	1.87
				10″ x	7″ x	8″	3802	2.30
				10″ x	10″ x	8″	3803	2.90
				12″ x	8″ x	11″	3804	3.60

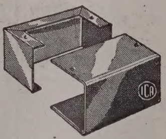
SLIP COVER ALUMINUM BOXES



Suitable for a variety of electronic device housing needs. Slide cover permits easy accessibility to mounted parts; offers shielding and dust-proof protection. May be used for television strips; terminal barriers, special equipment, amplifier units, etc. Heavy aluminum in natural finish or gray hammertone.

Gray Hammertone No.	Dealer Cost	Natural Finish No.	Dealer Cost	Size W.	L.	H.
29130	$3.62	29100	$3.45	3⅛″ x	13″ x	2⅝″
29135	3.92	29105	3.75	5⅛″ x	13″ x	2⅝″
29140	3.75	29110	3.58	3″ x	17″ x	2⅝″

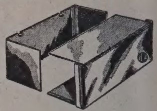
"FLEXI-MOUNT" ALUMINUM CASES



A two-piece case designed for maximum accessibility. Solves many problems demanding installation of numerous elements in limited space while assuring necessary shielding. Has wide application. Made of heavy aluminum—finished in gray hammertone or natural aluminum.

Cat. No. Gray H.	Dealer Cost	Cat. No. Natural	Dealer Cost	Dimensions W.	L.	H.
29435	$ .70	29335	$ .63	2⅛ x	2¾	x 1⅝
29436	.70	29336	.63	2⅛ x	3¼	x 1⅝
29437	.73	29337	.67	2⅛ x	4	x 1⅝
29438	.97	29338	.87	2¼ x	4	x 2¼
29439	1.00	29339	.93	2¼ x	5	x 2¼
29441	1.07	29341	1.00	3 x	5¼	x 2⅛
29440	1.10	29340	1.03	4 x	5	x 3
29442	1.37	29342	1.27	5 x	6	x 4
29443	1.53	29343	1.40	5 x	7	x 3
29447	3.83	29347	3.40	5 x	17	x 4
29444	2.23	29344	2.10	6 x	8	x 3½
29445	2.75	29345	2.30	6 x	10	x 3½
29446	3.27	29346	2.93	7 x	12	x 4

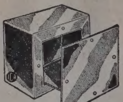
CHANNEL-LOCK ALUMINUM BOXES



Latest two-piece box with special "channel-lock" feature for snug and firm fit. Makes all mounting space easily accessible. Ideal for oscillators, amplifiers, etc. Easily assembled: merely tighten the two set screws provided. These sturdy boxes made of heavy aluminum in black wrinkle, gray hammertone and natural aluminum finish.

Natural Aluminum No.	Dealer Cost	Black Wrinkle No.	Gray Ham. No.	Dealer Cost	Size, Inches W.	L.	H.
29200	$ .72	29300	29400	$ .83	4	x 2⅛	x 1⅝
29205	1.00	29305	29405	1.12	5	x 2¼	x 2¼
29210	1.10	29310	29410	1.23	5¼	x 3	x 2⅛
29215	.93	29315	29415	1.05	3	x 4	x 5
29220	1.03	29320	29420	1.20	6	x 4	x 5
29225	2.00	29325	29425	2.17	10	x 4	x 2½

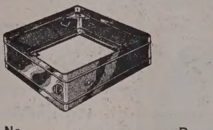
UTILITY CABINETS with built-in chassis



A multi-use small cabinet. Ideal for minor radio-television assemblies. The chassis is welded to front panel, making it a time-saving, convenient unit. Front and rear panels easily removable. Of sturdy steel in black ripple finish.

No.	Cabinet Size W. D. H.	Chassis Size W. D. H.	Dealer Cost
3816	4″ x 2″ x 4″	2⅞″ x 1⅞″ x 1″	$1.05
3817	4″ x 3″ x 5″	2⅞″ x 2⅞″ x 1″	1.15
3818	5″ x 3″ x 4″	3⅞″ x 2⅞″ x 1¼″	1.15
3819	4″ x 5″ x 6″	2⅞″ x 4⅞″ x 1¾″	1.43
3821	6″ x 5″ x 4″	4⅞″ x 4⅞″ x 1¼″	1.43
3823	6″ x 6″ x 6″	4⅞″ x 5⅞″ x 1¾″	1.50

WEBSTER RECORD CHANGER BASES



Sturdy steel base in beautiful brown hammertone finish with protective, non-marring cork rubber cushion. Especially designed for the better known record changers. Grommeted holes provided for AC lead on rear apron; also punched for easy addition of Insuline No. 2385 phono plug-socket.

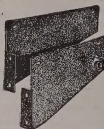
No.	Description	Dealer Cost
3308	For WEBSTER changer models Nos. 346, 246, 146 and similar sizes	$4.17
3308-BP	Steel bottom plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25
3309	For WEBSTER changer models Nos. 356, 256, 156 and similar sizes	4.17
3309-BP	Steel Bottom Plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25

GARRARD CHANGER BASE

Made for the new Garrard Model RC-80 3-way record changer. This steel base is finished in brown hammertone with protective cushions. Includes grommeted holes for AC lead. Complete with bottom plate.

No. 3315..Dealer Cost $6.33

CHASSIS MOUNTING BRACKETS



Designed for rack panels and chassis where additional strength is required for heavier units such as power supplies, etc. Heavy gauge steel, black ripple finish.

No.	Front	Back	Dealer Cost
4077	6½″ Ht. x 10″ D. x	3″ Ht.	$1.13
4079	8½″ Ht. x 10″ D. x	4″ Ht.	1.80
4081	6½″ Ht. x 12″ D. x	3″ Ht.	1.50
4083	8½″ Ht. x 13″ D. x	4″ Ht.	1.92

ICA CHASSIS MOUNTING BRACKETS

Made to fit on 17″ relay rack chassis. Panels must be at least 7″ high.

Black ripple finish.

No.		Dlr. Cost
3955	For 8″ base................Per Pair	$ .85
3958	For 10″ base...............Per Pair	1.02
3956	For 11″ base...............Per Pair	1.20
3957	For 13″ base...............Per Pair	1.70

ICA RELAY RACK BRACKETS

Black Ripple Finish.

Used to reinforce racks and for mounting of panels, shelves, chassis, etc.

No.		Dlr. Cost
3950	5″ Base Brackets........Per Pair	$ .80
3951	8″ Base Brackets........Per Pair	.92
3952	11″ Base Brackets........Per Pair	1.10

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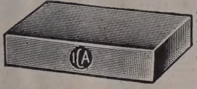
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

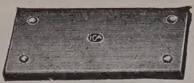
STEEL OR ALUMINUM CHASSIS BASES



For receivers, transmitters, etc. Bases are folded over on bottom for additional strength and drilled to permit attaching of bottom plates. Solidly constructed. STEEL BASES—one piece; heavy duty; zinc plated or black ripple finish. ALUMINUM BASES—First grade aluminum, electronically welded. Thickness: 16 gauge (.050).

Steel—Zinc Plated Finish		Steel—Black Ripple Finish			Size			Aluminum	
No.	Dlr. Cost	No.	Dlr. Cost	Gauge	W.	L	H.	No.	Dealer Cost
1560	$ .77	4000	$ .77	20	4½	x 8	x1½		
1586	.88	4037	.88	20	5	x 7	x 2	29030	$ .93
					5	x 7	x 3	29047	1.17
1530	.78	4001	.78	20	5	x 9½	x 1½		
1587	.93	4038	.93	20	5	x 9½	x 2	29033	1.10
1565	1.08	4002	1.08	20	5	x 9½	x 3	29002	1.30
1564	1.08	4042	1.08	20	5	x 10	x 3	29048	1.33
1566	1.33	4003	1.33	20	5	x 13	x 3	29003	1.40
1582	1.17	4032	1.17	20	5½	x 10	x 3	29004	1.58
					6	x 17	x 3	29050	2.10
1526	.90	4024	.90	20	7	x 7	x 2	29005	1.10
1569	1.08	4004	1.08	20	7	x 9	x 2	29006	1.20
1570	1.12	4005	1.12	20	7	x 11	x 2	29007	1.33
1527	1.27	4006	1.27	20	7	x 12	x 3	29008	1.57
1571	1.20	4007	1.20	20	7	x 13	x 2	29009	1.40
1572	1.43	4008	1.45	20	7	x 15	x 3	29010	2.27
1528	1.57	4009	1.57	20	7	x 17	x 3	29011	2.20
1567	1.62	4013	1.43	20	8	x 12	x 3	29012	1.90
1573	1.45	4014	1.45	20	8	x 17	x 2	29013	2.10
1575	1.58	4035	1.58	20	8	x 17	x 3	29014	2.47
1588	1.65	4039	1.65	20	8½	x 15	x 3	29037	2.30
1520	1.50	4016	1.50	20	10	x 12	x 3	29015	2.10
1568	1.58	4017	1.58	20	10	x 14	x 3	29016	2.67
1589	1.60	4040	1.60	20	10	x 17	x 2	29039	2.53
1583	1.63	4033	1.63	20	10	x 17	x 3	29017	2.87
1521	1.87	4018	1.95	18	10	x 17	x 3		
1580	2.03	4030	2.03	18	10	x 17	x 4	29025	3.30
1522	2.43	4019	2.33	18	10	x 23	x 3	29018	3.32
1577	2.17	4027	2.00	18	11	x 17	x 2	29019	2.63
1519	2.20	4023	2.20	18	11	x 17	x 3	29020	3.33
1574	1.77	4020	1.77	18	12	x 17	x 2	29021	3.00
1578	2.03	4028	2.03	18	12	x 17	x 3	29022	3.53
1579	2.35	4029	2.47	18	13	x 17	x 2	29023	3.13
1524	2.55	4021	2.55	18	13	x 17	x 3	29024	3.73
1581	3.00	4031	3.00	18	13	x 17	x 4	29026	4.27

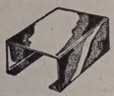
ICA CHASSIS BOTTOM PLATES

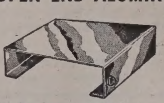


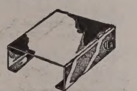
Designed to fit all ICA Chassis Bases and amplifier units listed to the left. Four raised bosses prevent marring or scratching. Supplied in steel or aluminum.

Steel					Aluminum	
Zinc Plated	Black Ripple	Dealer Cost	Size		No.	Dealer Cost
1636	4076	$ .40	5	x 7	8729	$ .70
1601	4051	.40	5	x 9½		
1602	4052	.57	5	x 13	8702	.80
1625	4075	.50	5½	x 10	8725	.73
1623	4073	.60	7	x 7	8723	.73
1603	4053	.57	7	x 9	8703	.77
1604	4054	.65	7	x 11	8704	.87
1605	4055	.68	7	x 12	8705	.92
1606	4056	.68	7	x 13	8706	1.08
1607	4057	.75	7	x 15	8707	1.08
1608	4058	.78	7	x 17	8708	1.13
1612	4062	.78	8	x 12	8712	1.08
1613	4063	.82	8	x 17	8713	1.25
1629	4064	.85	8½	x 15	8721	1.12
1615	4065	.82	10	x 12	8715	1.22
1616	4066	.85	10	x 14	8716	1.12
1617	4067	1.00	10	x 17	8717	1.47
1618	4068	1.40	10	x 23	8718	1.75
1622	4072	1.10	11	x 17	8727	1.75
1619	4069	1.08	12	x 17	8719	1.87
1620	4070	1.42	13	x 17	8720	1.97
1624	4074	1.17	13	x 14		

MINIATURE OPEN END ALUMINUM CHASSIS







Of first grade aluminum for less weight but long service. Base flange permits attaching of bottom plate or fastening down of chassis. Ideal where limited space is factor. Suitable for all small unit assemblies.

No.	W.	L.	H.	Dealer Cost
29076	1¾	x 3⅛	x 1	$.37
29075	2⅝	x 2¾	x 1¼	.33
29078	2¾	x 4⅛	x 1½	.40
29080	3	x 6⅛	x 1¼	.47
29077	3¼	x 4½	x 2	.40
29079	3¾	x 4⅛	x 1½	.40
29082	4	x 3⅛	x 1	.40
29083	4	x 4⅛	x 1	.43
29084	4	x 5⅛	x 1	$.47
29043	4	x 6	x 2	1.13
29044	4	x 6	x 3	1.13
29085	4	x 6⅛	x 1	.50
29027	4	x 17	x 3	2.03
29000	4½	x 8	x 1½	1.00
29001	5	x 9½	x 1½	1.10
29081	5¾	x 4⅞	x 1½	.50

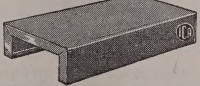
STANDARD RELAY RACK PANELS

ICA standard relay rack panels are slotted to fit any standard 19″ relay rack. ICA relay rack panels are supplied in ⅛″ thickness. Notched according to RMA specifications. If Western Electric notching is desired, add "WE" to catalog numbers. Made of steel (in black ripple or gray finish) or aluminum (in black ripple or gray wrinkle; also in gray hammertone on request).

STEEL				ALUMINUM			
Black	Gray	Dlr. Cost	Size	Black	Dlr. Cost	Gray Wrinkle	Dlr. Cost
*3600RS	*3612RS	$.67	1¾″	*8600RS	$.83	*8620RS	$.83
*3601RS	*3613RS	.75	3½″	*8601RS	1.20	*8621RS	1.20
*3602RS	*3614RS	.93	5¼″	*8602RS	1.37	*8622RS	1.37
*3603RS	*3615RS	1.08	7″	*8603RS	2.00	*8623RS	2.00
3604RS	3616RS	1.32	8¾″	8604RS	2.33	8624RS	2.33
*3605RS	*3617RS	1.58	10½′	*8605RS	2.77	*8625RS	2.77
3606RS	3618RS	1.88	12¼″	8606RS	3.17	8626RS	3.17
3607RS	3619RS	2.17	14″	8607RS	3.53	8627RS	3.53
3608RS	3620RS	2.40	15¾″	8608RS	4.00	8628RS	4.00
3609RS	3621RS	2.70	17½″	8609RS	4.43	8629RS	4.43
*3610RS	*3622RS	3.00	19¼″	*8610RS	4.83	*8630RS	4.83
3611RS	3623RS	3.30	21″	8611RS	5.17	8631RS	5.17

*RMA and "WE" notching specifications are identical.

OPEN END STEEL CHASSIS



Permits easier wiring of the smaller assemblies. Has wide variety of applications. Made of sturdy steel with zinc plated finish.

No.	W.	L.	H.	Dealer Cost
1547	5	x 7	x 1½	$.60
1559	5½	x 9	x 1½	.70
1546	7	x 6	x 2	.68
1548	7	x 7	x 1½	.78
1556	7	x 8	x 2	.85
1596	7	x 10	x 2	$.90
1597	7	x 11	x 1½	1.00
1595	7½	x 9	x 1½	.95
1599	7¾	x 15	x 2	1.38
1598	10¾	x 14	x 2	1.43

ICA MASONITE RELAY RACK PANELS

Made of Tempered Masonite—a non-magnetic material, sturdy and tough yet easily drilled and worked with ordinary wood-working tools and punches. Finished in Black or Gray. Supplied in Black Ripple finish unless Gray is specified. RMA notching. If Western Electric notching is desired, add "WE" to catalog No.

No.	Size	Dlr. Cost
*3662RS	1¾″ x 19″	$ .67
*3663RS	3½″ x 19″	.83
*3664RS	5¼″ x 19″	.97
*3665RS	7″ x 19″	1.10
3666RS	8¾″ x 19″	1.33
*3667RS	10½″ x 19″	1.50
3668RS	12¼″ x 19″	$1.67
3669RS	14″ x 19″	1.83
3670RS	15¾″ x 19″	2.03
3671RS	17½″ x 19″	2.37
*3672RS	19¼″ x 19″	2.57
3673RS	21″ x 19″	2.87

*RMA and "WE" notching specifications are identical.

SPECIAL SIZES OF RACK PANELS AVAILABLE ON ORDER

Insuline Corporation of America is geared to supply rack panels in various sizes, thicknesses and finishes. Materials include Steel, Aluminum, or Masonite in any thickness from ⅛″ to ¼″. Any finish according to specifications.

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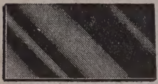
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA BAKELITE RADIO PANELS

Black, Polished Mirror Finish



Black, Mirror Finish. Laminated Indestructible Material. For Panels and general use where low moisture absoption, good electrical properties and fine surface finish are required. Tensile strength 8,000 lbs. per square inch.

⅛" Thickness			3/16" Thickness		
No.	Size	Dealer Cost	No.	Size	Dealer Cost
832	7" x 10"	$1.17	842	7" x 10"	$1.73
833	7" x 12"	1.42	843	7" x 12"	2.10
834	7" x 14"	1.53	844	7" x 14"	2.50
835	7" x 18"	2.30	845	7" x 18"	2.97
836	7" x 21"	2.40	846	7" x 21"	3.33
837	7" x 24"	2.70	847	7" x 24"	4.17
840	7" x 30"	3.67	850	7" x 30"	5.16
860	10" x 12"	2.10	863	10" x 12"	3.17
861	10" x 18"	2.90	864	10" x 18"	4.35

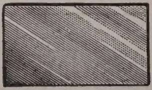
ICA FULL SIZE BAKELITE SHEETS

Black Glossy Finish

No.	Size	Thickness	Apprx. Wt.	Dealer Cost
852	38" x 49"	1/16"	6 lbs.	$16.35
853	38" x 49"	3/32"	9 lbs.	20.56
854	38" x 49"	⅛"	12 lbs.	33.49
857	38" x 49"	3/16"	18 lbs.	41.73
858	38" x 49"	¼"	24 lbs.	50.11

Prices on other sizes or thicknesses quoted on request.

ICA STEEL . . . MASONITE . . . ALUMINUM PANELS

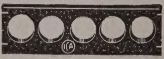


Steel panels are made in 1/16" thickness, black ripple finish. Masonite panels are 3/16" thick, black ripple finish. Aluminum panels have bright silver finish, 1/16" thick.

Steel No.	Dealer Cost	Size	Masonite No.	Dealer Cost	Alum. No.	Dealer Cost
3175	$ .72	7" x 10"	810	$ .77	1194	$1.00
3176	.80	7" x 12"	811	.85	1195	1.17
3177	.93	7" x 14"	812	.97	1196	1.27
3178	1.20	7" x 18"	813	1.17	1198	1.53
		7" x 21"	814	1.27	1199	2.17
		7" x 24"			1200	2.70
3183	1.03	8" x 12"	815	1.00		
3184	1.10	8" x 14"	816	1.10		
		8" x 16"	817	1.28		
3186	1.23	8" x 18"	818	1.37		
		10" x 12"			3157	2.00
3191	1.60	10" x 14"				
3192	1.87	10" x 18"			3158	2.27
3194	2.17	10" x 24"			3159	4.00

ICA METER PANELS

Notched to RMA specifications ("WE" notching identical). Will fit all standard racks. Finished in Baked Black or Gray Ripple. Size 5¼" x 19".



Black will be shipped unless Gray is specified.

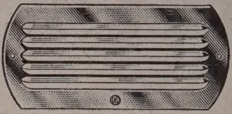
STEEL PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3651	5	2"	2 3/16"	$1.85
3652	3	2"	2 3/16"	1.30
3653	5	3"	2 13/16"	1.85
3654	3	3"	2 13/16"	1.30

MASONITE PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3641	3	2¼"	2¼"	$1.32
3642	4	2¼"	2¼"	1.45
3643	3	2 3/16"	2 13/16"	1.32
3644	4	2 3/16"	2 13/16"	1.45

CHROME VENTILATING LOUVRES



Adds the attractive touch to any receiver, amplifier, transmitter, etc. A polished chrome finished steel "Air-Gate," consisting of 5 ventilating louvres. Over-all size: 5 7/16" long—3" wide. Distance between mounting hole centers: 4 27/32". Diameter of holes: 5/32". Length of louvres: 4¼". Air space between louvre plates: 5/16".

No. 3525..............................Dealer Cost $ .67

ICA CHROME TRIM MOULDING

Beautiful chrome trim mouldings to dress up any cabinet, chassis, receiver, speaker cabinet, transmitter, etc. All moulding furnished with mounting tracks or clips.

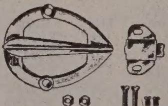
No.	Dealer Cost
3510—Chrome Moulding, with single Stripe. Size: ½" wide by 4" long	$ .67
3513—Chrome Moulding, with double Stripe. Size: ¾" wide by 8" long	1.07
3514—Chrome Moulding, with double Stripe. Size: ¾" wide by 12" long	1.23
3515—Chrome Moulding, with double Stripe. Size: ¾" wide by 17" long	1.50
3505—Bullet Shape all Chrome Moulding. Size 5/16" wide by 6" long	.67

CHROME HANDLES . . . PLASTIC HANDLES

A neatly styled adornment for any cabinet, amplifier chassis transmitter, etc. Furnished with mounting screws. Supplied in gleaming chrome or attractive plastic.

No.	Dealer Cost
3500—Chrome. 4" l.; 11/16" w. Mounting centers: 2¾" apart	$ .58
3502—Plastic. Dimensions as above	.48
3501—Chrome. 6¼" l.; ⅝" w. Mounting centers: 4 13/16"	.77

HANDLE . . . LOCK SET



A complete, attractive handle and lock set that will dress up a variety of cabinets. Streamlined handle of zinc with nickel-plated finish; spring snap lock of durable steel for long service. Includes screws and nuts.

No. 3532..............................Dealer Cost $ .60

THE RADIO craftsmen INCORPORATED

• Engineered for the custom builder . . . the music lover . . . the architect . . . fringe areas. Professional installations simplified by *Craftsmen* chassis units providing for every detail of installation. All units finished in polished chromium for long-lasting durability.

HIGH FIDELITY TELEVISION

Video Tuner RC101

An outstanding new high-fidelity custom video tuner with the same fine, big-picture quality and sensitivity as its famous predecessor, the RC100A. Features include keyed AGC and booster switch, plus new, double-shadow tuning eye for precision tuning. 20 to 20,000-cycle audio output permits remote hook-up with high-fidelity audio and FM-AM tuners. Turret-type channel selector.

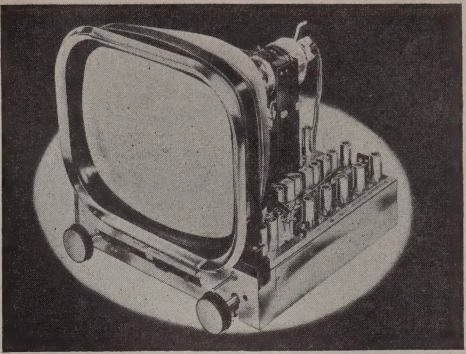
TV-FM Receiver RC200

Here, at last, is a TV-FM high-fidelity television and FM reception! Has all features of RC101, plus 5-watt push-pull, high fidelity audio system and coverage of FM band. Continuous-type tuner and tuning eye permit one knob control of TV, FM or phono — with picture circuits automatically switched off for FM or phono.

RC101 Chassis, List	**$321.95**
RC200 Chassis, List	**336.80**
16-in. rect. tube mtg. kit 216R	**20.60**
17-in. rect. tube mtg. kit 217R	**20.60**
19-in. rd. metal tube mtg. kit 219M	**40.35**
20-in. rect. tube mtg. kit 220R	**28.45**

RC101-200 SPECIFICATIONS

Panel Controls: Off-on-sound volume and tone. Channel selection and tuning.



Secondary Panel Controls: Contrast, brilliance, horizontal hold, vertical hold.

Tuning Indicator: 6AL7GT double-shadow eye.

Sensitivity: Video (channel 6): 25 microvolts or less for 1 volt at detector. Noise figure: 12 db.
Audio: 25 microvolts or less for 30 db. quieting.

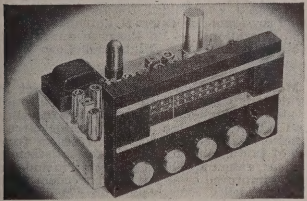
Audio Output: (RC101) 1 volt at less than 1% distortion.
(RC200) Push-pull 6W6GT's provide 5 watts with less than 2% distortion at 4, 8, or 16 ohms.
Frequency response: 20 to 20,000 cps.

Power Consumption: 105-125 volts, 60 cycles, 165 watts (RC101): 225 watts (RC200).

Tube Complement: (RC101) 24 tubes, plus 5 rectifiers.
(RC200) 28 tubes, plus 5 rectifiers.

Shipping Weight: 60 lbs. (less picture tube).

Chassis Dimensions: 17⅛" x 18" x 10" high.



RC10 SPECIFICATIONS

Tube Complement: 11 tubes plus rectifier—6AB4 FM RF preamp., 6CB6 RF amp., 12AT7 mixer, 12AT7 osc. and AFC., (2) 6CB6 IF amp., (2) 6AU6 limiters, 6AL5 FM det., 6AV6 AM det. and phono pre-amp., 12AU7 audio amp., 6X5GT rectifier.

Controls: Bass, off-on-volume, FM-AM-PH-TV selector, tuning, treble.

Output: Capability up to 3 volts at less than 1% distortion. For use with either high or low gain amplifiers with input impedance of 25,000 ohms or higher.

Power Consumption: 105-125 volts, 60 cps., 50 watts.

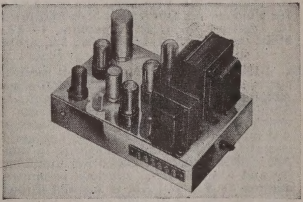
Shipping Weight: 16 lbs.

Dimensions: 13½" x 9½" x 7" high.

FM-AM TUNER

Extremely versatile for individualized installations especially those including TV. Built-in pre-amplifier can be switched for use with G-E, Pickering, or crystal phono cartridges. Furnished with low-noise AM low-impedance loop and built-in FM antenna. Outstanding audio fidelity provided by wide-band IF channels followed by cascaded double limiter and Foster-Seeley discriminator. Continuously variable base and treble controls, providing either boost or cut, are easily adjusted for flat response of 20 to 20,000 cycles. FM and AM sensitivity are both below 5 microvolts. Low-noise performance provided by separate FM and AM triode converters and grounded-grid triode FM pre-amplifier. 10 kc. filter on AM provides 25 db. rejection of inter-station whistles. Fly-wheel tuning enables a quick and accurate station selection. Obsoleting the tuning eye, *Craftsmen* Automatic Frequency Control simplifies FM tuning and eliminates entirely the annoyance of station drift.

RC10, List $219.00



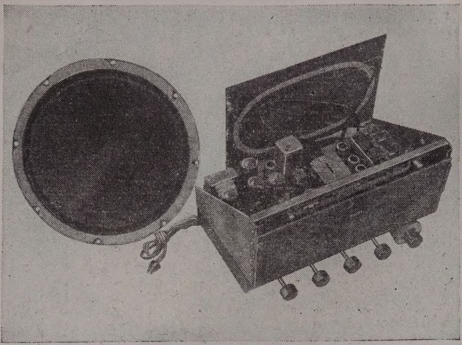
HI-FI AMPLIFIER

10 watts of undistorted output obtainable at 4, 6, 8, 15, or 500-ohm impedance taps. Over-all gain of 70 db., including inverse feedback, over frequency range of 20-20,000 cycles. Four tubes plus rectifier.

RC2, List $71.65

THE RADIO craftsmen INCORPORATED

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK
ESTABLISHED 1928



Model 511B—AM-FM RADIO CHASSIS

ALL MODELS CONTAIN NEW PRE-AMP PICKUP TUBE 6SC7

DEALER - SERVICEMAN.....***Net* $118.50**
(With Speaker)

I. Model 511-B is a Superheterodyne AM-FM Radio Receiver chassis designed to operate on: 105/125 volts AC; 50/60 cycles. Power consumption: 105 watts.

II. FEATURES: 1. AC Superheterodyne AM-FM receiver. — 2. Improved Frequency Modlution Circuit. **Drift Compensated.** — 3. 12 Tubes plus Rectifier and Pre-amp Tube. — 4. 4 Dual Purpose Tubes give added performance. — 5. Treble Tone Control. — 6. 6-Gang Tuning Condenser. — 7 Full-range Bass Tone Control. — 8. High-Fidelity AM-FM Reception. — 9. Automatic Volume Control. — 10. 10-watt (maximum) Push-Pull Beam Power Audio Output. — 11. 12-inch PM Speaker with Alnico V Magnet. — 12. Indirectly Illuminated "Slide-Rule" Dial. — 13. Antenna for AM and Folded Dipole Antenna for FM reception. — 14. Provisions for extenral antennas. — 15. Wired for Phonograph Operation, high and low impedance pick-ups. — 16. Licensed under RCA patents. — 17. RTMA listed. — 18. Multi-tap Output Transformer, 3.2, 8 and 500 ohms.

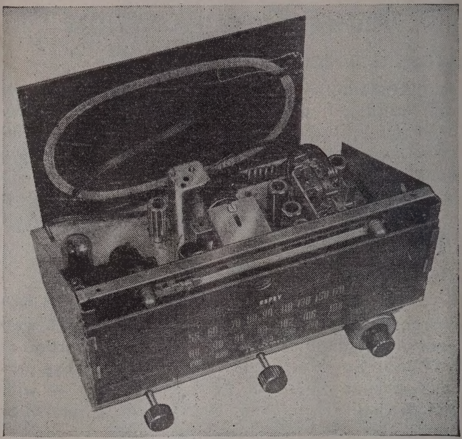
III. DESCRIPTION: Model 511-B receiver features the latest in postwar engineering design. The FM circuit includes a tuned RF Amplifier stage, 2 stages of high gain Intermediate Frequency Amplification and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna in most urban locations. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High Fidelity reproduction on FM and AM is insured through well-engineered circuits and the use of high quality parts. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc.

The large easy-to-read "slide-rule" type dial is illuminated by two pilot lights which also provide illumination for the red plastic dial pointer. A high ratio flywheel drive on the tuning condenser provides smooth tuning throughout the range of the receiver.
The receiver has two antennas; a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM band.
Provision is made for connecting an external Phonograph Pickup to the high-fidelity audio amplifier system of the receiver.
The Multi-tap output transformer will permit the use of Most Popular Type Hi-Fidelity Speakers and dividing networks, or to match a standard 500-ohm line for Remote installations.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. —1 AM Oscillator, Mixer tube. — 1 IF Amplifier tube. — 1 FM Detector Driver tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Audio Amplifier-Inverter tube. — 2 Push-Pull Power Amplifier tubes. — 1 Rectifier tube. — 1 Pre-amp Pickup tube.

V. ACCESSORIES: The Model 511-B chassis is supplied ready to operate, complete with tubes, antennas, speaker and all necessary hardware for mounting in a table cabinet or console.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 10" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 17½ lbs. each.



Model 512B—AM-FM TUNER

Outstanding AM-FM TUNER, self-powered for use with all types of Audio Amplifiers.

DEALER - SERVICEMAN......***Net* $99.95**

I. Model 512 Superheterodyne AM-FM Radio Tuner chassis is designed to operate on: 105/125 volts AC; 50/60 cycles. Power consumption: 75 watts.

I. FEATURES: 1. AC Superheterodyne AM-FM tuning circuit — 2. Improved Frequency Modulation Circuit, **drift compensated.** — 3. 9 Tubes plus Rectifier and Pre-amp Tube. — 4. 3 Dual Purpose Tubes give added performance. — 5. Automatic Volume Control. — 6. 6-Gang Tuning Condenser. — 7. High-Fidelity AM-FM Reception. — 8. Indirectly Illuminated "Slide-Rule" Dial. — 9. Antenna for AM and Folded Dipole Antenna for FM Reception. — 10. Provisions for external antennas. — 11. Wired for Phonograph Operations. — 12. Licensed under RCA patents. — 13. RTMA listed. — 14. High and Low Level Audio Output.

III. DESCRIPTION: Model 512-B Tuner features the latest in post-war engineering design. The FM circuit includes the tuned RF Amplifier stage, 2 stages of high-gain Intermediate Frequency Amplification, and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High-Fidelity reproduction on FM and AM is insured through well-engineered circuits and high-quality parts.
Line Voltage is made available at two outlets at the rear of the tuner; these are actuated by the tuner on-off switch To facilitate custom installations, B+ and Heater Voltages are made available at a utility socket mounted in the tuner. This is suitable for powering auxiliary pre-amplifiers as used with variable reluctance type pickups. Holes for 2 additional controls are available for the convenience of the user. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc.
The receiver has two antennas: a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM Band.
Provision is made for connecting an external phonograph pick-up to the tuner audio system, for use with all types of amplifier installations. Two audio output channels are provided, one at high level, the other at low level; both are controlled by the tuner volume control.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. — 1 AM Oscillator, Mixer tube. — 1 FM Detector Driver tube. — 1 IF Amplifier tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Rectifier tube. — 1 Pre-amp Pickup tube.

V. ACCESSORIES: Model 512-B chassis is supplied ready to operate, complete with tubes, antennas, and all necessary hardware for mounting in a table cabinet or console.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 9" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 14 lbs.

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK
ESTABLISHED 1928

Lowest Priced on the Market DeLuxe AM-FM UNIT

Model 513B—AM-FM DeLuxe TUNER Dealer-Serviceman	Net $ 96.50
Model 514B—DeLuxe Audio Amplifier, 25 Watts Dealer-Serviceman	Net $ 41.95
Alnico V PM Speaker, 12″, 25 Watts Dealer-Serviceman	Net $ 10.35
TOTAL—Dealer-Serviceman	Net $148.80

Model 513B

I. FEATURES:

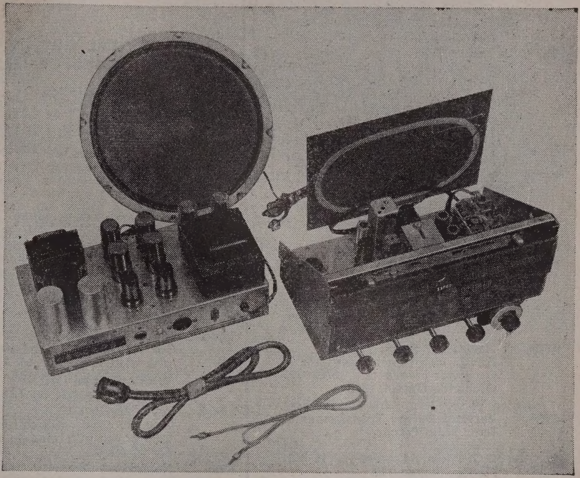
1. Superheterodyne AM-FM circuit.
2. Improved Frequency Modulation Circuit, stabilized against drift.
3. 10 Tubes plus Pre-amp Tube.
4. Tuned RF Circuits on AM and FM.
5. 6-Gang Variable Tuning Condenser.
6. Automatic Volume Control.
7. Full Range Bass Boost Control.
8. Full Range Treble Control.
9. Indirectly Illuminated "Slide-Rule" Dial.
10. Fly Wheel Tuning Drive.
11. Antenna for AM and Folded Dipole Antenna for FM.
12. Provision for external antennas.
13. Wired for Phonograph Operation, High and Low Impedance Pick-up.
14. Licensed under RCA and Hazeltine.
15. RTMA listed.

II. **Model 513B AM-FM Tuner** employs 10 tubes plus a pre-amp tube in a superheterodyne circuit. It is designed to operate from an external power supply and feed into an external audio amplifier. (Model 514 DeLuxe Power Supply-Audio Amplifier is specifically designed to work in conjunction with the Model 513 Tuner.) The power requirements for the tuner are 6.3 volts AC or DC at 3.5 amperes, and 200 volts DC at 60 milliamperes.

III. **DESCRIPTION: The Model 513B Tuner** incorporates the latest development in engineering design. It is intended for the discriminating listener. Separate, Tuned RF stages are employed on both the AM and FM bands to provide extreme sensitivity and minimize spurious responses. The FM circuit also includes two stages of high-gain intermediate frequency amplification to drive a ratio detector circuit of advanced design. AM: 535 Kc. to 1720 Kc. ——— FM: 88 Mc. to 108 Mc.

IV. **TUBE COMPLEMENT:** 1 6BA6 AM-RF Amplifier tube. — 1 6BA6 FM-RF Amplifier tube. — 1 6BE6 AM Converter tube. — 1 6BE6 FM Mixer tube. — 1 6C4 Oscillator tube. — 1 6SG7 AM-FM IF Amplifier tube. — 1 6SH7 FM-Ratio Detector Driver tube. — 1 6J5 AM-Detector AVC tube. — 1 6SQ7 AM-FM 1st Audio tube. — 1 6AL5 FM Ratio Detector tube. — 1 6SC7 Pre-amp Pickup tube.

V. **CHASSIS DIMENSIONS:** 13½″ wide x 8½″ high x 9″ deep. Weight: 10 lbs.



Model 514B Amplifier & Power Supply. Model 513B AM-FM Tuner

ALL MODELS CONTAIN NEW PRE-AMP PICKUP TUBE 6SC7

Model 514B

I. **Model 514** DeLuxe Power Supply and Audio Amplifier contains 6 tubes, plus 2 rectifiers in a high gain push-pull amplifier circuit. It is designed specifically for use in conjunction with the Model 513 Tuner, but may be used wherever a high quality audio amplifier may be required. Power requirements are: 105/125 volts AC; 50/60 cycles; power consumption: approximately 150 watts.

II. **FEATURES:**

1. Parallel Push-Pull Beam Output Circuit.
2. Self-Balanced 3-Phase Inverter System.
3. Extended Range High-Fidelity Response.
4. Inverse Feedback Circuit.
5. 6 Tubes plus 2 Rectifiers.
6. Output Impedance selective for any speaker requirement (4 to 500 ohms).
7. License under RCA.
8. RTMA listed.

III. **DESCRIPTION:** The Model 514B Power Supply-Audio Amplifier employs the best proven engineering design. Six tubes are incorporated in a balanced phase inverter parallel push-pull amplifier. By the use of an inverse feedback circuit, high-fidelity performance is obtained.

IV. **TUBE COMPLEMENT:** 2 6J5 Audio Driver tubes. — 4 6V6 Beam Power Audio Output tubes. — 2 5Y3 Rectifier tubes.

V. 13½″ wide x 7½″ high x 7″ deep. Weight 18 lbs.

Net

TECH-MASTER PRODUCTS COMPANY

PRECISION TELEVISION COMPONENTS

TRANSFORMERS

Part No.	Description	List Price
1T8	**Power Transformer** Primary: 117 V 2.18 Amps Secondary: 360-0-360V AC (C.T.) D.C. Output 370V at 250 Mils Filament 1 6.3V 8 Amps Filament 2 5.0V 2 Amps Filament 3 6.3V 6 Amps Filament 4 5.0V 3 Amps Mounting Dimensions: 4$\frac{1}{16}$''x3$\frac{3}{16}$''	$23.75
157*	**Power Transformer** Primary: 117V, 2.75 Amps, 320 Watts Secondary: 362-0-362V AC (C.T.) DC Output 390V at 295 Mils Filament 1 12.6/6.3V 5/10 Amps (Center tapped winding) Filament 2 5.0V 6 Amps Filament 3 5.0V 2 Amps Mounting Dimensions: 4$\frac{1}{16}$''x3$\frac{3}{16}$''	32.50
147A	**Power Transformer** Same as 157 Except: Filament 3 6.3V 1.2 Amps	32.50
CH-1*	**Filter Choke** L = 3 Henry R = 62 Ohms	5.40
8T2*	**Vertical Blocking Osc.** X'former (Shielded) Turns Ratio Primary to Secondary 1:4.2 D.C. Resis.: Primary 165 Ohms Secondary 1310 Ohms	3.50
8T8*	**Horizontal Sync Discr.** Transformer (Synchrolock Tran.) Oscillator Frequency 15750 CPS Oscillator Output (Peak to Peak) 95V	2.30
4T2*	**Vertical Output Transformer** Turns Ratio Primary to Secondary 10:1 D.C. Primary Current 15 Mils Primary Impedance (at 60 cps) 19,000 Ohms D.C. Resis.: Primary 590 Ohms Secondary 6.9 Ohms	6.95
T14*	**Audio Output Transformer** D.C. Resistance (Primary): 450 Ohm (approx.) Primary Impedance (for 3.2 ohm speaker): 7600 Ohms Turns Ratio (Primary to Secondary): 48:1	2.10

I. F. TRANSFORMERS

Part No.	Description	List Price
1K1*	**1st and 2nd Sound I.F. Transformer** Primary and Secondary Center Frequency: 21.25 Mc Band Width: 90% 200 KC 10X 1300 KC	2.20
3K1*	**Sound Discr. Transformer** Center Frequency 21.25 Mc Band Width (Peak to Peak) 300 KC Q (Primary and Secondary) 105	2.75
2K7	**1st Video I.F. Transformer** I.F. Trap Operating Freq.: 25.3 Mc 27.25 Mc Q 115 315	2.35
2K3*	**2nd Video I.F. Transformer** I.F. Trap Operating Freq.: 22.3 Mc 19.75 Mc Q of Trap 100	1.80
2L1*	**3rd and 4th Video I.F. Coils** Operating Freq.: 25.2 Mc (3rd I.F.) 23.4 Mc (4th I.F.)	.65
2K4*	**Cathode Trap** I.F. Trap Operating Freq.: 21.25 Mc Q 75 315	2.20
4L1*	**Filament Choke** Used to isolate filament of I.F. tubes at Video I.F. frequencies Inductance .8 Mh D.C. Resistance .015 Ohms	.20

VIDEO PEAKING COILS

Part No.	Color	Ind.	Shunt Res.	List Price
3L1*	White	180 Mu H	39K	$ .45
3L2*	Green	250 Mu H	10 Meg	.45
3L3*	Blue	120 Mu H	22K	.45
3L4*	Red	93 Mu H	10 Meg	.45

HORIZONTAL OUTPUT AND H.V. TRANSFORMERS

Part No.	Description	List Price
11T1	Replaces RCA type 211T1	$ 5.60
11T5	Replaces RCA type 211T5	9.50
23T1	Replaces RCA type 223T1	6.00
TJ1	Replaces G.E. type 77J1	10.40

WIDTH AND LINEARITY COILS

Part No.	Description	List Price
1R1*	**Width Control Coil** For use with 11T1 transformer.	.70
1R3*	**Horizontal Linearity Coil** For use with 11T1 transformer.	.80
1R4	**Width Control Coil** 5000 Ohms 1 W.	1.00
1R4-AG	**AGC Width Coil** For 11T1 or 11T5 transformers, with winding for Keyed AGC.	2.00
1R4-J	**Width Control Coil** Ceramic core coil for TJ1 trans.	2.50
1R4-E	**AGC Width Coil** Ceramic core width coil for TJ1 transformer with winding for Keyed AGC.	2.65
1R5	**Horizontal Linearity Coil** Tapped winding for use with 11T5 transformer.	1.20
9R1	**Horizontal Linearity Coil** Tapped winding for use with 23T1 transformer.	1.20

FOCUS COILS

Part No.	Description	List Price
2D2PM	**PM Focus Coil** Permanent magnet type focus coil with centering device.	7.50
2D1*	**Focus Coil** D.C. Resistance 247 Ohms D.C. Focus Current 115 Ma	7.50
2D2	**Focus Coil** D.C. Resistance 470 Ohms D.C. Focus Current 95 Ma 3 Mounting Brackets 120° apart.	11.00
2D2A	**Focus Coil** Same as 2D2 but with 2 mounting brackets 180° apart.	11.00

VOLUME CONTROLS

Part No.	Description	List Price
11.4*	**Vert. Lin. Control** 5000 Ohms 1 W.	1.25
11.5*	**Height Control** 2.5 Meg. ½ W.	.75
11.7*	**Vol., Contrast, On/Off Cont.** 1 Meg./10K ½ W.	4.25
11.8*	**Vert. & Horiz. Hold** 50K/1 Meg ½ W.	3.10
11.9*	**Brightness Control** 50K ½ W.	.75
11.11*	**Focus Control** 1500 Ohms 4 W.	1.65
11.15*	**Horizontal Drive** 20K ½ W.	.75
11.15T	**Horizontal Drive** 250K ½ W.	.75
11.16*	**Vert. & Horiz. Centering** 20 Ohms 2 W. Tapped	1.65

ELECTROLYTIC CONDENSERS

Part No.	Description	List Price
338*	250/10V, 1000/6V	$ 2.85
367*	40-10/450V, 80/150V	3.90
368*	40-40-10/450V	4.15
369*	80/450V, 50/50V	3.50
370*	40-10/450V, 10/350V	3.30
371*	20/450V, 80/350V	3.65

BLEEDER RESISTORS

Part No.	Description	List Price
439*	6300 ohm WW 25 watt	2.75
458*	1590 ohm WW 30 watt	1.80
459*	6855 ohm WW 10 watt	1.45
876*	5000 ohm WW 10 watt	.60
HVR	2 Meg. HV Resistor 4 watt	1.00

DEFLECTION YOKES

Part No.	Description	List Price
1D1*	**Wire Wound Yoke** For 53° deflection. Horizontal Ind. 8.3 Mh Vertical Ind. 50.0 Mh	9.45
70W	**Wire Wound Short Neck Yoke** For 70° deflection. Horizontal Ind. 8.3 Mh Vertical Ind. 50.0 Mh	9.45
70F	**Ferrite Core Short Neck Yoke** For 70° deflection. Horizontal Ind. 14 Mh Vertical Ind. 47 Mh	11.25
9D1	**Ferrite Core Yoke** On molded spool for 70° deflection. Horizontal Ind. 13.3 Mh Vertical Ind. 41.5 Mh	11.25

MISCELLANEOUS COMPONENTS

Part No.	Description	List Price
L1T1	**Ion Trap** Single Magnet Ion Trap.	1.50
L1T2	**Ion Trap** Double Magnet Ion Trap.	2.10
450*	**High Voltage Condenser** 500 mmf 10KV Ceramic	1.35
451	**High Voltage Condenser** 500 mmf 20KV Ceramic	2.25
457*	**Line Cord** Interlock Type. Length: 6 ft.	.70
458A*	**Male Interlock Receptacle** Will fit Cord 457 listed above.	.20
525*	**Kinescope Socket and Leads**	2.25
532*	**High Voltage Anode Cap and Lead** Insulated for 20KV	1.00
HVS*	**High Volt. Socket Assembly**	3.50
DS2	**High Volt. Socket Assembly** For use with Voltage doubler high voltage systems.	4.80

PLASTIC SLEEVE & RING SETS

Poly-ethylene sleeve, together with retainer ring and rubber band for use with metal Kinescope tubes. Insulated for more than 30KV.

Part No.	Description	List Price
PL-4	For use with 16'' tube	7.65
PL-4S	For use with 16'' short neck tubes	7.65
PL-17R	For use with 17'' Rect. tubes	9.75
PL-19	For use with 19'' tubes	9.75
PL-24	For use with 24'' tubes	13.20

KNOBS AND ESCUTCHEON PLATES

Part No.	Description	List Price
533	**Knob, Fine Tuning**	.40
534	**Knob, Station Selector**	.50
535	**Knob, Contrast, Brightness, Vertical Hold**	.35
536	**Knob, Hor. Hold, Vol.**	.30
537	**Knob, Dummy Brightness**	.30
598A	**12 Chan. Plate & Spring**	1.00
598B*	**13 Chan. Plate & Spring**	1.00

**** All parts marked * are exact replacements for 630 type chassis.***

All prices shown are list prices subject to change without notice.

TECH-MASTER PRODUCTS COMPANY

AMERICA'S FINEST TELEVISION CHASSIS

For all picture tubes from 16" to 24"

Quick-Action Keyed AGC circuit — *Stabilized Control*

"High-Sweep" Voltage Multiplier System — *Clear Brighter Pictures*

Advanced 12-Channel Turret Tuner — *Super Selective Control*

630 Type Circuit RCA Licensed — *Time-Proven and Time Honored*

Full 4Mc Band Width — *Better Picture Definition*

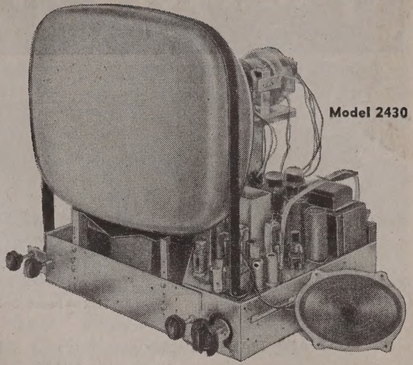
Excellent Linearity — *Perfectly Proportioned Pictures*

15 Microvolt Sensitivity — *Excellent for Fringe Areas*

Wherever quality custom television installations are made and sold, the outstanding Tech-Master 630 type chassis is the overwhelming choice. The superlative quality of this chassis is a direct result of advanced engineering and pledged determination to obtain the optimum in television reception. No corners have been cut—no expense has been spared to produce the finest possible T.V. receiver. Every component part is the best available to insure years of trouble-free performance. Rigid alignment and test standards for this time-honored and time-proven chassis make it the inevitable choice of engineers and technicians. Utilization of separate channels for sound and video assures excellent reception—even in fringe areas. The finest components, the most advanced engineering, and the most care and thoughtfulness in wiring, testing, and alignment all add up to the finest T.V. chassis the industry has to offer.

DELUXE SERIES TELEVISION CHASSIS

Model 2430—Designed specifically for all picture tubes requiring from 65 to 70 degrees horizontal deflection (such as 24AP4, 20CP4, 19AP4). Supplied with all tubes (less picture tube), and 5" x 7" PM speaker with Universal Picture Tube Mounting Brackets........$189.50



Model 2430

MASTERPIECE SERIES TELEVISION CHASSIS

Model 2431P—Same as model 2430, but contains Push-Pull Tru-Fidelity Audio with a Phono Input jack. Supplied with 12" PM speaker and universal picture tube mounting brackets. $199.95

Model 2431C—Basically the same as Model 2430, but contains a continuous tuner, push-pull Tru-Fidelity audio, and a phono jack. This allows complete coverage of both television and FM bands. Supplied with 12" PM speaker and universal picture tube mounting brackets........$199.95

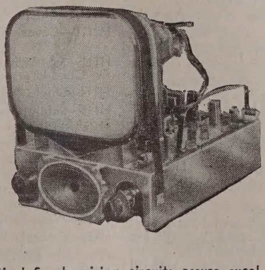
NEW . . . ADVANCED 630 TYPE KITS

Learn television first hand by assembling this top quality TV kit. Unsurpassed picture quality is obtained from the new and better features added to the world-famous 630 type circuit. Special Tech-Master schematic and pictorial diagrams guide every step. Supplied with all components, picture tube mounting brackets, speaker, and all tubes (less kine, wire, and solder).

Model 630D19—DE LUXE KIT, all principal components mounted. $159.50

Model 630S19—STANDARD KIT same as above but unassembled. $154.50

"UNIVERSAL" TELEVISION KIT



- √ Compact, light-weight, easily portable unit . . . operates on both AC and DC, for use with picture tubes up to 17 inch rectangular.
- √ Advanced and improved 12-channel tuner assures excellent sensitivity.
- √ Two-knob control on front panel provides automatically synchronized picture and sound —for simple, easy tuning.
- √ Latest Horizontal and Vertical Synchronizing circuits assure excellent stability and noise immunity characteristics.
- √ High efficiency beam power amplifier and ceramic core horizontal output transformer provide clear, bright pictures and full horizontal deflection.

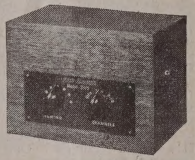
Tech-Master engineering ingenuity has achieved the greatest modern advancement in the construction of TV kits—the development of the IF "Synchro-Strip." This "extra" feature cuts in half the amount of work required to assemble and wire the kit. It comes mounted in place on the main chassis, together with the tuner, and is completely wire aligned and tested with 7 tubes—thereby eliminating the necessity of further Video or Sound IF alignment. The newest engineering advancements have been utilized in the design of the horizontal and vertical sync. Circuits to assure excellent stability and noise immunity characteristics.

Complete step-by-step instructions and diagrams (both pictorial and schematic) permit complete wiring and assembly over a week-end. TV by TECH-MASTER is no mystery!

Model 5116—"Universal" Kit complete with all hardware, instructions, and picture tube mounting brackets (less *tube kit, kine, wire & solder). *Tuner supplied with tubes........$89.50

Set of 14 circuit-tested tubes, including those actually used in the precision alignment of each individual 5116 Kit—recommended for optimum performance........$16.25

TV ACCESSORY KIT

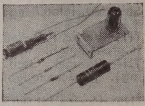


BOOSTER KIT—Precision designed and tested to reduce noise from 3 to 5 db. Signals are boosted to such proportions that you receive outdoor antenna results with an indoor antenna.

SPECIFICATIONS — Fixed grid, variable plate tuning • Separate coils for low and high channels • High channel input coil may be tuned for any desired channel • Complete with 6AK5 tube, walnut cabinet, and pre-aligned coils • Chassis is pre-stamped.

Model 3375—Each........$9.95

KEYED A.G.C. KITS FOR 630-TYPE CHASSIS



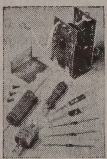
Add a keyed automatic gain control circuit to any 630 Type TV chassis using a 211T1, 211T5, or similar type HV transformer. No holes to drill, easy to install. Has special bracket easily attached to existing holes for under-chassis mounting. This advanced keyed AGC circuit operates from the sync pulse for ideal results under all signal conditions. Eliminates "airplane flutter" and overloading. Simplifies tuning and adjustment. Greatly improves signal to noise ratio. Has special width control coil with extra winding to obtain keying pulse.

KIT AG-1—Supplied complete with 6AU6 tube, bracket with mounted socket, all parts and complete wiring instructions........$4.45

A.G.C. Kit for Use with G.E. Type Trans.

KIT AG-2—Similar to Kit AG-1 but with special circuit and components for use with Voltage Multiplier Trans. as shown below........$6.00

TECH-MASTER "Hi-Sweep" VOLTAGE MULTIPLIER KITS



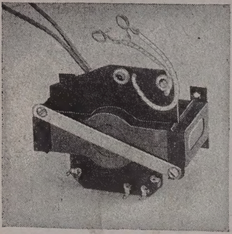
"HI-SWEEP" DE LUXE KIT TYPE "A" (illustrated)—Includes TJ1 flyback (GE type), mounting bracket, 1R4-J width coil and ALL components required for use with yokes having deflection angles up to 60°........$11.05

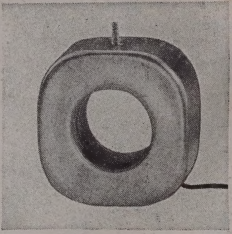
"HI-SWEEP" DE LUXE KIT TYPE "B"—Similar to type "A" kit but for use with yokes from 62° to 70°........$11.05

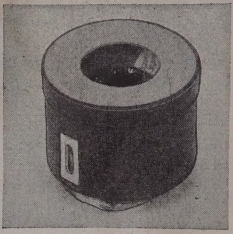
"HI-SWEEP" STANDARD KIT TYPE "C-D"—Basic kit includes TJ1 flyback (GE type), mounting bracket and 1R4-J width coil, for use with yokes having deflection angles from 53° to 70°. Each........$ 7.05

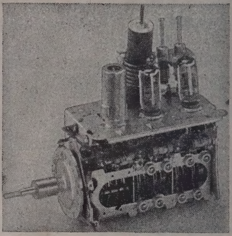
ALL PRICES SHOWN ARE NET AND SUBJECT TO CHANGE WITHOUT NOTICE.

Philmore *TV Replacement Parts*


T118 — Horizontal Deflection Output Transformer


T122 — Focus Coil


T121 — Deflection Yoke


T120 — 12 Channel Tuner

COILS AND TRANSFORMERS

Part No.	Description	List Price
T100	1st and 2nd Sound I.F. Transformers. Interchangeable with RCA type 201K1	2.00 ea.
T101	1st Pix I.F. Transformer. Interchangeable with RCA type 202K2	2.20 ea.
T102	2nd Pix I.F. Transformer. Interchangeable with RCA type 202K3	1.50 ea.
T103	Sound Discriminator Transformer. Interchangeable with RCA type 203K1	2.10 ea.
T104	Horizontal (Synch.) Discriminator Transformer. Interchangeable with RCA type 208T8	2.25 ea.
T105	3rd and 4th Pix Coils. Interchangeable with RCA type 202L1	.55 ea.
T106	Cathode Trap Coil. Interchangeable with RCA type 202K4	2.10 ea.
T107	Video Peaking Coil, 180 MH. Shunt Resistance 39,000 Ohms. Interchangeable with RCA type 203L1	.40 ea.
T108	Video Peaking Coil, 250 MH. Shunt Resistance 10 Megohms. Interchangeable with RCA type 203L2	.40 ea.
T109	Video Peaking Coil, 120 MH. Shunt Resistance 22,000 Ohms. Interchangeable with RCA type 203L3	.40 ea.
T110	Video Peaking Coil, 93 MH. Shunt Resistance 10 Megohms. Interchangeable with RCA type 203L4	.35 ea.
T111	Filament Chokes, .8 MH. Interchangeable with RCA type 204L1	.15 ea.
T112	Width Control Coil. Interchangeable with RCA type 201R1	.70 ea.
T113	Horizontal Linearity Control Coil. Interchangeable with RCA type 201R3	.80 ea.
T114	Audio Single Output Transformer (speaker) for 6K6 Tubes	1.65 ea.
T115	Power Transformer, 295 MA. Fully Shielded. Interchangeable with RCA type 201T6	31.25 ea.
T116	Vertical Deflection Output Transformer. Interchangeable with RCA type 204T2	5.50 ea.
T117	Vertical Oscillator Transformer (Blocking). Interchangeable with RCA type 208T2	2.25 ea.
T118	Horizontal Deflection Output Transformer. Interchangeable with RCA type 211T1 or 211T3	9.00 ea.
T121	Deflection Yoke, 8.3 MH. Vertical 50 MH. Interchangeable with RCA type 201D1	7.50 ea.
T122	Focus Coil, 247 Ohms D.C. Resistance. Interchangeable with RCA type 202D1	7.50 ea.
T123	Ion Trap Beam Bender P.M. (Double Magnet). Interchangeable with RCA types 203D1 or 203D3	1.60 ea.

ELECTROLYTIC CONDENSERS

(in Round Aluminum Cans)

Part No.	Description	List Price
C220	40+10+80 Mfd. — 450—450—150 Volts — with Cardboard Insulated Tube	3.90 ea.
C221	40+40+10 Mfd. — 450—450—450—Volts	4.15 ea.
C222	80+50 Mfd. — 450—50 Volts — With Cardboard Insulated Tube	3.50 ea.
C223	40+10+10 Mfd. — 450—450—350 Volts	3.35 ea.
C224	20+80 Mfd. — 450—350 Volts	3.65 ea.
C225	250+1000 Mfd. — 10—6 Volts	3.00 ea.
H125	Bakelite Insulating Plates for above condensers (set of 4)	.15 Set

NOTE: All Condensers are rated for 85°C Operation.

VOLUME CONTROLS

Part No.	Description	List Price
R131	Picture and Sound—10,000 Ohms and 1 Megohm Dual Control with Power Switch	3.70 ea.
R152	Brightness Control—50,000 Ohms	1.25 ea.
R168	Vertical and Horizontal Hold—1 Megohm and 50,000 Ohms Dual Control	3.10 ea.
R169	Height Control—2.5 Megohm	1.25 ea.
R178	Vertical Linearity Control—5,000 Ohms	1.25 ea.
R181	Vertical Centering Control—20 Ohms, Tapped Center, Wirewound	1.85 ea.
R184	Focus Control—1500 Ohms, Wirewound	2.00 ea.
R187	Horizontal Drive Control—20,000 Ohms	1.25 ea.
R211	Horizontal Centering Control—20 Ohms, Wirewound	1.25 ea.

WIREWOUND RESISTORS AND VOLTAGE DIVIDERS

Part No.	Description	List Price
R200	5,000 Ohms, 5 Watt	.55 ea.
R185	1360 Ohms—17 Watt and 250 Ohms—10 Watt	1.75 ea.
R209	5300 Ohms—20 Watt, 500 Ohms—2 Watt and 500 Ohms—2 Watt	2.00 ea.
R186	6750 Ohms 3.2 Watt, 12 Ohms—½ Watt and 93 Ohms—4 Watt	1.75 ea.

TUNER UNITS, KNOBS AND ESCUTCHEONS

Part No.	Description	List Price
T120	12 Channel Tuner, complete with Tubes. Pre-Aligned Turret Type	56.00 ea.
KN101-105	Tuner Knobs with Springs (set of two knobs) also includes 12 Channel Escutcheon Plate	1.50 Set
KN101-R	Tuner Knob with Springs (set of two knobs)	.80 Set
KN102-R	Picture and Sound Knobs with Springs (set of two knobs)	.55 Set
KN103-R	Vertical Hold and Horizontal Hold Knobs with Springs (set of two knobs)	.55 Set
KN104-R	Brightness Knobs with Springs (set of two knobs)	.55 Set
KN105-R	13 Channel Escutcheon Plate and Spring	1.10 ea.

NOTE: Above knobs are to be used with the RCA 13 Channel Tuner.

Part No.	Description	List Price
KN106	Set of Decals for either the 12 Channel or 13 Channel Tuner	.20 Set

Also available are a variety of sets of Knobs in Mahogany and Gold and in various color combinations.

ADDITIONAL TELEVISION ITEMS

Part No.	Description	List Price
S105	High Voltage Rectifier Socket Assembly	1.75 ea.
S106	Duo-Decal Kinescope Sockets with 5-19" Leads	.90 ea.
301	300 Ohm Twin Connecting Transmission Line, 1000 ft. Spools	68.75 M ft.
302	High Voltage Lead 23" Long with Clip for Connecting to Kinescope Tube	.75 ea.
Model DP	Voltage Doubler Assembly for conversion to higher voltage of approximately 12,000 volts, including one 1B3 tube	32.40 ea.

BRACKETS AND HARDWARE ITEMS

Part No.	Description	List Price
H101	Bracket for Hold Control	.90 ea.
H102	Bracket for Tuner Shaft Bearing	.50 Set
H103	Bakelite Bearing for Tuner Shaft	
H104	Brackets for Mounting Chassis to Cabinet (set of 4 brackets)	.75 Set
H105	Bracket for Mounting Deflection Yoke	.80 ea.
H106A	Bracket for Mounting Focus Coil (upper)	.35 ea.
H106B	Bracket for Mounting Focus Coil (lower)	.60 ea.
H106D	Studs Threaded for Focus Coil Bracket (set of 2)	.25 Set
H107	Bracket for Mounting Speaker	.90 ea.
H109-A-B-C-D	High Voltage Shield Assembly consisting of Transformer Mounting Base, Side Cover, Top Cover and Back Cover	8.00 Set
H109E	6 foot Power Supply Cord with Safety Break Female Connector	.90 ea.
H111A	Shield for Voltage Divider	1.50 ea.
H111B	Cover for Voltage Divider Shield	1.00 ea.
H112	Sub-Chassis Plate for Mounting Electrolytic Condensers	1.25 ea.
H114	Shield for Cathode Trap Coil	1.25 ea.
H115	Safety Break Male Connector for AC Input Supply	.30 ea.
H116	Tuner Shield	.75 ea.
H117	Shield for Discriminating Sound Transformer	.50 ea.
H132	Threaded Round Head Screws 4½" long (set of 2)	.30 Set
H135	Ring Corona Wire	.25 ea.
H136	Brackets for Mounting S105 H.V. Socket Assembly (set of 4 brackets)	.25 Set
H137	Bracket for Width Control	.50 Set
H142	Bracket for Kinescope Tube	1.50 ea.
H153	Complete set of Universal Kinescope Brackets for RCA type 630 and 830 chassis, including elastic belt and necessary mounting hardware. Suitable for all types of tubes from 12½" to 19" including the rectangular tubes.	13.75 Set
T125	T.V. Chassis, formed and punched. Cadmium plated for Philmore Television Sets and Kits or any RCA 630 Type Set	10.00 ea.

A.G.C. KIT—AUTOMATIC GAIN CONTROL WITH KEYED-PULSE FAST ACTION

Model AGC-10	For 10" and 12½" Tube	11.90 Kit
Model AGC-16	For 16" Tube	12.50 Kit

Manufacturers of the RCA 630 type Chassis completely assembled, also Kits partly assembled and completely unassembled, with step-by-step instructions for assembly, including full size detailed blueprints.

Also manufacturers of Table Models and Consolettes up to 19" Kinescope Tubes.

Additional items not listed are available. Please write for prices.

Philmore
GUARANTEED RADIO PRODUCTS

Glass Enclosed CRYSTAL DETECTOR

- Ideal for Crystal Reflex circuits.
- Dust-proof.
- Fixed at factory but delicately adjustable at all times.
- Includes Supersensitive Crystal.

Cat. No. 7008.....**List Price $0.65**

Fixed CRYSTAL DETECTOR

Philmore
FIXED CRYSTAL
DETECTOR

Will give renewed action to reflex or crystal sets. The sensitivity of the mineral is determined by laboratory methods and fixed permanently. Made to withstand high voltage. Small and enclosed in a bakelite case.

Cat. No. 7002..........................**List Price $0.90**

Open Type CRYSTAL DETECTOR

Universal joint on swivel arm provides quick, accurate adjustment on any point of crystal. Handsome polished metal finish. Completely assembled, ready for mounting.

Cat. No. 7003..........................**List Price $0.45**

Unmounted DETECTOR

Includes stand, crystal cup, arm with catswhisker and screws and nuts necessary for mounting.

Cat. No. 7010..........................**List Price $0.25**

CRYSTALS and CATSWHISKERS

Philmore
METER TESTED
CRYSTAL
PRICE 20¢

Mounted Galena Crystal on Display Card or Individually Boxed.

Cat. No.	List Price
7004—Galena Crystal, indiv. box	$0.20
7005—Galena Crystal, disp. card	.20
7006—Catswhiskers (2 on display card)	.20

HAND MICROPHONE

Ideal novelty for home parties. Cuts in on broadcasts and permits person to talk or sing through the radio speaker. Button switch cuts mike in and out of broadcast. Simple to install. Equipped with 9 ft. of cord.

Cat. No. 500H, List Price $2.90

Junior MICROPHONE

For home broadcasting; will operate efficiently from any radio set. It will help turn any dull house party into hilarious, enjoyable entertainment.

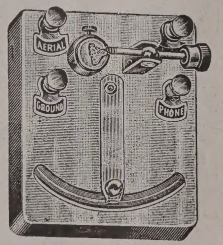
Equipped with push button switch for cutting off radio programs and bringing in the home broadcaster's voice very clearly. Sensitive, with excellent volume, and is shock-proof. Easily attached to any set without rewiring and can remain attached without interfering with regular broadcasting.

Cat. No. 500..........................**List Price $1.90**

"Little Wonder" and "Supertone" RADIO SETS Have These Outstanding Features!

- Glass enclosed dust-proof detector, which is adjustable. (Supertone)
- Specially designed hook-up assuring reception within a radius of twenty-five (25) miles from a broadcasting station.
- Under favorable climatic conditions reception may be received as far as one hundred (100) miles from broadcasting station.
- Costs nothing for upkeep.
- No batteries, tubes or expensive accessories required.
- Manufactured in Genuine BAKELITE in 4 brilliant colored pastel shades of GREEN — ORANGE — RED and ROSE. The advantages of bakelite are well-known for its beauty and cleanliness. It will retain its color and can be kept clean for the life of the set which is practically infinite.

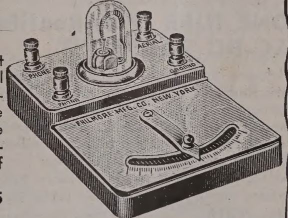
"Little Wonder" RADIO RECEIVING SET



Compact in size but big in results. The open type detector permits adjustments to be made to the finest degree. This set includes the Philmore Supersensitive Crystal which assures quick results when "looking" for a station, because the entire surface of the crystal is sensitive.

Cat. No. 7000..........................**List Price $1.75**
Plus Federal Excise Tax

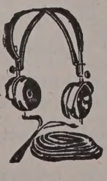
"Supertone" RADIO RECEIVING SET



A remarkable Radio Receiving Set built to give everlasting service. This set will bring in broadcasting loud and clear without distortion or noises. The Supertone Crystal Set is equipped with a Philmore Supersensitive Crystal which will give excellent results over an indefinite period of time.

Cat. No. 7001..........................**List Price $2.25**
Plus Federal Excise Tax

PHILMORE HEADPHONES



Accurately matched headphone set. Each unit consists of "double high flux" magnets. Ruggedly constructed of lightweight metal — with highly polished bakelite ear caps. Concealed terminal type. Equipped with braid covered adjustable headband, and cord 4½ feet long.

2260—Philmore Double Phone 2000 ohm Impedance $4.40
2261—Philmore Single Phone 1000 ohm Impedance $2.50

NOTE:—The Single Phone is the same construction as the Double with exception that the headband is of spring steel.

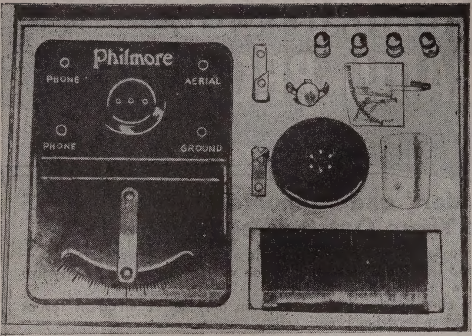
AERIAL KIT

A complete kit of parts for assembly of a professional antenna. Attractively packaged in a multi-colored display box.

- 1 coil 7-26-50 ft. stranded copper aerial wire.
- 1 coil 25 ft. rubber covered lead-in wire.
- 1 Ground Clamp.
- 1 Lead-in-strip.
- 2 Porcelain insulators.
- 2 Nail-it knobs.
- 1 Instruction sheet.

Cat. No. 2103..........................**List Price $1.50**

Philmore RADIO KITS



"Supertone" RADIO Crystal Set Kit

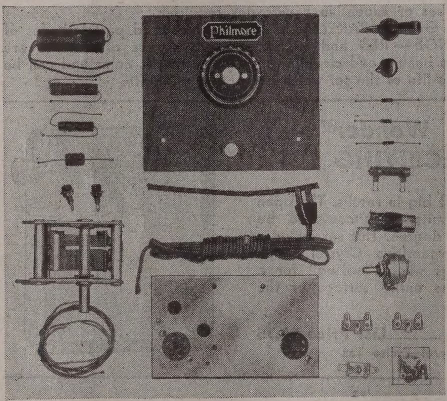
Complete in every detail for quick and simple assembly. Crystal set kits are a great hit with youngsters and adults the world over.

Kits consist of moulded bakelite base with contact slider, crystal holder; crystal detector and cover, catswhisker support, spring catswisker, ready wound tuning coil, binding posts, plus all necessary wire, hardware and "easy-to-follow" instructions.

Philmore
SUPERTONE
RADIO
KIT
INTERESTING
EDUCATIONAL
READY TO ASSEMBLE
IT'S SUPER

Cat. No. 7001A — List Price $4.40*

* Plus Federal Excise Tax

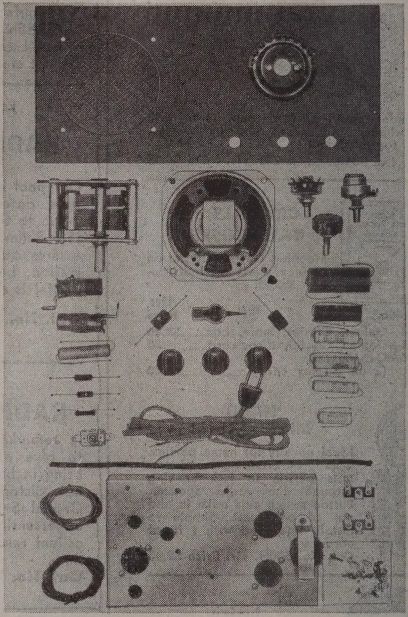


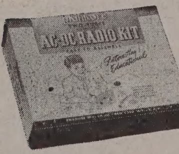
ONE TUBE (Plus Rectifier) Tube AC-DC RADIO KIT

Philmore radio kits have been designed purposely for easy construction and still use the most efficient types of circuits. Kits are replicas of parts and circuits used and thoroughly tested in master models and standardized. This permits anyone without previous knowledge or skill to obtain excellent results by following the simple instructions and diagrams.

Attractively packaged in a sturdy box. All parts are fitted in the inside, making a very presentable display.

No. 7001B — Complete, less tubes and headset........ List Price **$12.50**





Each Kit is attractively packaged in sturdy box.

TWO TUBE (Plus Rectifier Tube) AC-DC RADIO KIT

The two-tube plus rectifier tube receiver kit is more elaborate than the one-tube and much greater in signal strength — permitting use of a 4" P.M. speaker.

Simple instructions with pictorial as well as schematic diagrams make assembly simple and quick. Attractively packaged in sturdy box.

Here is a completely professional-type radio kit that is perfect for the beginner in radio. An excellent opportunity to learn the fundamentals of radio and at the same time build a radio that will be a high-quality unit, superior in tone and selectivity to many manufactured radios. Completely assembled, you have a TWO-BAND set, covering standard broadcast (550-1700 Kc) and SHORT WAVE (6-18 Mc).

Cat. No. 7001C — Complete with Speaker, less tubes........................**List Price** **$20.00**

(NOTE:—Wire and Solder not included with 7001B and 7001C)

DU MONT ELECTRONIC PARTS FOR TV

DU MONT DEFLECTION YOKES
DISTRIBUTED-WINDING 70° DEFLECTION YOKES
SERIES Y2A

The series Y2A Yoke when properly matched into the horizontal and vertical circuits of a television receiver will sweep any cathode ray tube which has a deflection angle of 70° or less.

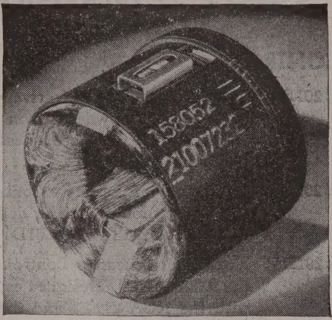
Because of the unusual winding technique, full sharp focus is insured, and the overall length is held to 2¾″.

The horizontal inductance is 10.5 mh and the vertical inductance is 42.0 mh.

The following types are available:

- **Y2A1** — 70° Deflection Yoke with 560 ohm resistors, 51 mmf capacitor and leads. For use with transformer type circuits.
- **Y2A2** — Same as Y2A1 but without components and leads.
- **Y2A5** — Same as Y2A1 but wired for autotransformer type circuits.
- **Y2A3** — Same as Y2A5 but without components and leads.

Lead length is 13″ minimum.



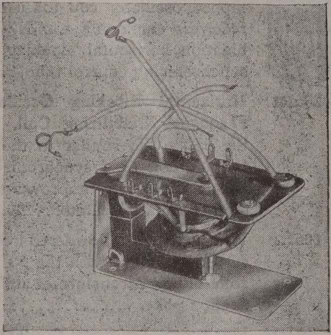
Instruction sheet included with each yoke.

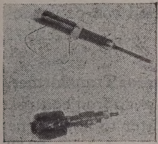
DU MONT TYPE H1A1 HORIZONTAL DEFLECTION AND HIGH-VOLTAGE TRANSFORMER

The type H1A1 Horizontal Output Transformer lends itself ideally for conversion of 10″ and 12″ television receivers to the large screen tubes. It is capable of supplying between 12 and 13 kilovolts to the anode of a 70° picture tube with the use of only one driver tube and one high voltage rectifier tube.

A ferrite core keeps the unit small in size and light in weight with the utmost of efficiency.

A universal mounting bracket allows it to be mounted on either its side or its bottom. The mounting holes are for a #8 self-tapping screw.



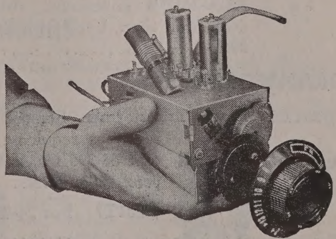


The Horizontal Width Control Coil type W1A1, and the Horizontal Linearity Control Type L1A1 are recommended for use in a horizontal deflection circuit using the Du Mont Horizontal Output Transformer type H1A1, and the Du Mont Deflection Yoke type Y2A1.

	Inductance Max.	Inductance Min.	Resistance Ohms (approx.)
Width Coil W1A1	.230 mh	.050 mh	.75
Linearity Coil L1A1	20 mh	7 mh	36.5

DU MONT INPUTUNER* SERIES T3C

A brand new Du Mont TV-FM r-f tuner combining the dependability of continuous tuning with detent selection of TV channels, resulting in greatly simplified operation. Mechanically and electrically, a direct replacement for most switch-type tuners. Covers all TV channels and FM broadcast band in four turns. Simplified dials enhance appearance and make tuning easy. Incorporates Mallory-Ware 3-gang spiral Inductuner** plus antenna tuning, providing full, four-section performance without extending physical length of chassis. Utilizes a 6BC5 or 6BC6 pentode rf stage with tuned input to provide maximum sensitivity. R-f stage is over-coupled to 6J6 mixer-oscillator for wide band-pass. Mixer plate network will match i.f. system of most TV chassis. Antenna input — 300 ohm. Ready to install. Installation instructions included with each Inputuner.



- **T3C1**—Inputuner aligned for sound center i.f. of 21.25 mcs. with detent and sound take-off. Includes tubes, dial and knob.
- **T3C2**—Same as T3C1 except sound center i.f. of 21.75 mc.
- **T3C3**—Same as T3C1 but without sound take-off
- **T3C4**—Same as T3C2 but without sound take-off.

*RTM ABD Co. Inc. **RTM PRM Co. Inc.

ELECTRONICS PARTS — ALLEN B. DU MONT LABORATORIES, INC.

RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

CONTROLS

#201R1 **Width Control.** Screwdriver-adjusted variable reactor. Powdered iron core. For use with RCA 211T1 where kinescope anode potential not over 9 KV................**$0.70**

#201R3 **Horizontal Linearity Control.** Features spring clip mounting. For deflection circuits using RCA 211T1 and 201D1.........**$0.80**

#201R5 **Horizontal Linearity Control.** For use with the RCA 16AP4. Designed especially for use with the RCA 211T5 and the RCA 201D1. ....**$1.20**

#203R1 **Horizontal Oscillator and Synchronizing Control-Coil.** A permeability tuned center-tapped oscillator coil for use in Television receivers employing a 6SN7-GT as a combination horizontal blocking oscillator and synchronizing control tube...........**$1.80**

#205R1 **Horizontal Blocking Oscillator Coil and Frequency Stabilizing Coil.** For use with the 6SN7-GT, similar to the 203R1 except for addition of a synchronizing stabilizing coil which greatly improves the stability of the horizontal oscillator...............**$2.25**

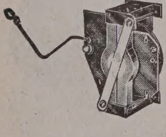
#206R1 **Width Control.** Powdered iron core, intended for operation with the RCA 217T1 horizontal output transformer and the 205D1 deflection yoke. **$1.00**

#207R1 **Horizontal Linearity Control.** Variable inductor designed for adjusting the horizontal linearity of the picture on such kinescopes as the 10BP4 and the 12LP4. Has powdered iron core. **$1.20**

#209R1 **Horizontal Linearity Control.** For use with RCA-16GP4 Kinescope. Adjustable powdered iron core. Used with RCA 218T1 and 206D1 ....**$1.20**

TRANSFORMERS

#201T6 **Power Transformer.** For use in 30-tube TV receivers requiring rectified current of 295 ma. at voltage of approx. 385 volts...........**$26.00**



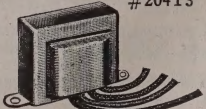
#201T7 For 24-Tube Receivers **$21.00**

#201T8 For 21-Tube Receivers **$19.00**

#201T9 For 27-Tube Receivers...............**$21.00**

#201T10 For 27-Tube Receivers...............**$21.00**

#204T1 **Horizontal Output Transformer.** Moisture-resistant. For deflection circuits with 50° mag. deflection kinescopes using RCA 201D1 or 201D2 ....**$20.00**



#204T3 **Horizontal Output Transformer.** Powdered iron core. For use where electro-magnetic deflection kinescopes with RCA 201D12 and 207D1 yokes are employed. . .**$12.00**

#204T9 **Vertical Output Transformer.** Quiet operation. For use with RCA 201D12 where kinescopes require 50° magnetic deflection. **$4.50**

#208T1 **Horizontal Blocking-Oscillator Transformer.** Powdered iron core. For use where electromagnetic deflection kinescopes with RCA 201D1 yokes are employed............**$3.90**

#208T3 **Horizontal Blocking-Oscillator Transformer.** Similar to 208T1 except that bracket mounting is used in place of potted can construction **$2.75**

#208T8 **Horizontal Sync-Discriminator Transformer.** Provides automatic horiz sweep freq control. Couples horiz-sweep oscillator to horiz-sync discriminator **$2.30**

#208T9 **Vertical Blocking-Oscillator Transformer.** Generates 60 cps pulses required to drive the grids of horizontal discharge tubes....**$2.50**

#211T1 **Horizontal Output Transformer.** For use with RCA 201D3 and directly-viewed kinescopes requiring 50° magnetic deflection using typical circuits.**$5.60**

#211T2 **Horizontal Output Transformer.** Designed for use in recommended circuits employing projection kinescope RCA 5TP4. Powdered iron core..........................**$19.00**

All prices in effect 6/1/51.

FOR COMPLETE INFORMATION ON RCA TELEVISION PARTS, ASK YOUR RCA DISTRIBUTOR FOR FORM 3F602R.

All prices shown are suggested list prices.

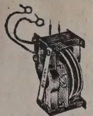
RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

TRANSFORMERS *(Continued)*

#211T3 **Horizontal - Deflection - Output and HV Transformer.** Designed for use with the RCA 201D12 deflecting yoke, RCA 201R1 width control, in magnetic deflection circuits employing the 10BP4. . . . . **$5.60**

#211T5 Designed for use with the RCA 207D1 or 201D12 deflecting yoke, the RCA 201R4 width control, the RCA 201R5 horizontal linearity control and with magnetically deflected kinescopes such as the RCA 16AP4. . . . . **$9.50**



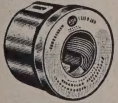
#217T1 Designed for use in pulse operated power supplies of TV receivers with no load kinescope anode potentials up to 12 KV. Use with either the 10BP4 or 121P4 tubes. . **$5.60**

#223T1 Designed for use in pulse operated power supplies of television receivers with no load kinescope anode potentials up to 14 KV. Use with RCA 16GP4. . . . . **$7.00**

#224T1 Designed for use with the 209D1 deflection yoke and 209R1 linearity control for kinescopes with deflection angles up to 66°, such as 17CP4, 17BP4A and 16TP4. . . . . **$7.00**

YOKES

#201D2 **Deflection Yoke.** For use with projection kinescopes requiring 50° magnetic deflection such as RCA 5TP4. . . . . . **$13.00**



#207D1 **Deflection Yoke.** For use with directly-viewed kinescope requiring up to 60° magnetic deflection such as RCA 10BP4, 12LP4, 16AP4. . . . . **$7.50**

#205D1 **Deflection Yoke.** Magnetic deflecting yoke designed for use with kinescopes having neck diameters of 1$\frac{7}{16}$" and deflecting angles up to about 60°. Especially designed for such kinescopes as the 10BP4 and 12LP4. . **$7.50**

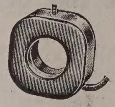
206D1 **Deflection Yoke.** For use with kinescopes having neck diameter of 1$\frac{7}{16}$" and deflection angles up to 70°, such as 16GP4, 17BP4A, 17CP4, 19AP4, 20CP4. . . . . **$9.00**

#209D1 **Deflection Yoke.** For use with kinescopes having neck diameters of 1$\frac{7}{16}$" and deflection angles about 70°, such as 16GP4. . . . . **$9.00**

COILS

#202D1 **Focusing Coil.** For magnetically focused kinescopes with deflection angles up to 50°, such as 10BP4. Utilizes large conductor size for long life. **$7.50**

#202D2 **Focusing Coil.** An electromagnetic focusing coil especially designed for use with the RCA 16AP4 kinescope or other kinescopes requiring an external magnetic field for focusing the electron beam on the screen **$11.00**



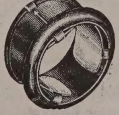
#204L1 **Filament Choke.** Eliminates undesirable RF currents from filament circuit. Consists of self-supported 16-turn coil on ¼" inside diameter **$0.20**

#204X1 **Television I-F and Video Coil Kit.** Contains all the coils for building a **high quality receiver.** 15 individual items. **$19.50**

MISCELLANEOUS

#203D1 **Ion-Trap Magnet. (Coil Type).** Required for RCA 7BP4 and 10BP4. Eliminates ion spot on kinescope screen. **$6.50**

#203D3 **Ion-Trap Magnet.** Designed for use with kinescopes which incorporate ion-trap guns having a neck diameter of 1⅜" to 1½", and operate with anode potentials of 7 to 14 KV. It is particularly useful with RCA 10BP4 or 16AP4. . . . . **$2.10**



All prices in effect 6/1/51.

FOR COMPLETE INFORMATION ON RCA TELEVISION PARTS, ASK YOUR RCA DISTRIBUTOR FOR FORM 3F602R.

All prices shown are suggested list prices.

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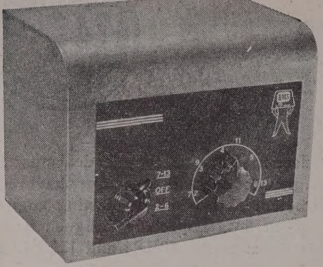


Acclaim for the RMS Preamplifier has forced our production rates up . . . enabling us to give you a lower cost Booster that's superior in every respect. All metal cabinet in neutral hammertone finish to blend with all furniture.

Newly engineered — newly priced

RMS TELEVISION PREAMPLIFIER SP-5

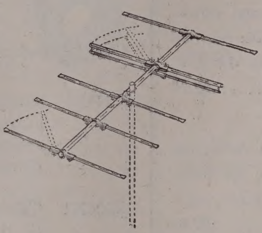
- provides an average gain of 6 to 10 times—over the entire television range.
- individually shielded input, output and power sections with entire unit shielded against outside and television receiver interference.
- efficient placement of components permits full use of tuning circuits with no loss in leads.
- tuned input and output iron-cores assure maximum resonance at the desired frequency.
- isolation-type transformer eliminates shock hazard from the chassis.
- positive gear-driven tuning mechanism.
- coils wound with flat ribbon for maximum efficiency at high frequencies.
- can be peaked for operating channels without taking chassis out of cabinet.
- broad frequency response to cover video and audio.
- single knob, simplified tuning. Pilot light indicates Preamplifier is in use

Shipping wt. — master carton of 6 . . . . 23 lbs.

A COMPLETE LINE OF TELEVISION ANTENNAS

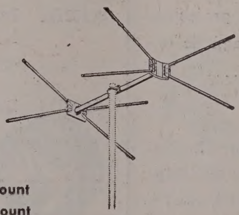
"BEE LINE"—3/8" *dipoles*

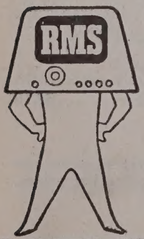
B-25	Straight Low - Folded High
B-30	Low Band - Straight
B-35	Hi - Lo - Straight
B-38	High Band - Straight
B-40	Low Band - Folded
B-45	Hi - Lo - Folded
B-48	High Band - Folded
B-50	Single Bay - Inline
B-55	Stacked - Inline



VERSACONE CONICALS—3/8" *dipoles*

VL-1	8 dipoles - Single Bay
WL-2	Stacked
VL-61	6 dipoles - Single Bay
WL-62	Stacked
V-81	Single Bay - High band
W-88	Stacked - High band





WINDOW ANTENNAS

WC-40	6 Element - B-1 Mount
WC-44	4 Element - B-1 Mount
WC-50	6 Element - Expansion Bracket
WC-54	4 Element - Expansion Bracket

YAGI ANTENNAS

SY	4 element, 3/8" dipoles, low band
STY	5 element, 3/8" dipoles, low band
SHY	4 element, 1/2" dipoles, low band
SVY	5 element, 1/2" dipoles, low band
Y	4 element, 3/8" dipoles, high band
TY	5 element, 3/8" dipoles, high band

JACKNIFE ANTENNA LINE— 1/2" *dipoles*

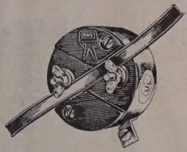
SL-10	Single Bay - Conical
DL-20	Stacked - Conical
SL-25	Straight Low - Folded High
SL-30	Low Band - Straight
SL-35	Hi - Lo - Straight
SL-38	High Band - Straight
SL-40	Low Band - Folded
SL-45	Hi - Lo - Folded
SL-48	High Band - Folded
SL-50	Single Bay - Inline
SL-55	Stacked - Inline

Radio Merchandise Sales Inc. **New York 59, N. Y.**

RMS Television Accessories

LIGHTNING ARRESTOR

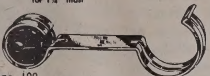
Model No. LA-2



SNAP-ON MAST CLAMP STAND-OFF

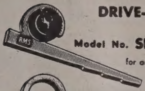
Model No. **SN-125**

for 1¼" mast



Standard Pkge. 100

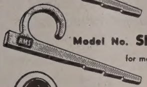
DRIVE-IN INSULATORS



Model No. **SN-3**

for antennna lead-in

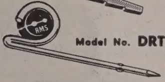
Standard package 100



Model No. **SN-4**

for masonry guy wire anchor

Standard package 100



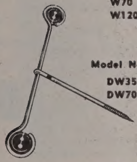
Model No. **DRT**

Standard package 100

WOOD SCREW EYE INSULATORS

with universal Polyethylene insert.

Model No.	Description	St. Pkge.
W35	3½"	
W70	7"	100
W120		50

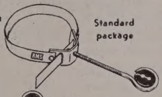


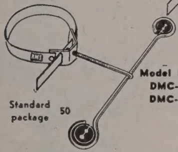
Model No.	Description	St. Pkge.
DW35	3½" Double	50
DW70	7" Double	50

ADJUSTABLE MAST STAND-OFFS

Model No.	Description
MC-3	3½"
MC-7	7"

Standard package



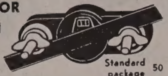


Model No.	Description
DMC-3	3½" Double
DMC-7	7" Double

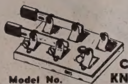
Standard package 50

LIGHTNING ARRESTOR

Model No. **LA-1**



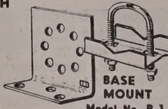
Standard package 50



COMBINATION KNIFE SWITCH

Model No. **KN-2**

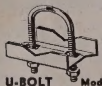
Standard package 100



BASE MOUNT

Model No. **B-1**

Standard package 25



U-BOLT CLAMP

Model No. **UB-10**

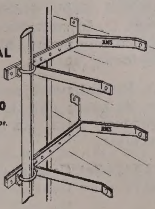
Standard package 25

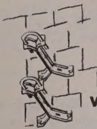
ADJUSTABLE VERTICAL WALL BRACKETS

8" to 18"

Model No. **AWM-180**

Standard package 1 pr.

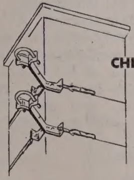




WALL MOUNT

Model No. **WM-10**

Standard package 1 pr.



CHIMNEY MOUNT

Model No. **CM-1**

Standard package 1 pr

8-ft. WOOD MASTS

Model No. **CR-44**

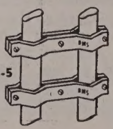
includes mast joining bracket

Standard package 50

ANTENNA BRACKET

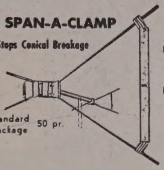
Model No. **JB-5**

Standard package 25 pr.



SPAN-A-CLAMP

Stops Conical Breakage



Standard package 50 pr.

Model No. **SC-1** for ⅜" dipoles

Model No. **SC-2** for ½" dipoles

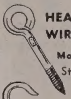
TELEVISION TURNTABLE

Model No. **TT-2**

15¾" diameter

GUY WIRE TURNBUCKLES

Model No.	Size	St. Pkge.
GTB 1	4"	100
GTB 2	5½"	100
GTB 3	8"	25



HEAVY DUTY WIRE ANCHOR

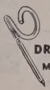
Model No. **GI-4**

Standard Pkge. 100

BRIDLE RING

Model No. **GC-1**

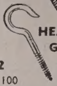
Standard Pkge. 100



DRIVE RING

Model No. **CC-2**

Standard Pkge. 100



HEAVY DUTY GUY HOOK

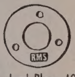
Model No. **GH-3**

Standard Pkge. 100

FLOATING GUY WIRE RINGS

Model No.	Size
GWR-1 . . .	1" I.D.
GWR-2 . . .	1⅛" I.D.
GWR-3 . . .	1¼" I.D.

Standard Pkge. 100



GUY WIRE CLAMP

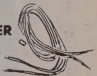
Model No. **GWC-1**

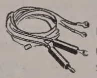
Standard Pkge. 100

MATCHING TRANSFORMER

Model No. **TR-372**

Standard package 50



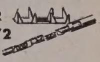


DIVIDER NETWORK

Model No. **DN-6**

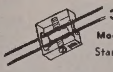
Standard package 50

72 OHM CONNECTOR



Model No. **CON-72**

Standard Pkge. 100



300 OHM CONNECTOR

Model No. **CON-300**

Standard Pkge. 100

SOLDERLESS DOUBLE-CUP WASHER LUGS

Model No. **STL-1**

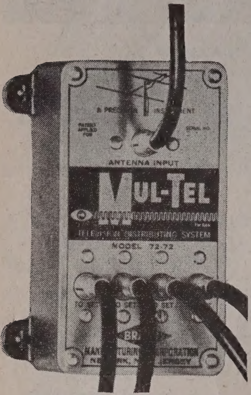
10 pkgs. of 100 to display card

You are invited to write for catalog illustrating complete line of outstanding RMS antennas and associated accessories.

Radio Merchandise Sales Inc. **New York 59, N. Y.**

BRACH MFG. CORP. MULTIPLE ANTENNA
INSTALLATION EQUIPMENT

UP TO 16 SETS MAY BE OPERATED
FROM ONE ANTENNA



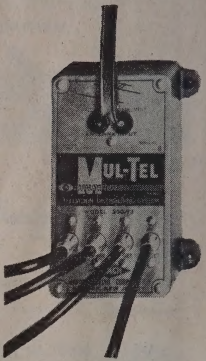
No. 72-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 72 ohm coaxial antenna input.

BRACH MUL-TEL MASTER TV-FM ANTENNA SYSTEM

The Mul-Tel System is designed to operate 2 to 16 Television Sets from one common TV Antenna . . . The system discriminates against I.F. interference as it will pass only those frequencies in the TV band from 50-230 megacycles . . . The range of application for the Brach Mul-Tel System is virtually limitless . . . It is ideal for garden type apartment houses or other multiple dwellings, and for extra television outlets in the home . . . It is eminently suitable for multi-room restaurants, taverns and clubs which operate several TV sets on the premises . . . In suburban areas, it supplies the simplest and most satisfactory method of TV distribution for smaller dwellings and two-family houses.

Brach Mul-Tel provides the dealer with the outstanding advantage of being able to demonstrate up to sixteen TV sets simultaneously from one roof antenna, with uniform signal to each receiver.

No. 72-72 4-Set Coupler—List Price	**$19.75**
No. 300-72 4-Set Coupler—List Price	**19.75**

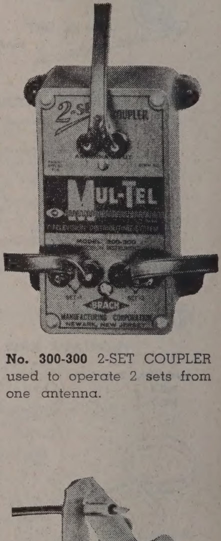


No. 300-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 300 ohm antenna input.

No. 72-300A 72 to 300 OHM MATCHING TRANSFORMER for use with Part No. 72-72 and 300-72.

TRANSFORMER (No. 72-300A) is designed to be a perfect termination at Channels 2-13. It also has a high pass filter action and may be used in interference areas to reduce diathermy and other I.F. interference. A coaxial fitting is provided with transformer #72-300A to make a low loss connection to RG59/U. It has negligible loss over the complete TV band and a voltage gain of 2:1. Recommended for all coaxial line installations with individual antennas in noisy and heavy interference areas and as a TV Set Matching Transformer in conjunction with the Brach Mul-Tel System.

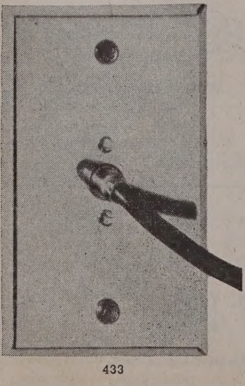
List Price	**$3.45**



No. 300-300 2-SET COUPLER used to operate 2 sets from one antenna.

2-SET COUPLER INPUT (No. 300-300) receives its signals from one antenna which may use 75 or 300 Ohm Down-lead. The signals are filtered of I.F. interference and divided into two outputs which may, by proper connection, be circuited to either 75 or 300 Ohm TV receivers. More than 20 d.b. of isolation to local oscillator radiation is realized between receivers with the 2-Set Coupler. The 2-Set Coupler has complete isolation in regard to loading effects. A defective connection to either receiver will not affect the operation of the other receiver connected to the 2-Set Coupler. This unit functions on the "Berger Effect" principle as do all other Mul-Tel Units.

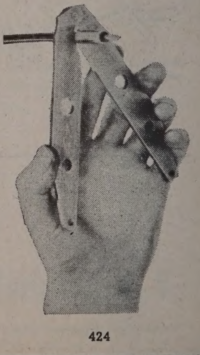
List Price	**$14.95**



433

WALL PLATE (No. 433) for permanent installations with concealed or surface wiring. Provides a professional finish to installations when used with single gang surface wire mold box or flush wall box. List Price $1.00

CRIMPING TOOL (No. 424) used to crimp the Jiffy high Q #431 plugs to the coaxial cable. List Price $0.75



424

Also A Complete Line of Antennas and Accessories

ANCHOR TV PRE-AMPLIFIERS

The Leader in QUALITY BOOSTERS

ANCHOR
ENGINEERING
always a year ahead!

ANCHOR RADIO CORPORATION
2215 South St. Louis Avenue, Chicago 23, Illinois

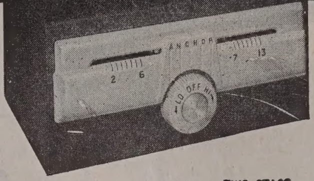
ANCHOR RADIO CORP
2215 SO. ST. LOUIS AVE CHICAGO 23, ILLINOIS

Model ARC-101-100—TWO-STAGE BOOSTER

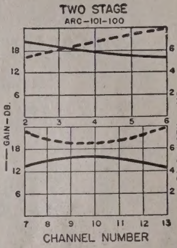
The new 2-Stage version of the famous ANCHOR-TV BOOSTERS is recommended by a national research organization. The ANCHOR 2-Stage Pre-amplifier will increase original TV signal strength five times.

This unit incorporates many new engineering features which include a radically new switching method of tube and circuit components in RF stage (Pat. Pend.) through which maximum gain and bandwidths are achieved. Single knob control for tuning and switching (Pat. Pend.) make this unit outstanding in simplicity and ease of operaton. No other adjustments are necessary. It reduces interference to a minimum and increases signal strength for excellent pictures and greater contrast on all channels (as shown in charts), especially effective in "fringe" areas — provides good reception in locations formerly considered unsatisfactory.

Exclusive simultaneous iron core tuning of input and output circuits results in uniform response on all channels. Reduces interference caused by AM, FM, short wave or Amateur Stations, as well as interchannel interference in strong signal areas. Cleans up noise and "snow" patterns — permits good reception from an indoor antenna in normal service areas. Most stable non-regenerative unit available—it is the unit that is not returned. ANCHOR 2-STAGE BOOSTER is ideal for show room demonstration permitting operation of several sets at one time using separate indoor antennas instead of outdoor antennas. For 300-ohm lines. Modernly styled with streamlined plastic escutcheon and soft mahogany leatherette finish. Illuminated Pointer Size, 4⅛ x 8⅜ x 4¼. With 2-6AK5 tubes and selenium rectifier. Complete instructions supplied. For 105-125 volts. 50-60 cycles. Shipping weight, 6 lbs. ARC-101-100

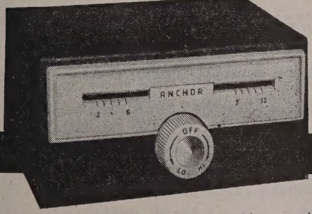


***List*, $49.50. NET, $29.70**

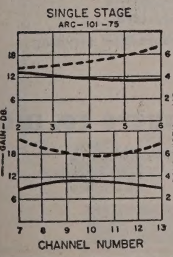


In 1949 the ANCHOR Single-Stage BOOSTER improved television reception for 1 out of every 4 TV Set Owners. Thousands of apartment dwellers, suburban and fringe area residents the nation over demonstrated their preference by making ANCHOR the Number One BOOSTER in sets sold. ANCHOR developed this recognition only through its own top-notch performance by being able to deliver sharp, snow-free pictures under most difficult conditions.

Now ANCHOR has added the new Two-Stage BOOSTER and vastly improved Single-Stage BOOSTER to their line to bring television, and the finest television reception, to everyone. The New ANCHOR Pre-Amplifier Will Out-perform Any Two-Stage BOOSTER on the market.



Model ARC-101-75—SINGLE-STAGE BOOSTER



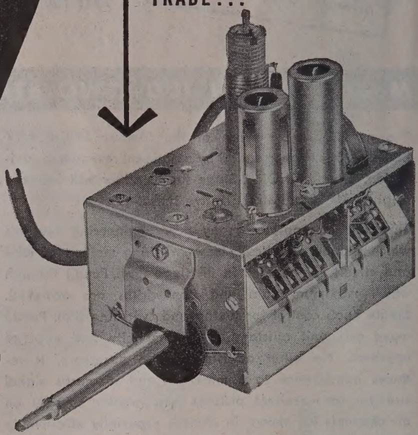
This new ANCHOR Single-Stage BOOSTER incorporates all of the features of the Two-Stage Model ARC-101-100. The outside case is changed slightly to differentiate one from the other. It is modernly styled with streamlined plastic escutcheon and soft mahogany leatherette finish. This unit is manufactured to take the place of the original ARC-101-50 and is competitively priced. It will outperform any other Single-Stage BOOSTER on the market as well as some Two-Stage BOOSTERS. This Single-Stage unit greatly reduces interference and increases the original signal strength approximately 3 times (as shown in charts) for excellent pictures and sharp definition on all channels. It is especially recommended for low signal areas nearer cities where there may be any number of interference problems. Size, 4⅛ x 8⅜ x 4¾". With 1-6AK5 tube and selenium rectifier. For 100-125 volts, 50-60 cycles. Shipping weight, 5½ lbs.

***List*, $37.50. NET, $22.50**

Net

STANDARD COIL PRODUCTS CO. Inc.

THE
No. 1
TV TUNER
IN THE
TRADE...



"The Standard Tuner"

THE
No. 1
TV BOOSTER
IN THE
TRADE.....

"The Standard Booster"

USED AS ORIGINAL EQUIPMENT BY OVER 75 TV SET MANUFACTURERS

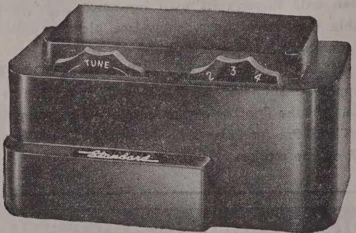
The biggest factor in the tuner replacement market is "The Standard Tuner." Nearly 50% of the TV sets being made today are equipped with this outstanding front end.

STANDARD TUNER REPLACEMENT PARTS

Antenna Coils • Oscillator Coils • Fine Tuning Assembly • Detent Spring • I.F. Coil Assembly I.F. Trap Assembly • Contact Plate and Bracket Assembly • Coil Support Assembly

FACTORY RECONDITIONING SERVICE

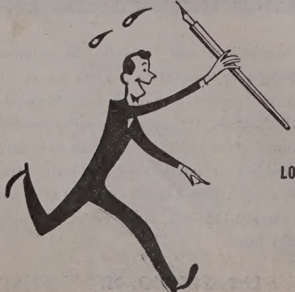
Guaranteed factory reconditioning service of "The Standard Tuner" is available to all servicemen. See your local distributor for details.



NEW. . . Improved Booster Model B-51

Includes These Key Features

- Attractively Styled
- Dark Brown Plastic Cabinet
- Large two knob control
- Four purpose switch
- Detent Tuning
- Continuous one knob tuning
- Simple Installation
- High gain, all channels
- Low noise factor
- Printed circuits
- Fully shielded
- Easy, simplified servicing



SEE YOUR
LOCAL DISTRIBUTOR
OR WRITE TO

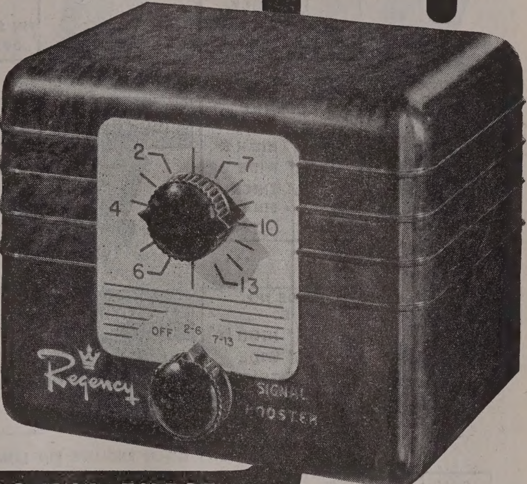
Standard COIL PRODUCTS CO. INC.
Chicago • Los Angeles • Bangor, Mich.

Regency

MODEL DB-410

TV SIGNAL BOOSTER!

REGENCY'S Model DB-410 is the "Largest Selling TV Signal Booster" *because* . . . Regency wins all performance tests in nationally-known laboratories . . . Regency is the lowest priced QUALITY Television Signal Booster . . . Regency offers such features as simplified tuning control; easy installation; full coverage on all 12 channels . . . and Regency is UNDERWRITERS' APPROVED.



REGENCY ALONE OFFERS ALL THESE FEATURES IN A TV SIGNAL BOOSTER!

- **Only 3 minutes to install.**
- **Tuning control has single knob.**
- **Contra-Wound Bifilar Coils with push-pull triode give balanced circuit.**
- **Electrical symmetry makes possible balanced-bridge neutralization, thus insuring stability and eliminating self-oscillations.**
- **No external impedance matching devices required.**
- **Equal enjoyment of both video and audio on all 12 channels is assured with wide bandwidth.**
- **Attractive plastic cabinet with easy-to-read gilt dial panel.**
- **Underwriters' Approved.**

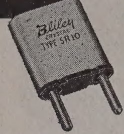
THE DB-410 **$32.50 LIST**

Regency *Division of I. D. E. A., Inc.*

55 NORTH NEW JERSEY STREET • INDIANAPOLIS 4, INDIANA

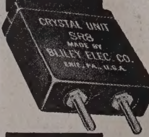
Bliley CRYSTALS

SR10



CODE NO.
E2-E4
51/64" HIGH*
3/4" WIDE
11/32" THICK
PIN SIZE • PIN SPACE
.093" .486"

SR8



CODE NO.
E7
1 1/4" HIGH*
1 1/8" WIDE
7/16" THICK
PIN SIZE • PIN SPACE
.093" .486"

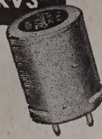
CF3

CODE NO.
E14
1 13/32" HIGH*
1 3/16" WIDE
3/4" THICK
PIN SIZE • PIN SPACE
.125" .750"

MC9

CODE NO.
E3-E8-E9-E13-E22
1 11/64" HIGH*
13/16" WIDE
7/16" THICK
PIN SIZE • PIN SPACE
.093" .486"

KV3

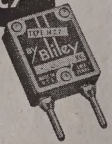


CODE NO.
E10
1 9/32" HIGH*
1 3/16" DIA.
PIN SIZE • PIN SPACE
.093" .486"

CF6

CODE NO.
E15
17/32" HIGH
15/16" WIDE
.695" THICK

MC7



CODE NO.
E5
1 39/64" HIGH*
1 1/8" WIDE
21/32" THICK
PIN SIZE • PIN SPACE
.125" .750"

MS433

CODE NO.
E11
1 31/32" HIGH*
1 25/64" DIA.
PIN SIZE • PIN SPACE
.093" .687"

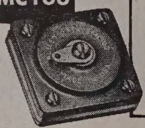
CCO-2A

CODE NO.
E16
CHASSIS
2 1/4" x 3 1/8" x 3"

SR5

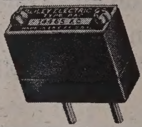
CODE NO.
E6
1 1/4" HIGH*
1 9/64" WIDE
7/16" THICK
PIN SIZE • PIN SPACE
.125" .500"

SMC100



CODE NO.
E12
1 3/8" HIGH
1 3/8" WIDE
1.039" THICK

AX2
AX3



CODE NO.
E17-E18-E19-E20-E21
15/16" HIGH*
1 1/16" WIDE
7/16" THICK
PIN SIZE • PIN SPACE
.093" .486"

* NOTE: DIMENSIONS GIVEN EXCLUDE PIN LENGTH.

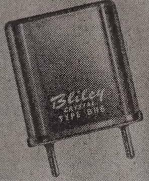
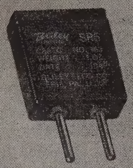
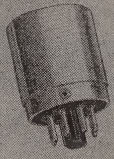
CODE	SERVICE	TYPE	APPLICATION	TOLERANCE	PRICE	CODE
E2	TV Test	SR10	sound channel markers — submultiples	±.05%	$ 6.95	E2
E3	TV Test	MC9	intercarrier 4.5 mc	±.02%	$ 3.95	E3
E4	TV Test	SR10	video submultiples;i-f freqs. 18-27.5 mc	±.05%	$ 8.50	E4
E5	Ship-to-shore	MC7	radiotelephone 2-3.5 mc	±.02%	$ 6.00	E5
E6	Ship-to-Shore	SR5	radiotelephone 2-3.5 mc	±.02%	$ 6.00	E6
E7	Ship-to-Shore	SR8	radiotelephone 2-3.5 mc	±.02%	$ 6.00	E7
E8	Marker	MC9	signal generator — 5.0 mc	±.02%	$ 2.80	E8
E9	Marker	MC9	FM i-f alignment — 10.7 mc	±.05%	$ 3.95	E9
E10	Standard	KV3	reference frequency 100 kc	±.005%	$ 6.95	E10
E11	Standard	MS433	reference frequency 1000 kc	±.005%	$17.00	E11
E12	Standard	SMC100	100 kc (exact by ckt. adjust.) 1000 kc	±.05%	$ 8.75	E12
E13	Diathermy	MC9	13.560 mc — multiplier to 27.12 mc	±.05%	$ 5.50	E13
E14	Filters	CF3	455 kc — 456 kc — 465 kc	±5 kc	$ 5.00	E14
E15	Filters	CF6	455 kc — 456 kc — 465 kc	±5 kc	$ 4.50	E15
E16	Amateur	CCO-2A	packaged oscillator for 2-6-10-11 meters		$ 9.95	E16
E17	Amateur	AX2	1803 — 1822 kc; 1878 — 1897 kc 1903 — 1922 kc; 1978 — 1997 kc	±1 kc	$ 3.75	E17
E18	Amateur	AX2	3500 — 3997 kc	±2 kc	$ 2.80	E18
E19	Amateur	AX2	7000 — 7425 kc; 8000 — 8222 kc	±2 kc	$ 2.80	E19
E20	Amateur	AX2	12.5 — 13.61 mc; 14 — 14.85 mc	±30 kc	$ 3.95	E20
E21	Amateur	AX3	24 — 24.33 mc; 25 — 25.5 mc	±5 kc	$ 3.95	E21
E22	Amateur	MC9	3.0 mc — 10 mc experimental freqs.	±.05%	$ 6.95	E22

BULLETIN 41

Bliley UNION STATION BUILDING
ERIE, PENNSYLVANIA

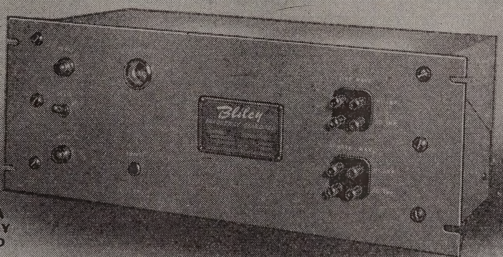
FOR EVERY FREQUENCY CONTROL APPLICATION–SPECIFY. . Bliley CRYSTALS AND CRYSTAL CONTROL OSCILLATORS

PRODUCED TO YOUR SPECIFICATIONS

BH6	SR5	MC9	TCO-1
			
FREQUENCY 200—600 kc 1.0 to 100 mc	FREQUENCY 600—15000 kc	FREQUENCY 2500—15000 kc	TEMP. CONTROLLED OVEN FOR BH6 UNIT
DIMENSIONS HIGH (exc. pins) 25/32″ WIDE 3/4″ THICK 11/32″	DIMENSIONS HIGH (exc. pins) 1 1/4″ WIDE 1 9/64″ THICK 7/16″	DIMENSIONS HIGH (exc. pins) 1 11/64″ WIDE 13/16″ THICK 7/16″	DIMENSIONS 1 1/4″ Diameter 1 1/2″ High (exc. pins)
PIN SIZE & PIN SPACE .050″ .486″	PIN SIZE & PIN SPACE .125″ .500″	PIN SIZE & PIN SPACE .093″ .486″	STANDARD OCTAL BASE
AIRBORNE (CAATC) MILITARY (HC-6/U)	AIRBORNE (CAATC) MILITARY (CR-1A/AR)	AIRBORNE (CAATC) MILITARY (FT-243)	MAINTAINS CRYSTAL TEMPERATURE AT 75°C

A COMPLETE LINE OF CRYSTAL UNITS FOR COMMERCIAL AND MILITARY SERVICE IS DESCRIBED IN OUR GENERAL CATALOG. REQUEST COPY ON YOUR LETTERHEAD.

A NEW HIGH STABILITY FREQUENCY STANDARD FOR PRECISION REFERENCE AT 100 kc. THE RIGHT COMBINATION AND BALANCE OF CIRCUITRY UTILIZING A SPECIAL BLILEY CRYSTAL UNIT AND TEMPERATURE CONTROL OVEN. AN OUTSTANDING INSTRUMENT WITH EXCEPTIONAL QUALIFICATIONS. WRITE FOR BULLETIN 40.



BCS—1A FREQUENCY STANDARD

ULTRASONICS:
Quartz blanks produced to customer specifications for ultrasonic application or research. Material carefully processed to individual requirements.

DELAY LINES:
Fused quartz delay lines custom-built to specifications.

PACKAGED OSCILLATORS:
Crystal oscillator sub-assemblies designed and produced for commercial VHF equipment.

Bliley ELECTRIC COMPANY
UNION STATION BUILDING ERIE, PENNSYLVANIA

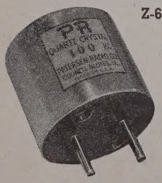
PR Precision CRYSTALS

PR CRYSTALS

COMMERCIAL TYPES—SPECIFICATIONS

Type		Frequency Range	Pin Spacing	Pin Diameter	Height Above Pins	Width	Depth
Z-1	Fundamental	900 Kc. to 12000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
Z-1	Harmonic	12000 Kc. to 30000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
*Z-1A	Fundamental	425 Kc. to 12000 Kc.	¾"	.125"	1⅜"	1⅜"	½"
*Z-1A	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	1⅜"	1⅜"	½"
Z-1B	Fundamental	1000 Kc. to 12000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1B	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1D	Same as Z-1	Same as Z-1	½"	.125"	1-3/16"	13/16"	7/16"
Z-1E	Same as Z-1	Same as Z-1	½"	.125"	1¼"	1⅛"	7/16"
Z-1H	Single or dual unit Fundamental	100 Kc. to 5000 Kc.	3-Pin W.E.	.157"	2-1/16"	1-19/32"	1-3/16"
Z-1K	Same as Z-1A except has .157" dia. pins	Same as Z-1A					
Z-1M	Fundamental	1000 Kc. to 5000 Kc.	⅞"	Std. Banana	2-3/32"	1-19/32"	¾"
†Z-1R	Fundamental	175 Kc. to 475 Kc.	½"	.093"	1¼"	1-3/32"	7/16"
Z-4	Fundamental	1500 Kc. to 12000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-4	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-7	Fundamental	1000 Kc. to 12000 Kc.	¾"	Std. Banana	1.660"	1.192"	.518"
Z-8	Fundamental	400 Kc. to 5000 Kc.	¾"	⅛"	1¾"	1-9/16"	1-11/16"
Z-6	Fundamental	100 Kc. to 325 Kc.	¾"	⅛"	1½"	Diameter	1-25/32"
E-1	Fundamental	100 Kc. to 7000 Kc.	Interchangeable with FT-164 and AC-95				
FT-171-B	Fundamental	1000 Kc. to 8000 Kc.	¾"	Std. Banana	2¼"	1½"	13/16"

* Can be Supplied with Standard Banana Pins.
† For Signal Generator Use. Not recommended for Transmitter Freq. Control.

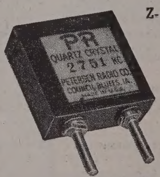


Z-6

PR
QUARTZ CRYSTAL
100 KC
PETERSEN RADIO CO.
COUNCIL BLUFFS, IA.

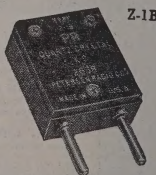
Z-1

TYPE Z-1
PR
QUARTZ CRYSTAL
FREQ-KC
PETERSEN
COUNCIL BLUFFS IOWA
RADIO CO.
MADE IN U.S.A.



Z-1A

PR
QUARTZ CRYSTAL
2751 KC
PETERSEN RADIO CO.
COUNCIL BLUFFS, IA.
MADE IN U.S.A.



Z-1B

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR *Precision* CRYSTALS

PR CRYSTALS

AMATEUR—Specifications and Frequencies

TYPE Z-2
PR
QUARTZ CRYSTAL
FREQ-KC
7083
PETERSEN
COUNCIL
BLUFFS
IOWA
RADIO CO.
MADE
IN
U.S.A.

Z-2

TYPE Z-2

- 160 meter band for VFX-680 Narrow Band FM in Sonar Exciter.
- 1699.2 to 1710 Kc. for 11 meter band.
- 1750 to 1812 Kc. for 10 meter band.
- 1828 and 1844 Kc. These 2 frequencies cover entire 10 meter FM band in Sonar VFX-680.
- 1562.5 to 1687.5 Kc. for 6 meter band.
- 1778 to 1827 Kc. for 2 meter band.
- 3370 to 3403 Kc. for 11 meters.
- 3500 to 4000 Kc. for 80, 40, 20 and 10 meters.
- 6250 to 6750 Kc. for 2 meters.
- 6740 to 6807 Kc. for 11 meters.
- 7000 to 7425 Kc. for 40, 20 and 10 meters.
- 8000 to 8222 Kc. for 2 meters.
- 8334 to 9000 Kc. for 6 meters.
- 9000 to 9250 Kc. for 2 meters.

TYPE Z-3
PR
QUARTZ CRYSTAL
FREQ-KC
14283
PETERSEN
COUNCIL
BLUFFS
IOWA
RADIO CO.
MADE
IN
U.S.A.

Z-3

TYPE Z-3

- 12000 to 12333 Kc. for 2 meters.
- 12500 to 13500 Kc. for 6 meters.
- 13480 to 13615 Kc. for 11 meters.
- 14000 to 14850 Kc. for 20 and 10 meters.

CHECK SUPERIORITY OF PR *Crystals*

Stability . . .

Drift characteristics of PR Crystals limited to less than 2 cycles per MC per degree. You get low drift, combined with high output, dependable frequency control. X-Ray orientation guarantees uniform cut for maximum low-drift performance.

Accuracy . . .

Guaranteed accurate within .01 per cent of specified frequency or better. When doubling and quadrupling accuracy is absolutely essential. You KNOW where you are with PRs.

Power Output . . .

PRs are designed to give maximum power output from the exciter stage when operating at the highest permissible voltages. PR Crystals can "take it."

Activity . . .

PRs give you high activity. They "come in" instantly on phone . . . key without chirps, even at high bug speeds, without excessive "backing off."

Unconditional Guarantee . . .

Every PR Precision CRYSTAL is guaranteed unconditionally, by the makers of fine crystals since 1934.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Precision CRYSTALS

PRICE LIST *SUBJECT TO CHANGE WITHOUT NOTICE*

COMMERCIAL

Type		Frequency Range	Tolerance .005%	Tolerance .01%	Tolerance .02%	Schedule
Z-1	Fundamental	900 to 12000 Kc.	$12.50	$11.00	$10.00	A
Z-1	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1A	Fundamental	425 to 900 Kc.	15.00	12.50	11.00	A
Z-1A	Fundamental	900 to 12000 Kc.	12.50	11.00	10.00	A
Z-1A	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1A	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1B	Fundamental	1000 to 12000 Kc.	12.50	11.00	10.00	A
Z-1B	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1B	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1D	Same as Z-1	Same as Z-1				A
Z-1E	Same as Z-1	Same as Z-1				A
Z-1H	Fundamental	100 Kc. Standard		(Exact Frequency)	12.00	B
Z-1H	Fundamental	101 to 900 Kc.	18.00	15.00	13.00	A
Z-1H	Fundamental	901 to 5000 Kc.	15.00	12.50	11.00	A
Z-1H	Dual Unit	901 to 5000 Kc.	30.00	27.50	25.00	A
Z-1K	Same as Z-1A	Same as Z-1A				A
Z-1M	Fundamental	1000 to 5000 Kc.	15.00	12.50	11.00	A
Z-1R	Fundamental	175 to 475 Kc.	18.00	15.00	13.00	A
Z-1R	Fundamental for Signal Generators	175, 200, 262, 370, 455, 456, 465 Kc.		6.00		B
Z-1R	Fundamental	475 to 1000 Kc.	15.00	12.50	11.00	A
Z-4	Fundamental	Same as Z-1				A
Z-4	Harmonic	Same as Z-1				A
Z-7	Fundamental	Same as Z-1				A
Z-8	Fundamental	400 to 900 Kc.	18.00	15.00	13.00	A
Z-6	Fundamental	100 Kc. Standard		(Exact Frequency)	9.00	B
Z-6	Fundamental	101 to 175 Kc.	18.00	15.00	13.00	A
E-1	Fundamental	100 to 900 Kc.	20.00	19.00	18.00	B
E-1	Fundamental	900 to 7000 Kc.	19.00	18.00	17.00	B
FT-171-B	Fundamental	1000 to 8000 Kc.	12.50	11.00	10.00	A

AIRCRAFT

Type	Frequency	Price	Schedule
Z-1, Z-1A, Z-1B	3105 and 6210 Kc.	$5.00	C

MARINE

Type	Transmitter	Receiver	Schedule
Z-1	$10.00	$10.00	A
Z-1A	10.00	10.00	A
Z-1B	10.00	10.00	A
Z-1D	10.00	10.00	A
Z-1H	12.50	12.50	A
Z-1H Dual	25.00	25.00	A
Z-1K	12.50	12.50	A
Z-1M	12.50	12.50	A

AMATEUR

Note: Crystals Within Amateur Bands Supplied INTEGRAL KILOCYCLES Only.

Type	Tolerance	Price	Schedule
Z-2	.01%	$2.75	B
Z-3	.01%	3.75	B

Crystals for amateur service other than frequencies listed on Catalog Sheet can be supplied as follows:

Type	Range	Tolerances: Plus or Minus 1% Price	Sched.	Tolerances: Plus or Minus .02% Price	Sched.
Z-2, Fundamental	1500 to 10000 Kc.	$2.75	B	$10.00	A
Z-3, 3rd Harmonic	10000 to 20000 Kc.	3.75	B	11.00	A

NOTICE

Prices on Commercial Crystals are based on quantities of 1 to 10 of the same frequency. For larger quantities write for prices.

Price on crystals below 100 Kc. furnished on request. Tolerance can be guaranteed only when oscillator or circuit diagram is furnished.

To facilitate the handling of your order, please order by type number and indicate permissible tolerance.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

SETTING EVER HIGHER STANDARDS OF PERFORMANCE

JK STABILIZED CRYSTALS

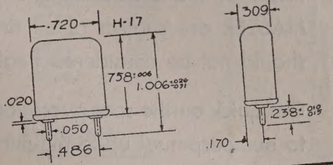
Performance is proof of product quality, and that's why JK STABILIZED CRYSTALS are held in such high esteem by those who depend on them.

Listed here are only a few of the many, many high quality crystals and ovens produced by the JAMES KNIGHTS COMPANY — the company that is constantly pioneering improved crystal performance.

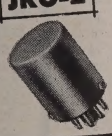
Write now for complete catalog that lists them all, including the outstanding FS 344 Frequency Standard.

H-17

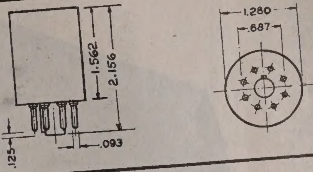
- Frequency Range 200 kc to 100 mc
- Hermetically sealed metal holders
- Wire mounted, silver-plated crystals
- Two type H-17 holders fit loctal socket.
- H-17 is military type HC6/U, CAATC No. 3R1-3



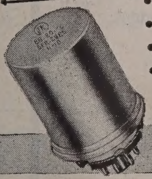
JKO-2



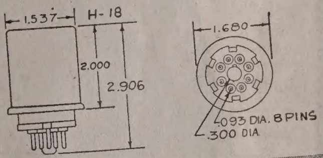
- Holds two type H17 (Military HC6/U)
- Normal temperature 75° ± 2°C
- Ambient range −55 to + 70°C
- Heater 6.3 volts, under 1 amp.
- Standard octal base



H-18

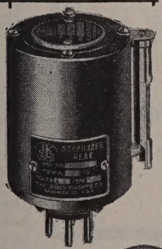


- Frequency range 80 kc to 2 mc
- Hermetically sealed metal holder
- Wire mounted silver-plated crystals
- H-18 has octal base.
- H-18-5 has standard 5 pin tube base.



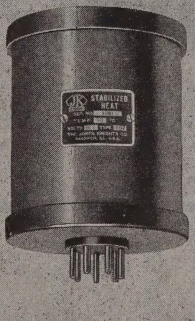
THE JAMES KNIGHTS COMPANY, SANDWICH, ILLINOIS

JK-57-MT



- Frequency range 400 kc to 1750 kc adjustable ± .01%
- Normal temperature 60°C ± 2°C (adjustable ± 10°C)
- Ambient range for 60°C operation, —20 to +58°C
- Heater 6.3 volts at 1-1/2 amp
- JK-57-M has standard 5 pin base, JK-87-M has octal base
- Low temperature coefficient plate will stay within FCC tolerance during warmup from normal room temperature
- F C C approved for broadcast use
- JK-57MT & JK-87MT have thermometer

JK-07



- Will hold any JK type crystal except H-6, H-18T and H-19
- Normal operating temperature 50°C ± 2°C
- Will hold temperature as much as 75°C above the ambient
- Supplied complete with Johnson No. 237 socket
- JKO-7E has sealed-in-glass thermostat for greater precision and longer life
- Available as JKO7 or JKO7E with 6.3 volt 10 watt heater or 115 volt 12 watt heater on either model
- Ideal for frequency standards and broadcast (FM & TV) FCC approved

CRYSTALS FOR THE CRITICAL

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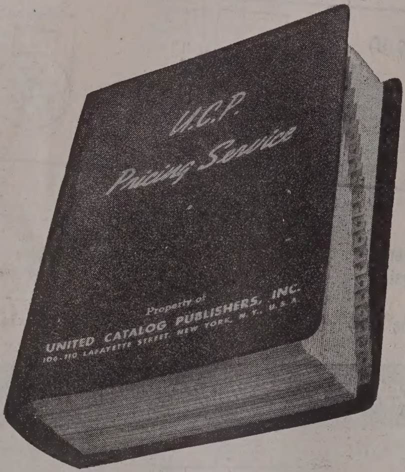
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MALLORY SWITCHES, JACKS AND PLUGS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 2

Multi-Section Rotary Switches

Mallory Cat. No.	List Price
1211L	$1.55
1212L	1.90
1213L	1.80
1215L	1.65
1221L	2.30
1222L	2.95
1223L	2.80
1225L	2.60
1231L	3.10
1235L	3.30
1241L	3.95
1245L	4.60
1251L	4.90
1256L	6.05
1261L	5.80
1266L	7.40
1311L	1.55
1312L	1.90
1313L	1.80
1315L	1.65
1321L	2.30
1322L	2.95
1323L	2.80
1325L	2.60
1331L	3.10
1335L	3.30
1341L	3.95
1345L	4.60
1351L	4.90
1356L	6.05
1361L	5.80
1366L	7.40

Single Section Rotary Switches

Mallory Cat. No.	List Price
3115J	$1.15
3122J	1.15
3123J	1.15
3126J	1.15
3129J	1.80
3134J	1.20
3136J	1.95
3142J	1.20
3143J	1.20
3163J	1.95
3215J	1.15
3222J	1.15
3223J	1.15
3226J	1.15
3229J	1.80
3234J	1.20
3236J	1.95
3242J	1.20
3243J	1.20
3263J	1.95
31112J	1.15
31117J	1.80
32112J	1.15
32117J	1.80

Mallory Page 3

Ceramic Section Selector Switches

Mallory Cat. No.	List Price
172C	$2.25
173C	2.25
174C	2.25
176C	3.50
177C	3.50
178C	3.50
180C	5.00
181C	5.00

Lever Action Switches

Mallory Cat. No.	List Price
5124	$1.50
5224	1.50
6142	1.25
6143	1.25
6242	1.25
6243	1.25
7122L	1.25
7123C	1.25
7142L	1.25
7143C	1.25
7162L	1.25
7222L	1.25
7223C	1.25
7242L	1.25
7243C	1.25
7262L	1.25

24-Point Non-Shorting Tap Switch

Mallory Cat. No.	List Price
13124L	$3.50

Mallory Page 4

Circuit-Opening Switch

Mallory Cat. No.	List Price
1400L	$5.90

Two-Section • Five-Position "Hamswitch"

Mallory Cat. No.	List Price
151L	$2.75

Two-Section • Two-Circuit • Six-Position "Hamswitch"

Mallory Cat. No.	List Price
152L	$3.25

Mallory Page 4

Multiple Push-Button Switches

Mallory Cat. No.	List Price
2164	$5.25
2166	6.55
2168	7.90
2184	5.25
2186	6.55
2188	7.90
2194	5.25
2196	6.55
2198	7.90

Ceramic Section • "Hamband" Switches

Mallory Cat. No.	List Price
161C	$2.25
162C	3.50
163C	5.00
164C	6.00
165C	7.50

Mallory Page 5

Single Push-Button Switches

Mallory Cat. No.	List Price
2001	$1.30
2001L	1.30
2002	1.30
2002L	1.30
2003	1.40
2003L	1.40
2004	1.60
2004L	1.60
2005	1.60
2005L	1.60
2006	1.95
2006L	1.95
2007	1.75
2007L	1.75
2008	2.20
2008L	2.20

Jack Switches

Mallory Cat. No.	List Price
20	$1.15
30	1.40
32	1.40
40	1.55
45	1.85
60	1.95
62	1.95
63	2.55
64	3.15
73	1.95
74	2.55
720	1.10
730	1.35
732	1.35
733	1.95
740	1.50
744	2.55
745	1.75
760	1.95
762	1.90
763	2.50
764	3.10

Mallory Page 6

Jacks

Mallory Cat. No.	List Price
1	$ .65
2	.80
2A	.80
2B	.80
3	.95
3A	95
3B	.95
3C	.95
4	1.10
4A	1.10
4B	1.10
5	1.20
6	1.30
701	.55
702	.75
702A	.75
702B	.75
703	.85
703A	.85
703B	.85
703C	.85
704	1.00
704A	1.00
704B	1.00
705	1.15
706	1.25
A-1	.30
A-2	.50
A-2A	.55
A-3A	.80
GJ-1	.50

Mallory Page 7

SC Jacks

Mallory Cat. No.	List Price
SC1A	$ .55
SCA2B	.65

Jacks

Mallory Cat. No.	List Price
XP1	$ .90
XP2B	1.00
XP3B	1.30

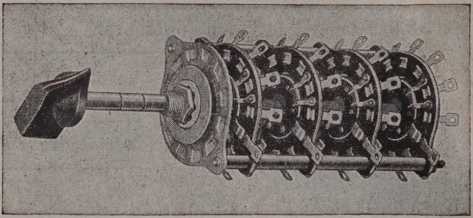
Extension Jacks

Mallory Cat. No.	List Price
100	$1.30
100A	2.30
100N	1.65

Plugs

Mallory Cat. No.	List Price
55	$ .45
75	.65
75A	1.65
75N	1.00
76	1.00
76A	1.95
85	.50

MALLORY ROTARY SWITCHES



Multi-Section Rotary Switches

APPLICATION—Ideally suited for test equipment, meter switching, and low current switching in industrial applications, including machine tool equipment. Also miscellaneous electronic devices, such as medical equipment, navigation instruments, and radar.

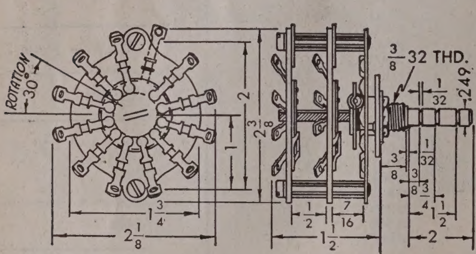
DESCRIPTION—All contacting members are heavily silver plated. This insures low contact resistance. The high lift of the contact springs provides a wiping and self-cleaning action to insure good electrical contact. The index spring, made of durable special alloy reinforced with web, prevents fracture failure and insures long-life operation.

An adjustable stop feature permits selection of the desired number of positions for extremely flexible use. The insulation used in all sections is high-grade phenolic resin. All switches supplied with ⅜″ diameter, ⅜″ long bushing, and ¼″ x 2″ long shaft, grooved for easy cutting at popular lengths.

All switches have ½″ spacing between sections, excepting the three and four-section, which have 1″ spacing. If closer spacing is required between sections, the switch can be dis-assembled and spacers cut to proper length.

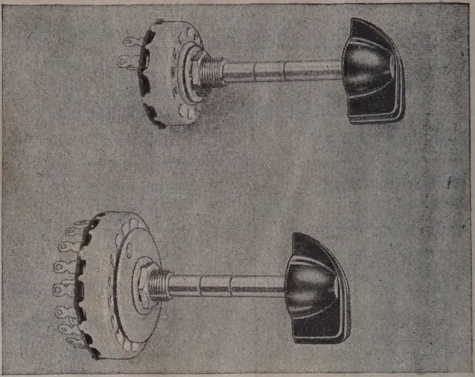
ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch. See Page 11, Mallory Miscellaneous Items section, of this catalog for Dial Plates.

PACKAGING—One switch and accessories per display carton.

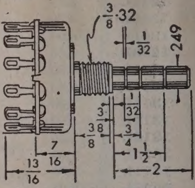


Shorting Type Catalog No.	Non-Shorting Type Cat. No.	No. of Circuits per Section or Gang	Total No. of Circuits per Switch	No. of Positions	No. of Sections or Gangs per Switch
1211L	1311L	1	1	2 to 11	1
1215L*	1315L*	2	2	2 to 5	1
1213L*	1313L*	3	3	2 to 3	1
1212L*	1312L*	4	4	2 to 2	1
1221L	1321L	1	2	2 to 11	2
1225L*	1325L*	2	4	2 to 5	2
1223L*	1323L*	3	6	2 to 3	2
1222L*	1322L*	4	8	2 to 2	2
1231L	1331L	1	3	2 to 11	3
1235L*	1335L*	2	6	2 to 5	3
1241L	1341L	1	4	2 to 11	4
1245L*	1345L*	2	8	2 to 5	4
1251L	1351L	1	5	2 to 11	5
1256L	1356L	2	10	2 to 6	5
1261L	1361L	1	6	2 to 11	6
1266L	1366L	2	12	2 to 6	6

*These switches are provided with an "off" position which is in addition to the greatest number of positions listed. The "off" position precedes the other positions.



Single Section Rotary Switches



3100J-3200J SERIES

APPLICATION—For use in small receivers as tone controls, band selector and antennae switching; also ideal for meter switching in test equipment and many other electronic devices where space is at a premium.

DESCRIPTION—Available in single section only, and in two sizes: 1¼″ diameter, 30° indexing, and 1¹¹⁄₁₆″ diameter, 20° indexing. All combinations made in both shorting and positive non-shorting action. The 1¹¹⁄₁₆″ base switch is available with the adjustable stop feature. High quality phenolic resin insulation is employed. All switches supplied with ⅜″ diameter, ⅜″ long bushing and 2″ long shaft grooved for easy cutting at popular lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch. See Page 11, Mallory Miscellaneous Items section, of this catalog for Dial Plates.

PACKAGING—One switch and accessories per display carton.

Shorting Type Catalog No.	Non-Shorting Type Cat. No.	Number of Circuits	Number of Positions	Diameter of Base	Adjustable Stop
3115J	3215J	1	5	1¼″	No
31112J	32112J	1	12	1¼″	No
3122J	3222J	2	2	1¼″	No
3123J	3223J	2	3	1¼″	No
3126J	3226J	2	6	1¼″	No
3134J	3234J	3	4	1¼″	No
3142J	*3242J	4	2	1¼″	No
3143J	3243J	4	3	1¼″	No
‡31117J	32117J	1	2 to 17	1¹¹⁄₁₆″	Yes
3129J	3229J	2	2 to 9	1¹¹⁄₁₆″	Yes
3136J	3236J	3	2 to 6	1¹¹⁄₁₆″	Yes
3163J	†3263J	6	2 to 3	1¹¹⁄₁₆″	Yes

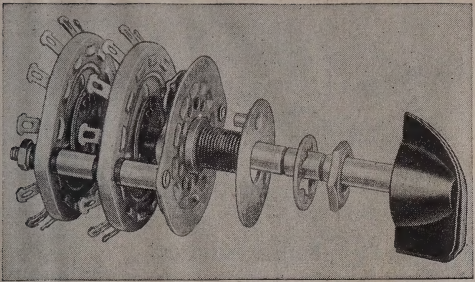
*Replaces No. 2742.
†Replaces No. 2762 by using adjustable stop.
‡Replaces No. 150J by using adjustable stop.

You can depend on

MALLORY SWITCHES

Ask for them by name

MALLORY SELECTOR, TAP AND LEVER ACTION SWITCHES



Ceramic Section Selector Switches

APPLICATION—These switches are ideal for highly efficient critical radio frequency circuit applications. Suitable for radio receivers and low-power transmitter circuits. They find widespread use in laboratories, by manufacturers of transmitters, receivers, test equipment and other electronic apparatus, and by experimenters and amateurs.

DESCRIPTION—Ceramic insulation minimizes RF losses and retards moisture absorption. Indexing mechanism is the "hill-and-valley" type providing a definite "snap" indexing action. An adjustable stop feature is designed into the index assembly to permit a choice of 2 to 11 positions. All current-carrying parts are heavily silver-plated. The contacts are of the double-wiping, self-cleaning type, which insures low contact resistance over an extended temperature range. All switches supplied with ⅜" diameter, ⅜" long bushing and ¼" x 2" long shaft grooved for easy cutting at popular lengths. All types non-shorting.

The two-section switch has ½" spacing between sections. The three-section switch has 1" spacing.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch.

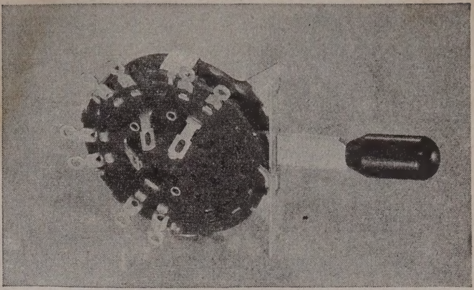
PACKAGING—One switch and accessories per display carton.

Catalog No.	Number of Gangs or Sections	Number of Circuits per Gang or Section	Number of Positions
172C	1	1	2 to 11
173C*	1	2	2 to 5
174C*	1	3	2 to 3
176C	2	1	2 to 11
177C*	2	2	2 to 5
178C*	2	3	2 to 3
180C	3	1	2 to 11
181C*	3	2	2 to 5

*These switches are provided with an "off" position which is in addition to the greatest number of positions listed. The "off" position precedes the other positions.

MALLORY
TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems. Contains page after page of information profusely illustrated. It's worth far more than its price. Your Mallory Distributor has copies—order from him.



Lever Action Switches

APPLICATION—These switches are particularly adapted to centralized radio, sound distribution, public address equipment, and intercommunication equipment for school installations of loudspeaker systems and office communication systems.

DESCRIPTION—The housing and mounting bracket of these switches are one integral part, which assures rigidity, and the design lends itself to the support of the section, thus preventing warping of the section or distortion in alignment of contacts. A smooth contact surface is guaranteed by the use of the exclusive Mallory "wrap-around" method of securing the terminal through the holes in the phenolic resin section. The phenolic resin is high grade for maximum insulation. The 5000 series have elongated mounting holes in the bracket, spaced from $2\frac{3}{16}$" to 2⅜" apart. The 6000 and 7000 series have mounting brackets with round holes spaced 1⅝" apart. Switches may be mounted singly or grouped in multiple mounting with ¾" between lever arm centers to facilitate conventional rack and panel installations.

ACCESSORIES—One knob, two 6-32 bolts and nuts are furnished with each switch.

PACKAGING—One switch and accessories per display carton.

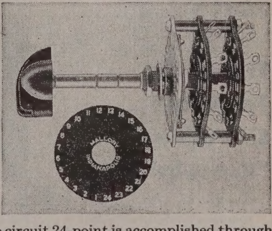
Positive Indexing

Cat. No. Shorting Type	Cat. No. Non-shorting Type	Number of Poles or Circuits	Number of Positions or Contacts
5124	5224	2	4
6142	6242	4	2
6143	6243	4	3

Spring Return

Cat. No. Shorting Type	Cat. No. Non-shorting Type	Number of Poles or Circuits	Number of Positions or Contacts
7122-L	7222-L	2	2
7123-C	7223-C	2	3
7142-L	7242-L	4	2
7143-C	7243-C	4	3
7162-L	7262-L	6	2

24-Point Non-Shorting Tap Switch



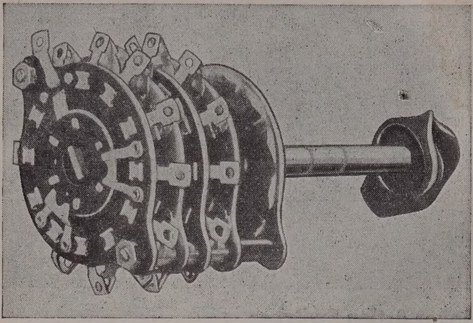
APPLICATION—This switch is particularly useful in test equipment applications where more than the conventional 12-point switch is required.

DESCRIPTION—The single circuit 24-point is accomplished through the use of two sections similar in design to the 1300L series switch. The indexing mechanism has no stops and is capable of continuous rotation with a 15° indexing action between positions. Furnished with ⅜" diameter, ⅜" long bushing and 2" long notched shaft.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, one No. 227 lock washer, and one No. 394 Mallory Dial Plate furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Catalog No. 13124L



Circuit-Opening Switch

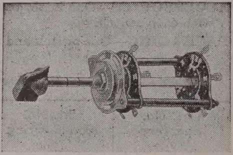
APPLICATION—This switch was designed especially for meter switching in test sets, tube checkers, analyzers, low power transmitters, and similar apparatus. It has been found ideal for almost every application where multiple circuits must be opened for insertion of indicating devices, resistors, capacitors, inductors, etc.

DESCRIPTION—This switch has the same high grade phenolic resin insulation and quality construction of the 1200 series switches listed on page 2. It has 4 special sections, a 2 to 11 position adjustable stop, and extra-duty solder terminals to permit location of resistors or capacitors directly on the switch. Has ⅜″ diameter bushing by ⅜″ long. Shaft is ¼″ by 2″ long and is grooved at intervals to facilitate cutting to length. Maximum DC operating voltage is 500 and mounting depth behind panel is 2⅛″.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, one No. 227 lock washer, and one No. 382 Mallory etched Dial Plate.

PACKAGING—One switch and accessories per display carton.

Catalog No. 1400L



Two-Section Five-Position "Hamswitch"*

APPLICATION—This switch provides a method of using a single meter to measure current or voltages up to and including 5 circuits of an amateur transmitter.

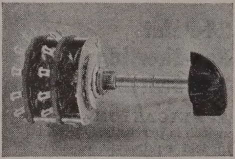
DESCRIPTION—This switch has the basic design of the 1200L series switch. It is of two-section construction with 2¼″ spacing between sections to permit multiplying resistors to be soldered directly to the switch terminals. High insulating qualities and low loss construction permit a conservative rating of 1000 volts RMS AC or 1500 volts DC. 60° indexing between positions and provided with the adjustable stop feature, giving a maximum of 5 positions. Supplied with ⅜″ diameter, ⅜″ long bushing and ¼″ x 2″ long shaft grooved for easy cutting at popular lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 237 nut and one No. 227 lock washer, furnished with each switch.

Refer to Misc. Items Section for special dial plate No. 487.

PACKAGING—One switch and accessories per display carton.

Catalog No. 151L



Two-Section Two-Circuit Six-Position "Hamswitch"

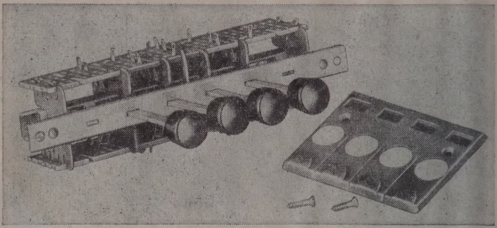
APPLICATION—Where all unused terminals are to be connected together and automatically shorted out.

DESCRIPTION—This switch is of the basic design of series 170C, excepting a phenolic resin insulation is used in the two-section assembly. Through the use of the 330° shorting shoes, all unused terminals are automatically connected. The spacing between sections is ½″. Switch is supplied with adjustable stop feature for 2 to 6 positions. Supplied with ⅜″ diameter, ⅜″ long bushing and ¼″ x 2″ long shaft grooved for easy cutting at popular lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lockwasher furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Catalog No. 152L



Multiple Push-Button Switches

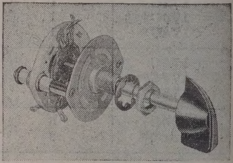
APPLICATION—This switch is ideal for applications requiring a device for making, breaking, or transferring multiple circuits in automatic station selector tuning, inter-office communication systems, telephone and annunciator systems, set analyzers, tube checkers, and multimeters.

DESCRIPTION—Available from four to eight buttons with ⅝″ spacing between center lines of plungers. Each plunger actuates a phenolic resin slider supporting the various combinations of shoes which engage the stationary contacts. Arrangement of the plunger and latch bar mechanism provides an inter-locking action whereby one or more plungers may be pressed simultaneously, and will remain latched until released by depressing another plunger. Available in both shorting and non-shorting types, and with contact arrangement for both circuit closing and circuit transfer.

ACCESSORIES—Each switch furnished with brown phenolic resin knobs, one attractive statuary bronze escutcheon plate with blank designation inserts, and transparent strip for windows.

PACKAGING—One switch and accessories per display carton.

Catalog Number	Number of Buttons	Operation Per Button
2164	4	DP Circuit Closing
2166	6	DP Circuit Closing
2168	8	DP Circuit Closing
2184	4	DPDT, Make Before Break
2186	6	DPDT, Make Before Break
2188	8	DPDT, Make Before Break
2194	4	DPDT, Break Before Make
2196	6	DPDT, Break Before Make
2198	8	DPDT, Break Before Make



Ceramic Section "Hamband" Switches

APPLICATION—For transmitter band switching of low power transmitter circuits.

DESCRIPTION—A special ceramic switch designed for transmitter plate circuits using up to 1000 volts DC with power up to 100 watts inclusive. Ceramic insulation is employed in both the section and spacers between sections to obtain highest insulation qualities, and to provide low losses at high frequencies. Available in one to five sections, with each section having one circuit. 90° indexing between positions, and capable of continuous rotation. Supplied with ⅜″ diameter, ⅜″ long bushing and ¼″ x 2″ long shaft grooved for easy cutting at popular lengths. All types non-shorting.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch.

Refer to Page 11, Mallory Misc. Items Section, of this catalog for special dial plate No. 488.

PACKAGING—One switch and accessories per display carton.

Catalog Number	No. of Sections or Gangs	Circuits per Switch	Spacing between Sections	Points or Contacts per Circuit
161C	1	1		4
162C	2	2	1⅞″	4
163C	3	3	1″	4
164C	4	4	1″	4
165C	5	5	1″	4

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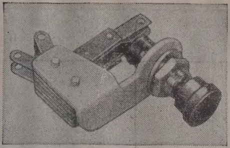
*Reg. U. S. Pat. Off.

MALLORY PUSH-BUTTON AND JACK SWITCHES



Single Push-Button Switches

APPLICATION—These switches are ideal for a wide variety of applications requiring momentary or permanent contact. Especially adapted for use in laboratories, on test panels, in meter circuits, etc.

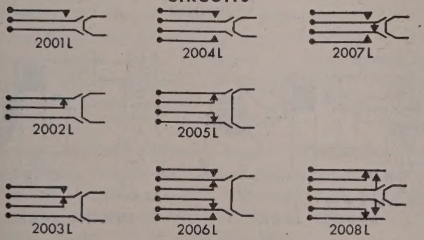
DESCRIPTION—Eight different circuit combinations are available in either the locking or non-locking types. The locking types keep the circuit closed until the button is pulled out. The non-locking types maintain contact only while the button is held in the depressed position. Excellent electrical characteristics are achieved through the use of the special alloy contact springs and the fine silver-plated contacts. The switch frame is steel cadmium plated, and the mounting bushing is nickel plated brass. Will mount in single hole 7/16″ diameter on panels up to ¼″ thick.

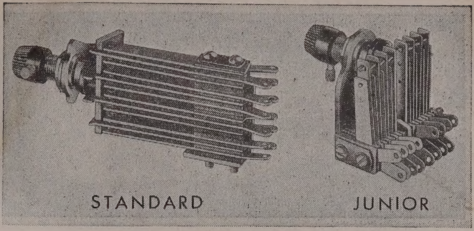
ACCESSORIES—One polished phenolic resin button, one mounting nut and one washer furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Cat. No.	Circuit Arrangement
2001	S. P. Make contact—Non-locking type
2001-L	S. P. Make contact—Locking type
2002	S. P. Break contact—Non-locking type
2002-L	S. P. Break contact—Locking type
2003	S. P. Double-Throw—Non-locking type
2003-L	S. P. Double-Throw—Locking type
2004	2-Pole—Make two contacts—Non-locking type
2004-L	2-Pole—Make two contacts—Locking type
2005	2-Pole—Break two contacts—Non-locking type
2005-L	2-Pole—Break two contacts—Locking type
2006	2-Pole—Double-Throw—Non-locking type
2006-L	2-Pole—Double-Throw—Locking type
2007	2-Pole—Make two—Break one—Non-locking type
2007-L	2-Pole—Make two—Break one—Locking type
2008	Double-Throw—Make before break—Non-locking type
2008-L	2-Pole—Double-Throw—Make before break—Locking type

CIRCUITS





Jack Switches

APPLICATION—Ideally suited for use in laboratories, test panels, meter circuits, and other equipment where variable circuit combinations are accomplished through the leaf spring type assembly.

DESCRIPTION—The Standard Jack (or long frame type) may be used where space is no factor, as the frame extends straight back from panel mounting. The spring stack is assembled on a horizontal line with the frame. Constructed with shaft that rotates through the bushing, operating a cam to actuate the spring which accomplishes the circuit switching.

The Junior Jack (or short frame type) is made with the frame supporting the spring stack at right angles. Because of the short springs used, it requires a minimum of space for mounting. The actuation of the springs is the same as for the Standard Switch. Frames on both Standard and Junior types are cadmium plated. Bushings and special alloy springs are nickel plated. The fine silver contacts insure good electrical and low resistance contact. Both switch types are suitable for mounting in a single hole 7/16″ diameter on panels up to ¼″ thick. Furnished with ¼″ flatted shaft.

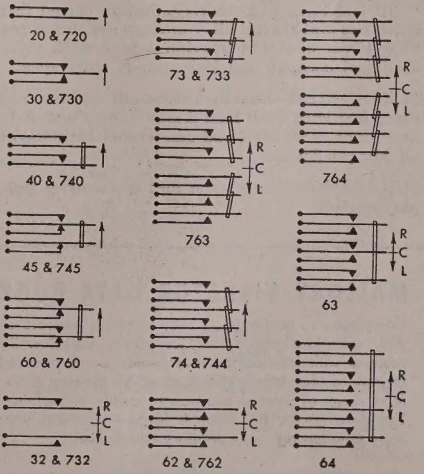
ACCESSORIES—One mounting nut, and one washer furnished with each switch. Knobs suitable for these switches shown on page 11, Mallory Special Components Section, of this catalog.

PACKAGING—One switch per display carton.

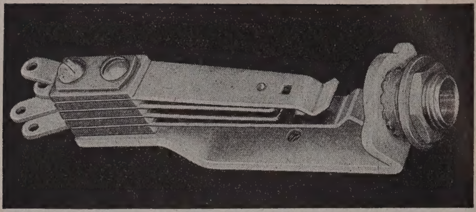
Two Position		
Standard* No.	Junior No.	Circuit Arrangement
20	**720**	Single-Pole, Single-Throw
30	**730**	Single-Pole, Double-Throw
40	**740**	Double-Pole, Single-Throw
45	**745**	Five Springs, two break and one make
60	**760**	Double-Pole, Double-Throw
73	**733**	Three-Pole, Single-Throw
74	**744**	Four-Pole, Single-Throw
Three Position		Circuit Arrangement
32	**732**	Double-Pole, Single-Throw Center off Position
62	**762**	Double-Pole, Double-Throw Center off Position
63	**763**	Three-Pole, Double-Throw Center off Position
64	**764**	Four-Pole, Double-Throw Center off Position

*Standard Types will be discontinued when present stocks are exhausted.

CIRCUITS



MALLORY JACKS



Jacks

APPLICATION—These jacks provide a conventional receptacle where it is desirable to open or close auxiliary circuits by use of a combination of spring assemblies actuated by insertion of connection plugs. Excellent for head sets, hand sets, or microphone cord and plug connections, for meter testing cord and plug connections, or as a receptacle for any device where desirable to connect or disconnect by cord and plug. Fit all Mallory #75 and 76 plugs.

DESCRIPTION—The long frame jacks are provided with a variety of spring combinations. The spring stackups are mounted horizontally to the frame. The jack is designed to mount in a single 7/16″ hole in panels up to 1/4″ thick. Fits all standard Mallory plugs of two and three conductor types.

The Junior Jack (sometimes called "short frame" jack) is made with the frame supporting the spring stack at a right angle with the short springs requiring only 1 5/16″ space back of panel for mounting. Bushings are made to mount in single 7/16″ diameter holes in panels up to 1/4″ thick. Fits all standard Mallory plugs.

The Midget Jack is very compact (with shorter frame and springs than the Junior types), being extremely useful where bare minimums of space exist. Will mount in a single 7/16″ diameter hole in panels up to 1/4″ thick.

The Infant Jack (sometimes referred to as a "pup" jack) is the smallest single circuit jack manufactured to accommodate the conventional 2-way phone plug tip and sleeve connection.

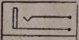
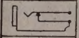
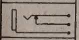
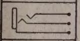
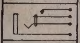
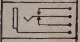
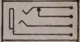
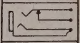
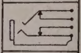
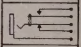
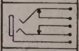
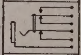
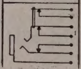
All jacks are made with cadmium-plated frames. Bushings and special alloy springs are nickel plated. Fine silver contacts provide a jack with excellent electrical contact and low-contact resistance.

ACCESSORIES—One mounting nut and one washer furnished with each long frame Junior and A-1 (Infant) Jack. Two nuts and one washer furnished with all Midget Jacks.

PACKAGING—One switch and accessories per display carton.

MALLORY VIBRATOR DATA BOOK

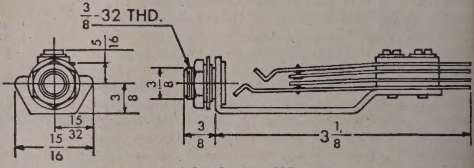
Complete . . . original . . . easy to read. Answers all your questions about vibrator power supplies. It's packed with information that cannot be duplicated anywhere else; information gained by Mallory in sixteen years of specialized power supply experience. The demand for this book is large—so order your copy now through your Mallory Distributor.

	Long Frame Cat. No.	Junior Jacks Cat. No.	Infant and Midget Cat. No.
	1	701	*A-1
	2	702	A-2
	2A	702A	A-2A
	2B	702B	
	3	703	
	3A	703A	A-3A
	3B	703B	
	3C	703C	
	4	704	
	4A	704A	
	4B	704B	
	5	705	
	6	706	

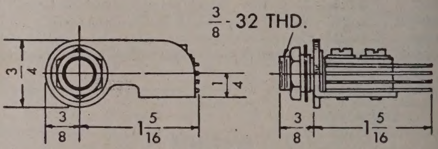
*Commonly referred to as "Infant" Jack.

GJ-1 GROUNDING JACK, for "grounding" airplanes while refueling. Furnished with hardware mounted on jack. Built to government specifications. Similar in construction to the A1 Jack except for insulation.

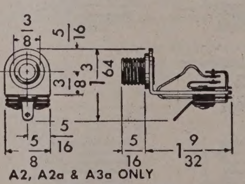
JACK DIMENSIONS



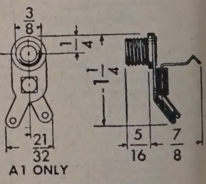
LONG FRAME



JUNIOR

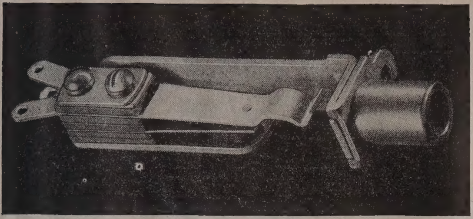


MIDGET JACK



INFANT JACK

MALLORY JACKS AND PLUGS



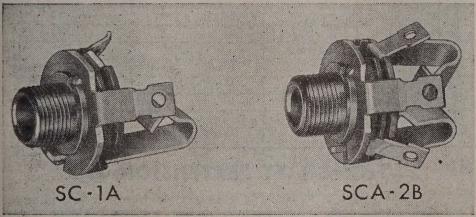
Jacks

APPLICATION—Ideal for telephone switchboard types of applications, as well as industrial applications where a more compact jack is required for close strip panel mounting.

DESCRIPTION—Although limited to three circuit combinations, these jacks serve the same purpose as the Mallory Standard Long Frame Jacks, but employ a special frame angle to provide greater support. The bushing is plain, unthreaded, and the jack is mounted by means of a screw through the panel mounting plate at the base of the bushing. Bushing fits all standard Mallory plugs of two and three conductor types. The springs are assembled horizontally to the frame. The frames are steel cadmium plated. Bushings and special alloy springs are nickel plated. The fine silver contacts provide an excellent electrical contact and low contact resistance.

ACCESSORIES—One mounting nut and one special washer furnished with each SC Jack.

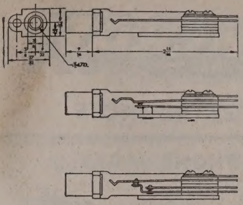
PACKAGING—One jack per display carton.



SC Jacks

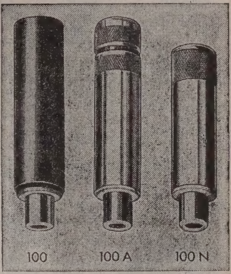
No. SC-1A Phone Jack—Equivalent of Military Jack No. JJ-034. Same spring arrangement as No. 1 Long Frame Jack. Designed to receive following plugs: Mallory No. 75, Western Electric Nos. 47A and 47B; Signal Corps Nos. PL-47, PL-48, PL-55, PL-148, PL-155.

No. SCA-2B Microphone Jack—Equivalent of Military Jack No. JJ-033. Same spring arrangement as No. 2B Long Frame Jack. Designed to receive following plugs: Western Electric No. 109 and Signal Corps Nos. PL-46, PL-68 and PL-168.



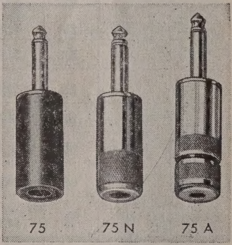
Cat. No.	Type
XP1	(Open Circuit)
XP2B	(Three-Circuit Microphone)
XP3B	(Single Circuit, Make before Break)

Extension Jacks



Cat. No.	Description
100	Two-Way Extension Jack (Fiber Shell) for No. 75 Phone Plug
100N	Two-Way Extension Jack (Shielded One-Piece Nickel Shell) for No. 75N Phone Plug
100A	Two-Way Extension Jack (Shielded Two-Piece Nickel Shell) for No. 75A Phone Plug (with Built-in Cable Clamp)

Plugs



Cat. No.	Description
55	Adapts standard microphone connector for use with conventional Jack.
75	Two-Way Phone Plug with Tie-Cord Anchor (Phenolic Resin Shell)
75N	Two-Way Phone Plug with Tie-Cord Anchor (Shielded One-Piece Nickel Shell)
75A	Two-Way Phone Plug with Tie-Cord Anchor (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)
76	Three-Way Microphone Plug (Phenolic Resin Shell)
76A	Three-Way Microphone Plug (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)
85	Two way miniature phone plug, shielded.

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INC.

CHICAGO 22, ILLINOIS

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SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

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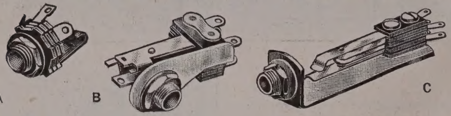
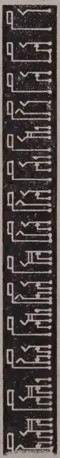
SWITCHCRAFT PHONE JACKS



The "**Littel-Jax**" (A) features notched insulating washers mechanically interlocking springs and lugs; "V-bend" in tip spring firmly "holds" mating Plug; minimum space requirements, economical. Mounts in single ⅜" dia. hole. panels up to 5/32" thick.
Our No. C-11 (JK-34A) mates with Army Plug PL-55; our C-12B (JK-33A) is adjusted to fit Army Plug PL-68; our S-13B is same as 13B except to fit W.E. Plug 109 and Signal Corps Plug PL-68.

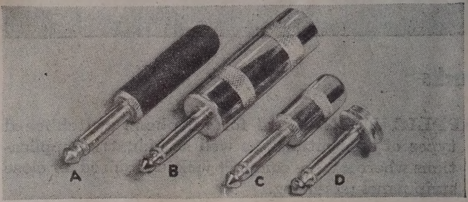
The short frame type Jack "**SF-JAX**" (B), requires minimum panel depth, mounts in single ⅜" dia. hole, panels up to 3/16" thick.

The long frame type Jack "**LF-JAX**" (C), requires minimum panel space, 3" deep, mounts in single ⅜" dia. hole, panels up to ¼" thick.

"LITTEL-JAX"		"SF-JAX"		"LF-JAX"		
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	Schematic
11	$0.40					
C-11	$0.60	21	$0.55	31	$0.65	
		22	$0.70	32	$0.85	
12A	$0.45	22A	$0.70	32A	$0.85	
12B	$0.55					
C-12B	$0.70	22B	$0.70	32B	$0.85	
		23	$0.85	33	$0.95	
		23A	$0.85	33A	$0.95	
13B	$0.75					
S-13B	$0.95	23B	$0.85	33B	$0.95	
		23C	$0.85	33C	$0.95	
		23E	$0.85	33E	$0.95	
		24	$0.95	34	$1.10	
		24A	$0.95	34A	$1.10	
		24B	$0.95	34B	$1.10	
		25	$1.15	35	$1.25	
		26	$1.25	36	$1.40	

2¼" Handle

SWITCHCRAFT PHONE PLUGS



The "**Littel-Plug**" (A), radically new, fitting standard Jacks; solder lug type features clamp terminal serving as a cable clamp and terminal—perfect for metal braid cable. Screw type terminals—no clamp. Tenite or Metal handles are 1⅝" L., ½" dia. Exterior metal parts bright nickel Pl.

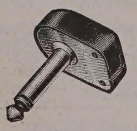
The **Standard Plugs** (B), conventional design, available both black Bakelite or metal handles 2 1/16" L., 11/16" O.D., except No. 90 and No. 160 have metal handles 1" long. Exterior metal parts bright Nickel Pl.

The "**Lug-Plug**" (C), low-cost two conductor, solder lug term. Exterior metal parts bright Nickel Pl. Red or Black Tenite Handles are 1⅝" L., ½" O.D. No. 380 has metal handle 1" L., bright Nickel Pl.

Plug Adapter (D) used with MC1F or MC1FA Connectors for use with standard Phone Jacks.

Part No.	U.S.A. List Price	Plug Type	Color or Type of Handle	Description
240	$0.75	"Littel-Plug"	Black	2-conductor. Screw Term.
245	$0.75	" "	Red	" " " "
270	$1.05	" "	Metal	" " "
250	$0.70	"Littel-Plug"	Black	2-conduct. Clamp-lug Term.
255	$0.70	" "	Red	" " " " "
280	$1.00	" "	Metal	" " " " "
260	$1.20	"Littel-Plug"	Black	3-conductor. Screw Term.
290	$1.40	" "	Metal	" " " "
267	$1.05	"Littel-Plug"	Black	3-conduct. Clamp-lug Term.
269	$1.05	" "	Red	" " " " "
297	$1.30	" "	Metal	" " " " "
40	$0.70	Standard	Black	2-conductor. Screw Term.
70	$1.20	"	Metal	" " " "
160	$0.90	"	Metal	" " " "
44	$0.50	Adapter	—	" " " "
60	$1.05	Standard	Black	3-conductor. Lug Terminals
90	$1.30	"	Metal	" " " "
350	$0.55	"Lug-Plug"	Black	2-conductor. Lug Terminals
355	$0.55	" "	Red	" " " "
380	$0.70	" "	Metal	" " " "

SWITCHCRAFT "FLAT PLUG"

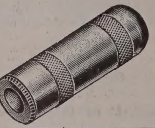


A radically new design, in both 2 and 3-conductor types. Removable Plastic Cap; terminals and body mechanically interlocked; Cover of Black or Red Tenite; one-piece tip rod; high grade insulation; terminal identification.

Ideal for theatre or church hearing-aid installations, office dictation equipment, disc, wire or tape recorders, test equipment, etc.

Part No.	U.S.A. List Price	Color or Type of Handle	Description
220	$0.75	Black	2-conductor Screw Term.
225	$0.75	Red	" " " "
227	$0.70	Black	" " Lug. Term.
229	$0.70	Red	" " " "
230	$1.10	Black	3-conductor Screw Term.
235	$1.10	Red	" " " "
237	$1.05	Black	" " Lug. Term.
239	$1.05	Red	" " " "

SWITCHCRAFT "EXTENSION JAX"



Features a clamp type terminal providing a cable anchor. Spring tempered nickel silver springs, designed to properly "hold" mating plug. Exterior metal parts N.P.; Terminals mechanically interlock. High grade insulation. Available in 2 and 3-conductor types, solder lug or screw type terminals. Bakelite or Brightly Nickel Plated Brass handles. Mates with any standard plug.

Part No.	U.S.A. List Price	Color or Type of Handle	Description
80	$1.15	Black	2-conductor. Screw Term.
88	$1.00	"	" " Lug. Term.
120	$1.55	Shielded	" " Screw Term.
128	$1.40	"	" " Lug. Term.
830	$1.55	Black	3-conductor. Screw Term.
838	$1.40	"	" " Lug. Term.
1230	$1.95	Shielded	" " Screw Term.
1238	$1.80	"	" " Lug. Term.

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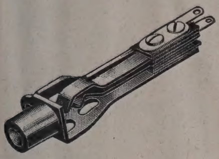
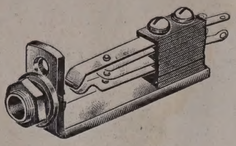
SWITCHCRAFT "T" & "M" JAX

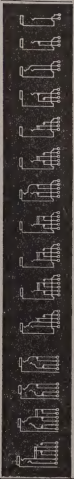




"T" JAX — Long frame, Switchboard type, designed for quality communication and military equipment.

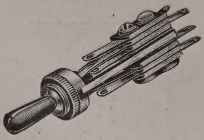
"M" JAX — Heavy, long frame Jack, often referred to as Navy Jack, designed for industrial and military equipment requirements.

Circuits listed are standard; more complex circuits available.

Part No.	U.S.A. List Price	Similar Jan Type No.	Schematic
"T-JAX"			
T-331	$1.05	JJ-086	
T-332A	$1.20	JJ-024	
T-332B	$1.20	JJ-022	
T-332C	$1.45		
T-333	$1.35	JJ-084	
T-334A	$1.50		
T-334B	$1.60	JJ-042	
T-334C	$1.50	JJ-072	
T-334F	$1.50	JJ-035	
T-335	$1.60		
T-336	$1.75	JJ-074	
"M-JAX"			
M-444B	$2.20	JJ-082	
*M-444	$2.30	*JJ-083	
M-446	$3.50	JJ-079	
M-446A	$3.90	JJ-081	

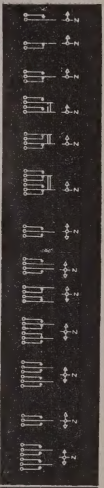
*Bushing .2085" to mate PJ-068, PJ-168 & PJ-309.

SWITCHCRAFT "LEV-R-SWITCHES"

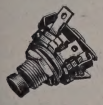


Unusually small, lever action switch, available in numerable circuits, to provide the simplest in switching design. Ideal for inter-comm. equip., test equip., model r.r. switch panels, recording equip., etc.

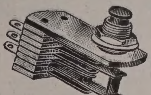
Mounts in single $\frac{15}{32}$″ dia. hole, panels up to $\frac{5}{64}$″ thick; Long life springs; soft, easy action — real detent action on locking types; Springs assembled into a conventional stack assembly; fine silver contacts rated at 3 amperes, 120 volts A.C., non-inductive load; other contacts available.

Part No. Non-locking	Part No. Locking	U.S.A. List Price	Schematic
TWO-POSITION TYPE			
3001	3001L	$1.95	
3002	3002L	$1.95	
3003	3003L	$2.25	
3004	3004L	$2.50	
3005	3005L	$2.50	
3006	3006L	$2.75	
THREE-POSITION TYPE			
3033	3033L	$2.50	
3034	3034L	$2.60	
3035	3035L	$2.60	
3036	3036L	$2.90	
3037	3037L	$2.95	
INTER-COMM. SWITCHES			
3033T		$2.50	
3037T		$2.95	

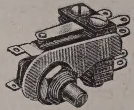
SWITCHCRAFT PUSH-BUTTON & ROTARY SWITCHES



A



B

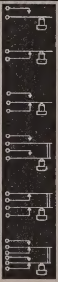


C

The **"Littel-Switch"** (A), available in 3 circuits, either in Red or Black one-piece Plastic Push-Buttons, non-locking only. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Integral contacts are standard, recommended for low current only.

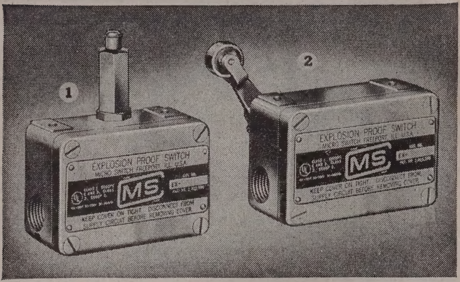
The **"FF-Switch"** (B), all common circuits, one-piece Black Plastic Push-Button, non-locking only. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Fine silver contacts rated 3 amperes, 120 volts A.C., non-inductive.

The **"RS-Switch"** (C), locking and non-locking types, two-position rotary, all common circuits. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Fine silver contacts rated 3 amperes, 120 volts A.C., non-inductive. Ideal for "Talk-Listen" switches in Inter-Communication Systems, Electro-musical equipment, Test equipment, Electro-therapy and X-Ray equipment.

"LITTEL-SWITCH"			"FF-SWITCH"		"RS-SWITCH"			Schematic Circuit
Part No. Red-Button	Part No. Black-Button	U.S.A. List Price	Part No.	U.S.A. List Price	Part NO. Non-Locking	Part NO. Locking	U.S.A. List Price	
101	201	$0.85	1001	$0.95	2001	2001L	$1.00	
102	202	$0.85	1002	$0.95	2002	2002L	$1.00	
103	203	$0.90	1003	$1.10	2003	2003L	$1.20	
			1004	$1.20	2004	2004L	$1.25	
			1005	$1.20	2005	2005L	$1.25	
			1006	$1.45	2006	2006L	$1.65	

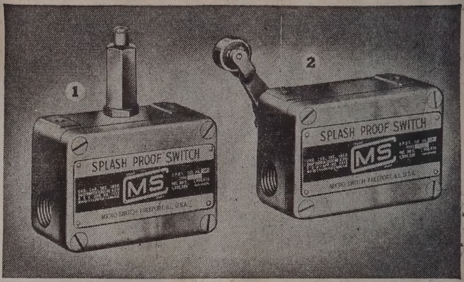
MICRO Precision Switches

MICRO Explosion-Proof Switches



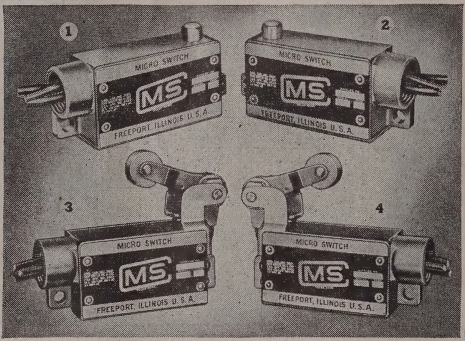
For use in hazardous atmospheres. These switches are the smallest listed by Und. Lab. for use in explosive atmospheres. They are particularly useful in chemical plants, explosives and powder plants, coal plants, petroleum refineries, and grain elevators. Sturdy housing measures 2" x 2-35/64" x 3-21/32". Catalog Numbers — ① EX-Q. ② EX-AR.

MICRO Splash-Proof Switches



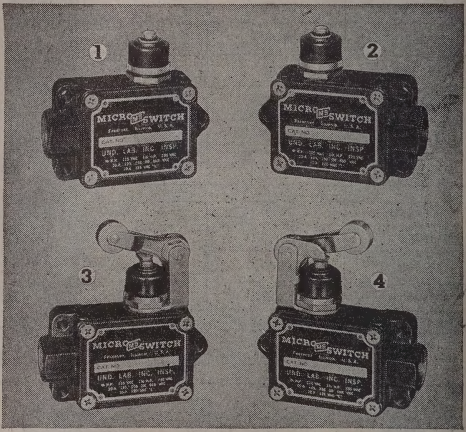
MICRO splash-proof switches are rugged cast metal housings enclosing basic switch units. For use where there is splash of oil or water. Long electrical and mechanical life, accurate repeat operation, ability to withstand severe use. Same size and design as MICRO Explosion-Proof switches. Catalog Numbers — ① OP-Q. ② OP-AR.

MICRO Type "LN" Limit Switches



Type "LN" limit switches are for general industrial use in applications requiring accurate repeatability and long life in locations exposed to dirt, dust, and splash of liquids. Leads are sealed in conduit hub. Cover plate is gasketed. Plunger operates through sealed diaphragm. Roller arm adjustable vertically through 260 degrees. Housing measures 1" x 1-21/32" x 4-1/6". Catalog Numbers — ① BZLN-RH, ② BZLN-LH, ③ BZLN2-RH, ④ BZLN2-LH.

BAF1 High Capacity Switches



BAF1 switches are MICRO Type "A" basic switches enclosed in die cast aluminum housings. Electrical rating — 20 amperes steady state current, and 75 amperes inrush capacity up to 460 volts, a-c. Sealed against dirt, oil, and moisture. Overtravel mechanism built into housing. Improved wiring and mounting facility. Available in right or left hand designs. Housings measure 1-5/32" x 2-5/32" x 4". Catalog Numbers — ① BAF1-2RN-RH, ② BAF1-2RN-LH, ③ BAF1-2RN2-RH, ④ BAF1-2RN2-LH.

. . . first name in Precision switches

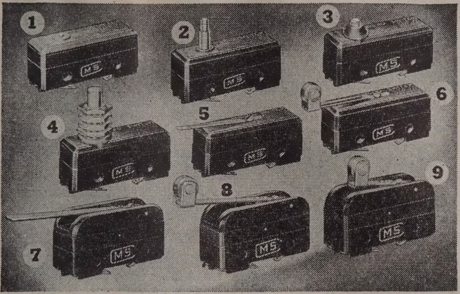
MICRO SWITCH ®
DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR CO.
Precision Snap-Action Switches

MICRO Precision Switches

MICRO precision switches are patented snap-action switches especially designed for alternating current circuits in industrial and commercial applications, for use as limits, safeties, and interlocks. Those cataloged herein are single-pole double-throw, but may also be used normally-closed or normally-open. MICRO precision switches are Und. Lab. listed for electrical rating of 15 amperes, 125, 250 or 460 volts, a-c.

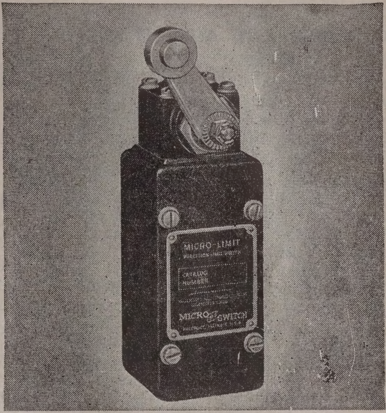
MICRO precision switches are engineers' choice for rugged, accurate, dependable, snap-action control of electrical circuits in industrial equipment.

MICRO Basic Switches

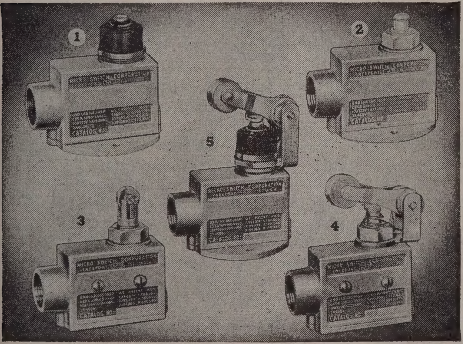


Shown are nine popular designs of Type Z2 basic switches differing in actuators and operating characteristics. Plastic cases measure $\frac{11}{16}$" x $\frac{27}{32}$" x 1$\frac{15}{16}$". Catalog Numbers — ① BZ-2R, ② BZ-2RS, ③ BZ-2RD, ④ BZ-2RQ1, ⑤ BZ-2RL, ⑥ BZ-2RL2, ⑦ BZ-2RW, ⑧ BZ-2RW2, ⑨ BZ-2RW22.

MICRO-LIMIT Precision Limit Switch



Heavy duty precision switch combines ruggedness with precision performance and unusual versatility. Operating head adjustable to four horizontal positions. Roller arm adjustable vertically through 360 degrees to 870 positive-lock positions. Adjustable to operate clock-wise, counter clock-wise or in both directions. Sealed against dirt, dust, or splash of liquids. Rated at 20 amperes, 110, 220, or 460 volts, a-c. High pilot duty rating. Switch housing 2⅛" x 1-59/64" x 6". Catalog Number 1ML1.



← MICRO Die Cast Enclosed Switches

Die cast metal housings enclosing MICRO Type Z2 basic switches. Housings provide protection, conduit connection, actuating means and mounting facility. Rugged — light weight — compact — high electrical capacity — and long life. Five actuator types in either side or bottom mounting design. Housings are 1" x 2-19/32" x 3-1/64". Catalog Numbers — ① BZV-2RN, ② BZV-2RQ, ③ BZE-2RQ9, ④ BZE-2RQ2, ⑤ BZV-2RN2.

...first name in Precision switches

MICRO SWITCH ®
TRADE MS MARK
DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR CO.
Precision Snap-Action Switches

SMALL SWITCHES, LIMIT SWITCHES, AND MAGNETIC RELAYS

SMALL SNAP-ACTION SWITCH, G-E SWITCHETTE CR1070

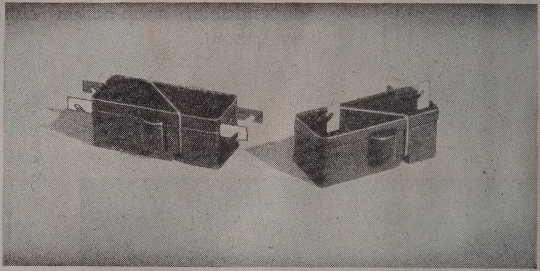
This new, lightweight switch mechanism lends itself especially to applications where space is limited and long life is required.

The Switchette is operated by movement of the spring-return button located in the housing. This button can be actuated by a lever, bellows, or other means. Snap-action, double-break-contact construction gives the G-E Switchette a high current rating and makes it suitable for applications where the vibration is severe.

FEATURES AND ADVANTAGES

1. Small (approximately 1¼ in. by ½ in. by ½ in.) and weighs only 9 grams (0.02 lb).
2. Resists vibration and corrosion.
3. Phenolic-resin operating button provides protection from live parts during operation.
4. Contact tips are 99.95 per cent pure silver.
5. Particularly suited to electronic applications because of negligible amount of contact bounce.
6. Five terminal arrangements are available, including the two shown above.
7. Wide variety of forms available, for example, three basic contact arrangements: single-circuit, normally open; single-circuit, normally closed; and two-circuit, normally open and normally closed. Also many special forms.

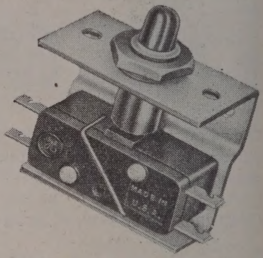
Switchettes are available in ratings up to 10 amperes at 115 or 230 volts a-c. Write for Bulletin GEA-4888.



Switchettes showing two terminal arrangements

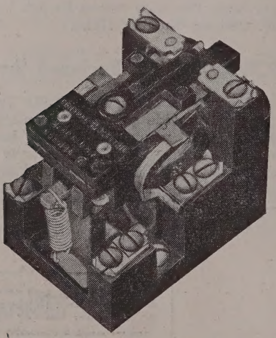
LIMIT SWITCH, CR1070-D112

This sturdy, open-type limit switch is operated by a plunger which provides $\frac{7}{32}$-inch overtravel. The contact mechanism of this device is the G-E Switchette, which can be wired to control one normally open circuit and one normally closed circuit. Rated 10 amperes at 230 volts a-c. Write for Bulletin GEC-197.



Open-type limit switch with push-rod operation

GENERAL PURPOSE RELAY, CR2790-E



The CR2790 relay is a compact, attractively finished device for use either as a motor starter or a relaying unit. Available in either an open form or enclosed in a general-purpose or explosion-proof housing. Three contact arrangements available: single-pole, single-throw; double-pole, single-throw; and double-pole, double-throw. In the open form, all three contact arrangements use the same base, which facilitates mounting. In the enclosed form, the U-shaped cover makes wiring and servicing convenient. Rated 10 amp. continuous, 110/120 volts a-c.

Applications

Control of pilot circuits in response to remote control switch or thermostat, or for direct control of small motors.

As a fractional-horsepower motor starter, or in conjunction with a magnetic switch controlling larger motors, heating or lighting circuits, and signal systems. Bulletin GEC—257.

GENERAL CONTROL COMPANY
1203 SOLDIERS FIELD ROAD BOSTON 34, MASSACHUSETTS

CAM-LEVER SWITCHES

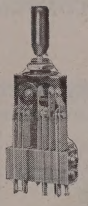
ompact lightweight switches designed for long life and trouble-free service tting many requirements. Features include shielding between contact ections, single-hole and standard mounting centers, plus availability of opular and special build-up variations. Many types are in stock for nmediate shipment. Quotations given promptly. **Write for Data Sheet LS.**

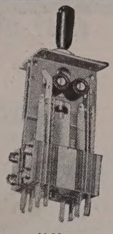
YPE	AMPS.*	HIGH	WIDE	LONG**
ICT-1	1	1¼"	¾"	2-5/16"
ICT-4	1	1½"	¾"	2-17/32"
ICM	5	1¼"	1¼"	2-25/32"
ICL	10	1¾"	1⅜"	3-15/16"

** 125 volts, 60 cycles, non-inductive.*
** From back panel to end of terminals.*

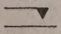
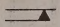
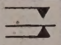
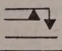
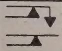
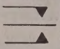
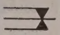
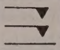
MCT-1

MCT-4


MCM


MCL

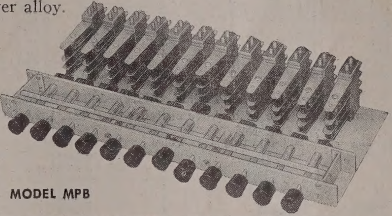
FRAME TYPES AND PRICES	
MCT-4	$1.60
MCT-1	$2.00
MCM	$3.00
MCL	$4.00

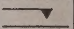
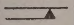
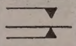
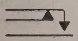
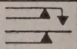
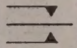
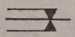
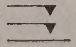
Contact Forms	A	B	C	D	E	F	G	H	O
CIRCUIT									No Contacts
MCT-1 MCT-4	0.40	0.40	0.50	0.60	0.70	0.50	0.50	0.50	—
MCM	.60	.60	.75	.95	1.20	.75	.75	.75	—
MCL	.95	.95	1.05	1.30	2.00	1.05	1.05	1.05	—

NOTE: Add 20% to MCT contact prices for contacts of palladium–silver alloy.

MASTER PUSH-BUTTON SWITCH

complete heavy duty push-button switch with high current-handling oility. Furnished in from two to a maximum of twelve positions. Standard ame types are: (1) locking, (2) non-locking, (3) release-lock, and 4) accumulative locking with single-button release. Besides standard ounting illustrated, MPB switches can be furnished on right-angle frame or use where back of panel space is limited. Std. mtg. 4-7/16" deep; . angle mtg. 1-9/16" plus ht. of contact assembly. Pure silver contacts, hosphor bronze springs. Rating: 5 amps., 125 volts a-c (non-ind.). **rite for data sheet PS.**


MODEL MPB

CONTACT FORMS	A	B	C	D	E	F	G	H	O
Circuit									No Contacts
Price	$0.60	$0.60	$0.75	$0.95	$1.20	$0.75	$0.75	$0.75	—

FRAME TYPES	MPB-2	MPB-3	MPB-4	MPB-5	MPB-6	MPB-7	MPB-8	MPB-9	MPB-10	MPB-11	MPB-12
CONTACT POSITIONS	2	3	4	5	6	7	8	9	10	11	12
Lock Release	$5.00	$5.20	$6.40	$7.60	$8.80	$10.00	$11.20	$12.40	$13.60	$14.80	$16.60
No Two Interlock	5.50	5.95	7.40	8.85	10.30	11.75	13.20	14.65	16.10	17.55	19.60
*Accumulative Lock	See note	6.70	8.65	10.60	12.55	14.50	16.45	18.40	20.35	22.30	24.85

'*Reset button requires one position in addition to standard contact positions. Reset button is on right-hand side unless otherwise specified.
*Reset button normally actuates no contacts but *can* be used to actuate *momentary* contacts if required.

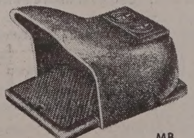
FOOTSWITCHES

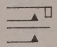
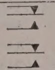
lodels to meet every need. Sturdy cast-iron cases with durable finish. Standard rating) amp. 125 v. a-c. non-inductive. For heavy duty rating — 20 amp. 125/250/460 v. c.; ¾ HP, 115 v. a-c. 1½ HP 230 v. a-c. — add $1.00 to price shown. Sizes: MX — ½" x 4" x 2"; MC — 4" dia. x 2⅛" h; MI — 6¾" x 4" x 3"; MB — 8" x 5¼" x 5". **rite for Data Sheet FS.**

MX

MC

MI


MB

TYPES				CONTACT TYPES		CONTACT OPERATION
MX-3 $3.50	MC-13 $6.50	MI-23 $9.80	MB-33 $13.65	C		Double throw Spring return (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
— —	— —	MI-25 $11.25	MB-35 $16.25	ACO-C		First press transfers switch contacts Second press restores switch contacts (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
— —	— —	MI-26 $13.65	MB-36 $17.30	TS-AA		1st half-throw closes 1st switch 2nd half-throw closes 2nd switch Spring return
— —	— —	MI-27 $15.00	— —	2-C		Double pole Double throw Spring return (TWO NORMALLY OPEN, TWO NORMALLY CLOSED)

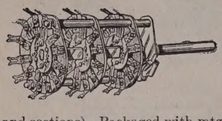
Add $1.00 to price shown, for foot switch with heavy duty 20-ampere rating.
Add $1.65 to price shown, for foot switch with direct current rating.

OTICE: All prices and specifications subject to change without prior notice. General Control Company

SWITCHES

ROTARY SELECTOR SWITCHES

1400 SERIES PHENOLIC INSULATION



Series 1400 offers compact design and quality construction. Laminated phenolic insulation. Mounting Bushings ⅜″ x 32 thd. x ⅜″ long. Shafts 1⅞″ from end of bushing. Positive 30° index with adjustable stop. Revisions or additions can easily be made due to availability of all parts separately (see listings under hardware and sections). Packaged with mtg. nut, lockwasher, 1¼″ black bar knob.

Shorting—make before break. **Non-Shorting**—break before make.

Cat. No. Shorting	Cat. No. Non-Short.	Poles per Section	Total Sections	Total Poles	No. of Positions	List Price
1400	1401	1	1	1	2 to 6	**$1.25**
1402	1403	1	1	1	2 to 11	**1.50**
1404	1405	2	1	2	2 to 5	**1.50**
1406	1407	3	1	3	2 to 3	**1.75**
1408	1409	4	1	4	2 only	**1.75**
1410	1411	1	2	2	2 to 6	**2.00**
1412	1413	1	2	2	2 to 11	**2.25**
1414	1415	2	2	4	2 to 5	**2.50**
1416	1417	3	2	6	2 to 3	**2.75**
1418	1419	4	2	8	2 only	**2.75**
1420	1421	1	3	3	2 to 6	**2.75**
1422	1423	1	3	3	2 to 11	**3.00**
1424	1425	2	3	6	2 to 5	**3.25**
1426	1427	1	4	4	2 to 6	**3.50**
1428	1429	1	4	4	2 to 11	**3.75**
1430	1431	2	4	8	2 to 5	**4.50**

PHENOLIC SECTIONS ONLY—1400 SERIES

.064″ Rotor Slot. Use with above switches or P-121, 122, 123 Index.

Cat. No. Shorting	Cat. No. Non-Shorting	Poles	Positions	List Price
A	H	1	2 to 6	**$0.50**
B	J	1	2 to 11	**.75**
C	K	2	2 to 5	**.75**
D	L	3	2 to 3	**1.00**
E	M	4	2 only	**1.00**
EE	..	4	2 to 3	**1.50**
F	..	1	2 to 5	**.75**
(On F section unused contacts on one side of common connected and shorted out.)				
G	..	1	2 to 10	**1.00**
(On G section all unused contacts connected and shorted out.)				
N and P Special—Combine for resistance decade switch. Each				**.75**
Q—Special for capacitance decade siwtch				**.75**

P-1 Special—10 pos. progressively shorting out 9 positions. . . . **$1.00** List

(See listings of "Deluxe" sections—DD rotor slot—Page L15).

ROTARY SELECTOR SWITCHES

2500 SERIES—STEATITE INSULATION

2500 Series Switches have highest quality (grade L-5) Steatite insulation, meet critical requirements of r.f. circuit applications. Bushing ⅜″ x 32 thd. x ⅜″ long. Shaft 1⅞″. Positive 30° Index with adjustable stop. Separate parts also available.

Packaged with Mtg. nut, lockwasher and 1-¼″ black bar knob.

Shorting—Make before break. **Non-Shorting**—Break before make.

Cat. No. Shorting	Cat. No. Non-Short.	Poles per Section	Total Sections	Total Poles	No. of Positions	List Price
2500	2501	1	1	1	2 to 6	**$2.25**
2502	2503	1	1	1	2 to 11	**2.25**
2504	2505	2	1	2	2 to 5	**2.25**
2506	2507	3	1	3	2 to 3	**2.25**
2510	2511	1	2	2	2 to 6	**3.50**
2512	2513	1	2	2	2 to 11	**3.50**
2514	2515	2	2	4	2 to 5	**3.50**
2516	2517	3	2	6	2 to 3	**3.50**
2520	2521	1	3	3	2 to 6	**5.00**
2522	2523	1	3	3	2 to 11	**5.00**
2524	2525	2	3	6	2 to 5	**5.00**

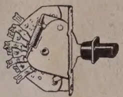
STEATITE SECTIONS ONLY FOR 2500 SERIES

.064″ Rotor slot. Use with above switches or P-121, 122, 123 Index.

Cat. No. Shorting	Cat. No. Non-Shorting	Poles	Positions	List Price Each
T	X	1	2 to 6	**$1.25**
U	Y	1	2 to 11	**1.25**
R	RR	2	2 to 5	**1.25**
S	SS	3	2 to 3	**1.25**
V	Z	4	2 only	**1.25**
GG Special 10 position, 1 pole, all unused contacts connected and shorted out				**1.25**
P-1-S Special 10 position, 1 pole, progressively shorting out 9 positions				**1.25**

(See listings of "Deluxe" sections—DD rotor slot—Page L15).

LEVER ACTION SWITCHES



Coil spring and cam index design provide guaranteed minimum life of 150,000 switching cycles. Smooth, "clean" action. Coil type index spring easily replaceable. Mounting plates available. Furnished with black paddle-type knob (same style knob also available in maroon and ivory).

Shorting—Make before break. **Non-Shorting**—Break before make.

Cat. No.	No. Poles	Positions	Type Indexing	List Price	Cat. No.	No. Poles	Positions	Type Indexing	List Price
1452	2	3	Positive	**$1.25**	1454	2	3	Positive	**$1.25**
1453	2	3	Spr. Ret.	**1.25**	1455	2	3	Spr. Ret.	**1.25**
1456	4	2	Spr. Ret.	**1.25**	1457	4	2	Spr. Ret.	**1.25**
1459	4	2	Positive	**1.25**	1458	4	2	Positive	**1.25**
1466	2	3	Pos.-Spr. Ret.	**1.25**	1467	2	3	Pos.-Spr. Ret.	**1.25**

MOUNTING PLATES FOR LEVER SWITCHES

Type A—Made of .035″ die cut steel, black crackle finish. Eliminate alignment problems, provide ¾″ spacing between switches. Available for 1 to 5 switch mounting. Height of all plates is 2⅝″.

Type B—Specially furnished for mounting lever switches in electrical outlet boxes. Chrome plated wall plates will fit all standard boxes with mounting holes 3$\frac{5}{16}$″ between centers. Ideal for P.A. or Intercom installations.

MOUNTING PLATE—Type A

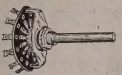
Cat. No.	No. Switches	Length	List Price
P-1755	1	¾″	**$ .35**
P-1756	2	1½″	**.40**
P-1757	3	2¼″	**.50**
P-1758	4	3″	**.60**
P-1759	5	3¾″	**.75**

WALL PLATE—Type B

Cat. No.	No. Switches	List Price
P-221	1	**$ .60**
P-222	2	**.75**

Size: 2¾″ x 4½″ overall.
¾″ spacing between switches.

UNIVERSAL FLAT AND P.A. TYPE SWITCHES

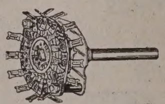


1450 "ECONO-SWITCH"—A 4 pole, 2 position economically designed switch which requires only ⅝″ depth behind panel. Can be used as SPST, SPDT, DPDT, 3PST, 4PST, or 4PDT. Positive, non-shorting, leaf type index.
Cat. No. 1450. List. **$1.00**

1451 "PERMA-SWITCH"—The famous Centralab long life coil spring switch with a minimum of 150,000 cycles. Similar in style to the 1450 switch, 4 pole 2 position. Designed for hard life and long use in test equipment and intercom use. Coil spring can be replaced without removing switch. Non shorting, spring return index.
Cat. No. 1451. List. **$1.75**

1448-1449 "ALL PURPOSE" Intercom switches. Six pole three position, will fit practically every intercom application in use. Both units have replaceable coil spring indexing assuring 50,000 cycles minimum.
Cat. No. 1448 spring ret. one side. List. **$2.25**
Cat. No. 1449 spring ret. both sides. List. . . **2.25**

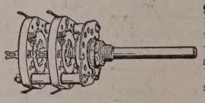
23 POSITION SELECTOR SWITCH



1443—"23 CLIPPER"—Single pole, 23 positions, shorting type contacts. High quality "W" type construction requires only 1″ behind the panel. Double wiping silver plated contacts mean low loss. Includes dial plate.

Cat. No. 1443. List. **$3.25**

STEATITE HAM-TYPE SWITCHES



90° Indexing Ham Switches will handle 15 watts and can be operated with tubes up to 1000 volts and inputs up to 150 watts. Extra heavy steatite sections and spacers assure high breakdown point. Heavily silver plated contacts. Non-shorting type switching.

Cat. No.	Poles Per Sect.	Total Sect.	Positions	List Price
2542	1	1	2 to 4	**$2.25**
2543	1	2	2 to 4	**3.50**
2544	1	3	2 to 4	**4.75**
2545	1	4	2 to 4	**6.00**
2546	1	5	2 to 4	**7.25**

SEPARATE SECTIONS

1 pole, 2 to 4 positions, non-shorting type with 4 fibre washers.
Cat. No. XX. List. **$1.25**

SEPARATE INDEX ASSEMBLIES

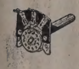
Cat. No.	No. Sect.	List Price
P-170	1 or 2	**$1.25**
P-171	3 or 4	**1.75**
P-172	5 or 6	**2.25**

Centralab CRL Centralab

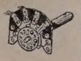
FIRST IN COMPONENTS RESEARCH SAFEST FOR SERVICING

SWITCHES

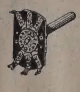
SMALL GENERAL PURPOSE SWITCHES



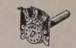
Type 1460—Single pole, 2 position, shorting contacts, positive index. Can be used as SPST or SPDT. For phono-radio, tone or sensitivity control.
Cat. No. 1460. List.......................... **$0.75**



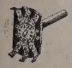
Type 1461—Single pole, 3 position, shorting contacts, positive index. Useful in miniature band change, step type tone or sensitivity control, P. A. channel selector switch.
Cat. No. 1461. List.......................... **$0.75**



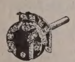
Type 1462—Double pole, 2 position, shorting contacts, positive index. Can be used as SPST, SPDT, DPST, DPDT—for meter reversing, P. A. channel, or switching both lines on phono-radio.
Cat. No. 1462. List.......................... **$0.75**



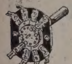
Type 1463—Single pole, 2 position, non-shorting contacts, spring return index. Same size as type 1460. Useful for meter reversing or momentary intercom talk switch. Non-shorting.
Cat. No. 1463. List.......................... **$0.75**



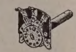
Type 1464—Double pole, 2 position, non-shorting contacts, spring return index. Same physical size as type 1462. Can also be used as SPST, SPDT or DPST. Used as meter switch and momentary line or remote speaker return on intercoms.
Cat. No. 1464. List.......................... **$1.00**



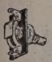
Type 1465—Single pole, 4 position, shorting, positive index, with SPST AC line switch attached. The selector switch has 3 active positions and "off." The line switch operates between "off" and first active selector position. Line switch is Underwriters' approved for 3 amperes at 125 volts, 1 ampere at 250 volts A.C. Type 1465 is a replacement for "on-off" step tone control switches used in many A.M. and F.M. receivers. Shaft is 2½" long from end of ¼" bushing.
Cat. No. 1465. List.......................... **$1.25**



Type 1473—Double pole, 3 position, shorting contacts, positive index. An economical waveband switch for A.M., F.M., phono selector to amplifier in custom installations.
Cat. No. 1473. List.......................... **$1.00**



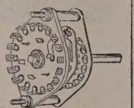
Type 1483—Single pole, 3 position, shorting contacts, positive index. For use with dual or auxiliary rear seat auto radio speakers. Permits operation of either speaker separately or both simultaneously. Supplied with special bracket and all mounting hardware.
Cat. No. 1483. List.......................... **$0.75**



MOMENTARY PUSH switches rated at 1 amp., 110 volts A.C.; available in momentarily open and closed.

Cat. No.	Type	List Price
1470	Mom. open	**$0.40**
1471	Mom. closed	**.40**

MEDIUM DUTY ROTARY POWER SWITCHES



STEATITE—750 Watts at 115 Volts A.C.

An accurate, long-life unit for transmitter, power supply, and specialized application. Has positive, non-stall 20° Indexing, double wiping solid silver contacts. Mounting bushing ⅜" x 32" thd. x ⅜" long. 2 7/16" between locating rods. With adjustable stop and dial plate.

SHORTING TYPE

Cat. No.	Poles Per Sect.	Total Sections	Positions	List Price
JV-9000	1	1	2–17	**$12.00**
JV-9002	3	1	2–5	**12.00**
JV-9004	1	2	2–17	**21.00**
JV-9006	3	2	2–5	**21.00**
JV-9008	1	3	2–17	**30.00**
JV-9010	3	3	2–5	**30.00**
JV-9012	1	4	2–17	**39.00**
JV-9014	3	4	2–5	**39.00**
JV-9016	1	5	2–17	**48.00**
JV-9018	3	5	2–5	**48.00**
JV-9020	1	6	2–17	**57.00**

Non-Shorting Type

Cat. No.	Poles Per Sect.	Total Sections	Positions	List Price
JV-9001	1	1	2–17	**$12.00**
JV-9003	3	1	2–5	**12.00**
JV-9005	1	2	2–17	**21.00**
JV-9007	3	2	2–5	**21.00**
JV-9009	1	3	2–17	**30.00**
JV-9011	3	3	2–5	**30.00**
JV-9013	1	4	2–17	**39.00**
JV-9015	3	4	2–5	**39.00**
JV-9017	1	5	2–17	**48.00**
JV-9019	3	5	2–5	**48.00**
JV-9021	1	6	2–17	**57.00**

SECTIONS ONLY FOR JV-9000 SERIES

SHORTING

Cat. No.	No. Poles	Positions	List Price
KV-8	1	2–17	**$9.00**
KV-9	3	2–5	**9.00**

NON-SHORTING

Cat. No.	No. Poles	Positions	List Price
KVN-8	1	2–17	**$9.60**
KVN-9	3	2–5	**9.00**

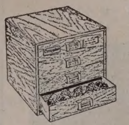
INDEX ASSEMBLY ONLY FOR JV-9000 SERIES

Includes shaft, tie rods, spacers, nuts and lockwashers, adjustable stop pin, 2" black bar knob and dial plate.
Cat. No. KV-7. List.. **$6.00**

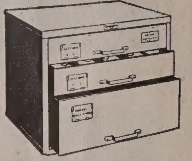
Dial Plates—2¾" Diameter—20° Markings

P-230	Marked 1 to 5	List **$0.30**
P-231	Marked 1 to 17	List **$0.30**

ROTARY SWITCH KITS



1500 SWITCH KIT—A four drawer cabinet containing an adequate supply of sections and indexes listed on this page to custom build two 4 section switches, two 3 section, four 2 section, six 1 section, one 2 section condenser decade, and one 1 section resistor decade switch. For labs, engineers, hams, and experimenters needing specialized switching arrangements. Cabinet can be replenished with stock parts.
Cat. No. 1500 Kit. List................. **$50.00**



414 DELUXE SWITCH KIT—PHENOLIC—An extra large assortment of switch hardware and sections to make the widest possible assortment of phenolic switches to your needs. Contains 111 sections including 34 of the special "DD" deluxe sections listed below, 31 Index assemblies, 25 doz. spacers, 5 doz. shafts, 8 doz. tie rods, 40 dial plates, and complete hardware. Especially suited to large users of specialized switches. All kit parts may be purchased for refill from stock listings.
Cat. No. 414 Kit. List........ **$175.00**

419 DELUXE SWITCH KIT—STEATITE—Similar to the 414 Kit, but all sections are made of Centralab's high quality grade L-5 steatite ceramic, long regarded as "the best". Contains standard and special deluxe sections below. Has 81 sections, 31 Index Assemblies, 26 doz. spacers, 35 knobs, 30 dial plates and assorted hardware. This is Centralab's finest switch kit.
Cat. No. 419 Kit. List...................................... **$185.00**

"DD" DELUXE SWITCH PARTS

"Double-D" describes CRL's extra heavy (3/16" thick) rotor shaft switch and the corresponding hole in the section rotor. Also, deluxe switches have one-piece shaft, index, and rotor shaft. Choose "DD" for precise indexing and a longer lasting switch.

DELUXE SECTIONS

PHENOLIC

Cat. No. Short.	Cat. No. Non-Short.	No. Poles	Positions	List Price
AD	HD	1	6	**$0.50**
BD	JD	1	11	**.75**
CD	KD	2	5	**.75**
DD	LD	3	3	**1.00**
ED	MD	4	2	**1.00**
EED	..	4	3	**1.50**
FD	..	1	5	**.75**

Unused contacts shorted out 1 side of common

GD	..	1	10	**1.00**

All unused contacts shorted out

ND PD	Combine for resistance decade	**.75**
QD	For capacitance decade	**.75**
P1D	.. 1 10#	**1.00**

#1 off, 9 progressively shorting

STEATITE

Cat. No. Short.	Cat. No. Non-Short.	No. Poles	Positions	List Price
TD	XD	1	6	**$1.35**
UD	YD	1	11	**1.35**
RD	RRD	2	5	**1.35**
SD	SSD	3	3	**1.35**
VD	ZD	4	2	**1.35**
GGD	..	1	10	**1.35**

All unused contacts shorted out

NSD PSD	Combine for resistance decade	**1.35**
QSD	For capacitance decade	**1.35**
P1SD	.. 1 10#	**1.35**

#1 off, 9 progressively shorting

DELUXE INDEX ASSEMBLIES

Includes all hardware to use with separate sections listed above.

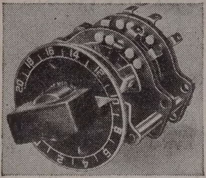
Cat. No.	Rotor Shaft Length	List Price
P-270	2"	**$1.25**
P-271	4"	**1.75**
P-272	8"	**2.25**

FOR OTHER SWITCH HARDWARE AND ACCESSORIES, see the latest complete Centralab catalog available at your distributor.

Shorting Contacts Make Before Break: Non-Shorting Contacts Break Before Make.

SWITCHES • ATTENUATORS • POTENTIOMETERS

New PRECISION INSTRUMENT SWITCH



TYPE 2A SPECIFICATIONS:

Contact res.: 1-2 milliohms.

Contact material: Silver Alloy.

Contact design: Wiping, shorting and non-shorting.

No. of contacts: 2-21 per deck single pole, 2-5 four pole.

Spacing: 15° sh., 30° non-sh.

No. of poles per deck: One to four.

No. of decks: As desired. Life: 20,000 cyc. min.

Curr. carr. cap.: 3 Amp.

Max. oper. voltage: 120V (Will stand 2,000V between contacts and to ground.)

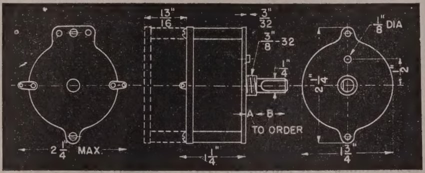
Insul. material: Low loss bakelite.

Insul. res.: 10,000 megohms to ground.

Mounting: Single hole ⅜″-32 bushing, std. length for up to ¼″ pnl. Special lengths to order. Size: 1¾″ dia.

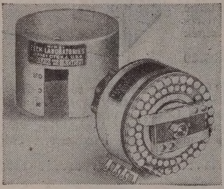
Detent: Ball and spring.

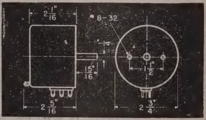
List Price: First deck **$4.50**; additional deck **$2.50** each; additional pole per deck **$0.25.**



TYPE 700

ATTENUATORS "T"-PADS

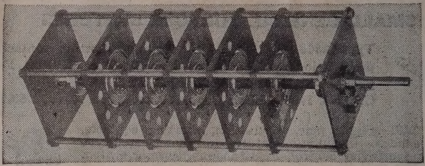




Type	Impedance	No. of Steps	Db Per Step
TA-731.5	600/600	30	1.5
TA-731	600/600	30	1
TA-722	600/600	20	2
TB-731.5	500/500	30	1.5
TB-722	500/500	20	2
TC-731.5	250/250	30	1.5
TC-722	250/250	20	2
TD-731.5	200/200	30	1.5
TD-722	200/200	20	2
TE-731.5	50/50	30	1.5
TE-722	50/50	20	2
TF-731.5	30/30	30	1.5
TF-722	30/30	20	2

TYPE 1250 R.F. SWITCHES

This switch represents a new design necessitated by the increasing demands for switches capable of withstanding higher voltages and heavier currents.



SPECIFICATIONS:

Size: Each panel 4½″ x 4½″. For depth, see table.

Insulation: Mykroy insulation good for at least 25,000V to ground, 12,500V between contacts.

Contacts: Phosphor bronze with silver plated collector ring.

Spacing: 36° std. unit has 6 position on 180°, special units to order.

Shaft: Mykroy sections with flanges so decks can be added or taken off to suit. Stainless steel shaft ⅜″ dia. on both ends, can be furnished with 4″ hand wheel.

Current Carrying Capacity: 50 Amps. max. for steady load, no load switching.

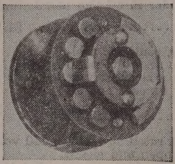
Bearing: Ball bearings at both ends.

Detent: Ball and gear detent for positive location on contacts.

Mounting Holes: For No. 10-32 screws on 3¾″ centers.

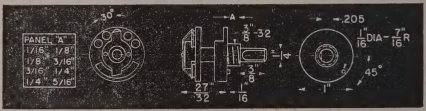
Weight: Single pole unit—4 pounds; add approximately 1 lb. for each additional deck.

New MINIATURE TAP SWITCH (2B)



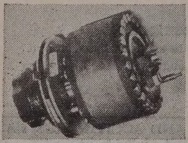
The Type 2B miniature rotary tap switch is a development widely used in military and other equipment where space is at a premium.

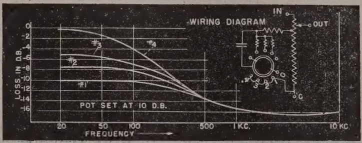
Price Upon Request



SPECIFICATIONS:

Diameter 1″ max., up to 12 pos. shorting, 6 pos. non-shorting. Silver contacts, wiping rotors, 30° spacing single hole mounting, low loss insulation, 3A, 120V. AC.





TYPE PB-822TC

TONE COMPENSATED POTENTIOMETER

PRICE $12.50

WRITE FOR

Complete catalogue on

Gain Sets
Decade Units
Bridges
Precision Attenuators
etc.

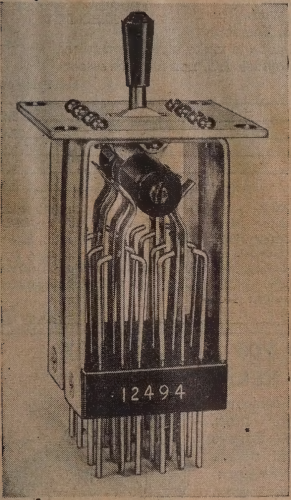
TECH LABORATORIES, INC.

PALISADES PARK
NEW JERSEY

FEDERAL ANTI-CAPACITY SWITCHES

Meet Your Needs for Multi-Circuit Switching Where a Combination of Quick Break and Low Blade-to-Blade Capacitance Is Required!

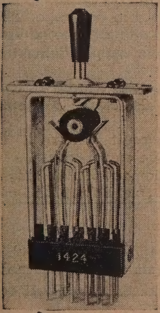
For Making, Breaking, or Transferring Multiple Circuits in Radio, Television, Radar, P.A. Systems, Sound Recording Equipment, & Experimental Equipment.



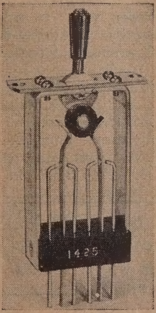
Above:
8 Pole Double Throw
Anti-Capacity Switch.

The quick break feature of Federal Anti-Capacity switches makes it possible for you to break high frequency A. C. as well as the A. C. and D. C. circuits usually encountered in sound, radio, radar, and test equipment. Check these Federal construction features:

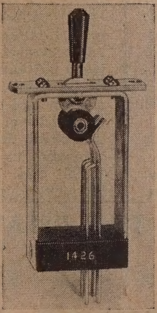
- Wide spaced round and flat master spring blades are silver-plated phosphor bronze with pure silver contacts . . . construction that eliminates the passage of perceptible amounts of induced alternating current.
- Cam arrangement is roller type with graphite impregnated bearing that turns on tool steel axles . . . gives you smooth, easy lever action, endlessly, under all atmospheric conditions.
- Insulating block in which the springs are mounted is molded bakelite.
- Polished chrome-plated face plate.
- Entire unit is secured to "U" shaped aluminum frame.
- Tinned terminals and connectors supplied.



No. 1424



No. 1425



No. 1426

No. 12494	**8 P.D.T. (N.O.)**
No. 1424	**4 P.D.T. (N.O.)**
No. 1425	**2 P.D.T. (N.O.)**
No. 1426	**2 P.S.T. (N.C.)**
No. 1427	**2 P.S.T. (N.O.)**

Can Be Easily Adjusted for Make-Before-Break or Break-Before-Make!

Approved and Used by the U.S. Navy, Army Signal Corps and the U.S. Forestry Service.

We are Always Glad to Modify Switches to Meet Your Particular Needs—Write Us for Details.

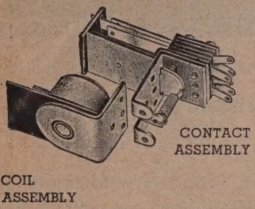
FEDERAL ANTI-CAPACITY SWITCH CORP.

80 Kingsley Street, Buffalo 8, N. Y.

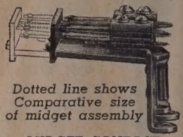
RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS

SERIES 200—INTERCHANGEABLE



Two basic parts—a coil assembly and a contact assembly—comprise this simple, yet versatile, relay. Coil assembly consists of coil and field piece. Contact assembly consists of switch blades, armature, return spring and mounting bracket. The new midget contact assembly, which is interchangeable with the standard assembly, is also available in either single pole double throw, or double pole, double throw. The standard contact assembly is 2⅞" long, 1¾" high, 1" wide. The midget assembly is 1⅝" long, 1½" high, 1" wide. The four contact assemblies can be used with any one of 13 coils to make a required relay. Contact points are rated at 8 amps., 115 volts, 60 cycles AC, non-inductive load.



MIDGET CONTACT ASSEMBLY

CONTACT SWITCH ASSEMBLIES	List Price ea.
Type 200-1—Stand., with SPDT Contact Ass'bly, 8 Amps.	$1.83
Type 200-2—Stand., with DPDT Contact Ass'bly, 8 Amps.	2.50
Type 200-4—Standard, DPDT, 12.5 Amps.	2.90
Type 200-M1—Midget, with SPDT Contact Ass'bly, 8 Amps.	1.70
Type 200-M2—Midget, with DPDT Contact Ass'bly, 8 Amps.	2.25

AC COILS*	List Price ea.
6 Volt	$2.25
12 Volt	2.25
24 Volt	2.25
115 Volt	2.80

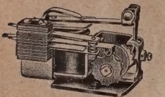
*All AC coils available in 25 and 60 cycles.

DC COILS	List Price ea.
6 Volt	$2.25
12 Volt	2.25
24 Volt	2.25
32 Volt	2.25
110 Volt	2.80
5000-D—For Current Type Operation	2.90

CONTACT PARTS KIT 200-3. Assortment of contact parts to make other switch combinations. May be used with SPDT or DPDT contact assemblies to make 3PST, 4PST, 4PDT combinations, etc. Either contact assembly takes any combination up to four pole double throw. Includes complete assembly and wiring information for all possible combinations. Complete with all necessary hardware. Shipping weight 4 oz.

List Price .... **$1.85 ea.**

RC-100 REMOTE LOCKING CONTROL RELAY



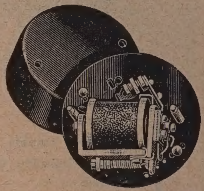
A Guardian development of the momentary impulse locking control relay. The circuit to the coil needs to be energized only long enough to close armature; contacts lock automatically. Each impulse reverses position of contacts. Standard coils operate on 115 volts, 50-60 cycles AC. Coils for other voltage and currents on specification.

Contacts, ¼" fine silver metal rated at 1500 watts at 115 volts, 60 cycle, non-inductive. Can also be used in AC primary circuits of any power supply delivering up to 1 KW. 3" long, 2⅛" wide, $1\frac{17}{32}$" high.

Applications—break-in control and phone to CW switching. Any circuit control where locking circuits are used.

	Shp. Wt.	List Price
RC-100-AR—(4PST)	8 oz.	**$7.15 ea.**
RC-100-BR—(3PDT) (SPDT) (DPST)	8 oz.	**7.85 ea.**

U-100 AND U-200 ADJUSTABLE UNDERLOAD RELAYS



Sensitive, precise, designed and constructed for long, trouble-free service. Relays are encased in attractive black finished metal containers, protecting them from dirt, dust and maladjustment. Normal current through the coil on the U-100 is 300 milliamperes with an adjustable range of 100 to 200 milliamperes DC. Normal current through the coil on the U-200 is 600 milliamperes with an adjustable range of 200 to 400 milliamperes. Oversize contacts of fine silver, rated for the AC primary of any power supply delivering up to 500 watts.

Radio Application—protection of class "B" audio equipment in case of class "C" load failure, also class "C" amplifier in case of excitation failure.

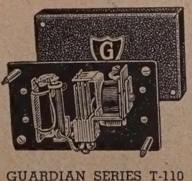
Industrial Application—Any DC circuit where it is desirable to maintain currents above a set value.

U-100 and U-200 are $3\frac{5}{16}$" in diameter, 2¼" high. Shipping weight 14 oz. .... **List Price $10.75 ea.**

T-100 AND T-110 TIME DELAY RELAYS

Standard coils operate on 115 volts, 50-60 cycles non-inductive AC. Coils available on other voltages on specification. Oversize contacts rated at 1500 watts on 115 volts, 50-60 cycles non-inductive. Can also be used in the AC primary of any power supply delivering up to 1 KW. Adjustable time delay for any period between 10 and 60 seconds.

Applications—Radio. In transmitter circuits to prevent damage of rectifiers and tube filaments by application of plate current before filaments are sufficiently heated. **Industrial.** Any control problem requiring the changing of circuits after a predetermined interval.



GUARDIAN SERIES T-110 TIME DELAY RELAY

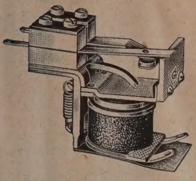
T-100—5¼" long, 3" wide, 2¼" high. Shipping weight 1¼ lbs. Laminated construction.
List Price .... **$17.15 ea.**

The T-110 is a compact, sturdy, economical time delay relay for use in applications not requiring the capacities of the T-100. Contact capacity — 1250 watts on 115 volt, 60 cycle non-inductive AC. Can also be used in the AC primary circuit of any power supply delivering up to, and including, 1 KW. Adjustable time delay between 10 and 60 seconds.

T-110—$5\frac{5}{32}$" long, $3\frac{1}{16}$" wide, $2\frac{7}{16}$" high. Shipping Weight 8 oz. **List Price** **$12.90**

RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS



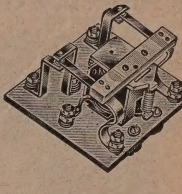
SERIES R-100
H.F. RELAY

HIGH FREQUENCY RELAYS

The Series R-100, R-100B, and A-300 Guardian Relays are primarily designed for high frequency applications. They are low-loss insulated, compact, economical and sturdily constructed. The R-100 and R-100B are AlSiMag insulated, while the A-300 is mounted on a mycalex base with polystyrene contact mounting bar.

Radio Applications — Antenna changeover, break-in, high voltage keying, grid controlled rectifier keying, remote control of receiver and transmitter, and other high frequency applications.

Industrial Applications — Oven control, remote motor control, short wave therapy and diathermy, heating equipment.

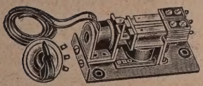


SERIES A-300
H.F. RELAY

	Length	Width	Height	Shpg. Wght. (oz.)	List Price ea.
R-100 —SPST (normally open)	2¾"	1"	2"	6	**$3.95**
R-100-B—SPST (normally closed)	2¾"	1"	2⅜"	6	**3.95**
R-100-C—SPDT	2¾"	1⅛"	2⅜"	6	**4.75**
R-100-G—DPDT	2¾"	1⅞"	2⅜"	6	**8.55**
A-300 —DPDT	3"	3"	2-1/16"	7	**9.10**

X-300-ER
ADJUSTABLE OVERLOAD RELAY

with Electrical Reset

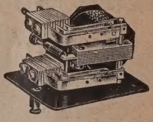


This relay offers positive, precise protection against current surges and continuous overloads — remote panel installation of the control potentiometer simplifying adjustment of relay to operate on any current value from 250 to 750 milliamperes — auxiliary contacts for pilot light indication of "overload" or "clear" position — reset relay can be operated from any convenient point. Voltage drop across overload coil is less than 10 volts at any current value. Insulation between coil and ground rated at 3000 volts.

X-300-ER—4¾" long, 1-15/16" wide, 2" high. Shipping weight 12 oz.

List Price..$9.25 ea.

B-100 BREAK-IN RELAY



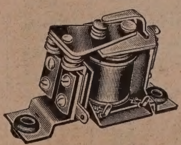
Specially designed for break-in operation on amateur transmitters. Low current drain and compact construction, plus the use of a laminated field piece and armature insuring efficient operation, make the B-100 an ideal relay for this application. Standard coil operates on 115 V., 50-60 cycle AC. Silver contacts rated at 1500 watts, 60 cycles AC non-inductive, and in AC primary circuits of any power supply delivering up to 1 KW.

B-100—2¾" long, 2⅛" high, 2¼" wide. Shipping weight 11 oz.

List Price..$10.75 ea.

K-320 KEYING RELAY

A standard coil operates on 6 volts AC. Coils for other voltages on specification at a minimum of 10% additional to list price. Contacts—special over-size silver. Can handle 5,000 watts on 60 cycle non-inductive 115 volts AC and in AC primary circuit of any power supply delivering up to and including 1 KW. Control capacity—up to 2,000 volts with clean make and break.



Applications—Control of filament center tap keying of any stage having up to 2,000 volts on plate; primary keying or control of power supplies up to and including 1,000 watts; and grid-controlled rectifier keying of 3,000 volt power supplies.

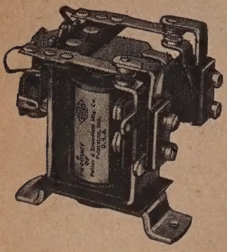
K-320—3" long, 1½" wide, 1-15/16" high. Shipping weight 4 oz.

List Price..$4.50 ea.

A TRADE MARK OF QUALITY

Potter & Brumfield

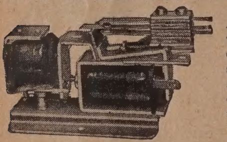
LM Series PLATE CIRCUIT RELAYS



Designed to meet demand for high grade medium cost plate circuit relays in both single and double pole contact arrangements. Large coils are particularly sensitive. The single pole LM operates on as low as .015 watt, the double pole types on .070 watt. Applicable to smoke control, packaging, counting and other electronic control circuits. Contacts supplied are 3/16″ fine silver. Approximate size of single pole units 2¼″ x 1⅜″ x 2⅜″ high. Double pole units 2¼″ x 2⅛″ x 2⅜″ high. Specify coil resistance.

DESCRIPTION	Coil Resistance Ohms	SINGLE THROW			
		Normally Open	Net	Normally Closed	Net
SPST	2500	LM-1	$2.60	LM-2	$2.60
	5000		2.75		2.75
	10000		3.10		3.10
DPST	2500	LM-7	3.75	LM-8	3.80
	5000		3.90		3.95
	10000		4.25		4.30
		DOUBLE THROW			
SPDT	2500	LM-5			2.80
	5000				2.95
	10000				3.30
DPDT	2500	LM-11			4.20
	5000				4.35
	10000				4.70

EL Series MULTIPLE CONTACT LATCHING RELAYS



Available in all contact combinations up to and including four pole double throw as shown under SU series. Actuating and latching coils available for DC voltages up to 115 or AC voltages up to 230. Actuating coils require 1.5 to 2.5 watts.

	NET
EL1A EL1D EL2A EL2D	$3.95
EL5A EL5D	$4.15
EL7A EL7D EL8A EL8D	$4.35
EL11A EL11D	$4.75
EL12A EL12D EL13A EL13D	$4.85
EL14A EL14D	$5.45
EL15A EL15D EL16A EL16D	$5.25
EL17A EL17D	$5.95

SM Series Super Midget

Open

"G"

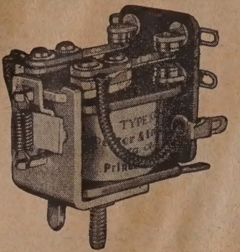
"S"

Potter & Brumfield
MFG. CO.
Princeton, Ind.
(PAT. PENDING

This subminiature relay weighs less than ½ oz. and is less than ¼ cubic inch in volume. Contacts are SPDT pure coined silver rated at .25 amp. 115 V 60 cy. load. The "D" or voltage operating types can be wound for any specified DC voltage up to 115 and draw approximately .5 watt. The "L" or current operating types can be wound to maximum of 10000 ohms which gives minimum pull-in of 2.75 ma at 75 milliwatts. "G" version hermetically sealed in miniature tube glass envelope with standard 7 pin base. "S" version hermetically sealed in deep drawn steel tube, standard 7 pin base.

List Price SM5D	Nominal Coil Voltage	Nominal Coil Amps	List Price SM5DG SM5DS	List Price SM5L	Coil Resistance Ohms	List Price SM5LG SM5LS
$2.60	0.3 - 31	2.1 - .026	$4.35	$2.85	0.155 to 1800	$4.60
2.65	32 - 47	.016 - .012	4.40	2.90	1801 to 3400	4.70
2.80	48 - 59	.009 .0113	4.55	3.10	3401 to 5200	4.85
3.15	60 - 75	.0075 - .0094	4.90	3.40	5201 to 8000	5.15
					8001 to 10000	5.55

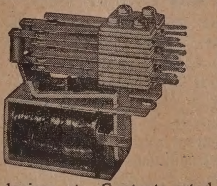
KR Series Small Light Duty



A relay designed for application where size and weight are important. Sturdy and efficient. In applications where operating current is not too limited, the DC types can be adjusted to withstand the vibration encountered in most aircraft applications. Ideal for sub-chassis mounting and switching of RF or AF circuits. Contacts are rated at 5 amperes 115 volts, 60 cycle non-inductive. Approximate size of KR11D 1-3/16″ x 1-11/16″ x 1-15/16″ high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115-230 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	KR1A	$2.20	KR2A	$2.15	KR1D	$2.10	KR2D	$2.05
Hvy. Duty SPST DB	KR3A	2.65	KR4A	2.60	KR3D	2.55	KR4D	2.50
DPST	KR7A	2.65	KR8A	2.60	KR7D	2.55	KR8D	2.50
3PST	KR12A	3.25	KR13A	3.20	KR12D	3.15	KR13D	3.10
SPDT	KR5A			2.20	KR5D			2.10
DPDT	KR11A			2.75	KR11D			2.65
3PDT	KR14A			3.50	KR14D			3.40
	A.C. coils up to 117 volts at above prices.				Add 30c to above prices for coils of 3500 to 5000 ohms. From 5001 to 6000 ohms add 40c.			

SU Series MULTIPLE LEAF RELAYS



Unique construction provides many valuable features at low cost. Larger coil space permits most efficient winding for higher voltages and lower consumption. May be mounted either vertically or horizontally, terminals easily accessible in either mounting. Suitable for applications such as signal or alarm controls, remote indicators, temperature controls, overload or underload protective devices, etc. Contacts rated at 5 amperes 115 volts AC non-inductive load. Contact combinations up to and including 4-pole double throw. DC types require 1.5 watts actuating power. Dimensions of SU17A (illustrated) are 2-9/16″ x 1-7/16″ x 2-7/16″ high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115-230 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	SU1A	$2.15	SU2A	$2.15	SU1D	$2.15	SU2D	$2.15
DPST	SU7A	2.70	SU8A	2.70	SU7D	2.50	SU8D	2.60
3PST	SU12A	3.20	SU13A	3.20	SU12D	3.10	SU13D	3.10
4PST	SU15A	3.65	SU16A	3.65	SU15D	3.50	SU16D	3.50
SPDT	SU5A			2.35	SU5D			2.35
DPDT	SU11A			2.95	SIU11D			2.95
3PDT	SU14A			3.45	SU14D			3.45
4PDT	SU17A			4.00	SU17D			4.00
	Add 70c to above prices for coils above 117 volts.				Add 70c to above prices for coils over 60 volts.			

POTTER & BRUMFIELD

PRINCETON, INDIANA • EXPORT SALES AT 13 E. 40TH ST., NEW YORK, U. S. A.

Potter & Brumfield

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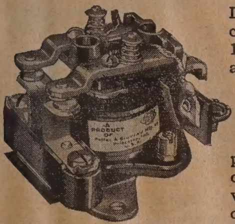
On these pages we list a few of the relay types we class as standard. Stocks of either completed relays or component parts are kept on hand for quick assembly, resulting in unusually prompt delivery and lower prices. From these relays a type can be selected for almost any application where the contact load does not exceed 20 amperes.

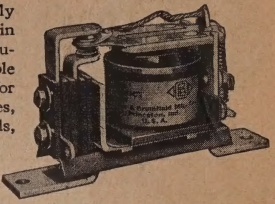
PR Series
HEAVY DUTY POWER RELAYS



Designed for such power circuits as motor starting up to 1 HP., heater loads up to 20 amperes, remote break-in control of transmitters, electro plating devices, elevator controls, or any control circuit requiring fast positive switching. AC types operate on approximately 10 volt amperes. DC types require approximately 2 watts. Relay contacts on PR3A, PR3D, PR4A and PR4D rated at 20 A, non-inductive load 115V AC or 1 HP, AC. All other relay contacts rated at 15 A, non-inductive at 115V AC. Size approximately 2⅝″ x 2-9/16″ x 2¼″ high. Specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-115-230-440 Volts				D.C. RELAYS 6-12-24-115-230-440 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	PR1A	$3.50	PR2A	$3.50	PR1D	$3.50	PR2D	$3.50
Heavy Duty SPST DB	PR3A	3.60	PR4A	3.65	PR3D	3.60	PR4D	3.65
DPST	PR7A	4.25	PR8A	4.45	PR7D	4.25	PR8D	4.45
SPDT	PR5A			3.80	PR5D			3.80
DPDT	PR11A			5.70	PR11D			5.70
	Add 65c to prices above for coils over 150 volts.				Add 65c to prices above for coils over 50 volts.			

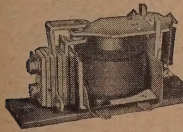
MR Series
MEDIUM DUTY POWER RELAYS



Sturdy, compact, highly efficient, for mounting in confined spaces. Particularly adapted to multiple panel mounting. Ideal for safety and signal devices, call systems, heater loads, radio protective circuits, transmitter keying circuits, burglar alarms, photographic applications, electric sign controls, etc. Available in all contact arrangements up to and including double pole double throw. AC types operate on approximately 4 volt amperes and DC types operate on approximately 2 watts. Contacts rated at 8 A, 115V, 60 cycles non-inductive load. Approximate size single pole units 2-15/16″ x 1½″ x 1⅝″ high. Double pole units 2¾″ x 2⅛″ x 1⅞″ high.

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115-230 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	MR1A	$2.25	MR2A	$2.20	MR1D	$2.25	MR2D	$2.20
SPST DB	MR3A	2.90	MR4A	2.95	MR3D	2.90	MR4D	2.95
DPST	MR7A	3.20	MR8A	3.25	MR7D	3.20	MR8D	3.25
3PST	MR12A	3.85	MR13A	3.85	MR12D	3.85	MR13D	3.85
SPDT	MR5A			2.40	MR5D			2.40
DPDT	MR11A			3.65	MR11D			3.65
3PDT	MR14A			4.40	MR14D			4.40
	Add 45c to prices above for coils over 150 volts.				Add 45c to prices above for coils over 55 volts.			

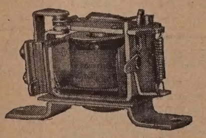
LS Series
PLATE CIRCUIT RELAYS



Designed for application where size and cost are important. Often used in photoelectric circuits, temperature control circuits and electronic timing devices. Similar to the LM Series but less sensitive. Available in all resistances up to and including 10000 ohms. Requires .09 watt minimum actuating power.

Single pole double throw, 2500 ohm coil, net $2.25.
Single pole double throw, 5000 ohm coil, net $2.35.
Single pole double throw, 10000 ohm coil, net $2.55.
Size 2⅝″ x 1¼″ x 1-5/16″ high.
When ordering, specify coil resistance or sensitivity.

FR Series
PHOTO FLASH RELAYS



Type	Net	Type	Net
FR1A FR1D	$3.30	FR5A FR5D	$3.60
FR2A FR2D	3.25	FR7A FR7D	4.35
FR3A FR3D	4.00	FR8A FR8D	4.25
FR11A FR11D	$4.70		

The newly developed electronic photo flash units using a high voltage discharge through a xenon gas filled bulb require a relay of extraordinary characteristics. When the bulb is flashed the contacts must carry an extremely high surge of current without sticking, burning or pitting. The repetitive accuracy must be as uniform as a precision built shutter on a fine camera. Unfailing positive contact is vital to synchronization of the shutter with the 2500 volt capacitor discharge.

The Potter and Brumfield FR relay has been tried and proven under the most severe conditions of temperature, humidity and shock. Special contact material and the finest quality of baked varnish impregnation of coil and other insulating parts combine to give a reliable relay at economy prices. The FR is available in all the contact combinations listed under the MR Series shown on this page up to and including Double Pole Double Throw. Coils are available in all AC voltages up to 230 volts and DC voltages up to 115. Power requirements for coil operation is 1.5 to 2 watts DC and 3 to 4 volt amperes AC. Overall dimensions for single pole types are 2-15/16″ x 1½″ x 1⅝″ high. Double pole types 2¾″ x 2⅛″ x 1⅞″ high.

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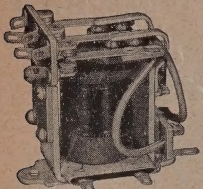
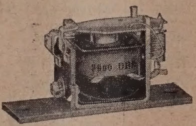
KL Series—LIGHT DUTY MULTIPLE CONTACT RELAYS



Similar in design to KR but has actuating coil approximately twice the length of the KR. Permits double the ampere turns giving more power to actuate additional contacts and maintain 25 grams minimum on all. AC coils will operate relay on 78% of rated voltage or less and will not overheat on 113%. Contacts rated at 5 amperes, 115 volts, 60 cycle non-inductive load. Approximate size of KL 14, 1-7/16″ x 1⅞″ high x 1⅜″ (for 2 pole relays), 1-7/16″ (for 3 pole relays), and 1-11/16″ (for 4 pole relays). When ordering specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115-230 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	KL1A	$2.90	KL2A	$2.85	KL1D	$2.70	KL2D	$2.65
DPST	KL7A	3.35	KL8A	3.25	KL7D	3.15	KL8D	3.05
3PST	KL12A	4.00	KL13A	4.00	KL12D	3.75	KL13D	3.75
4PST	KL15A	5.40	KL16A	5.05	KL15D	5.15	KL16D	4.80
SPDT	KL5A			2.95	KL5D			2.75
DPDT	KL11A			3.40	KL11D			3.20
3PDT	KL14A			4.30	KL14D			4.00
4PDT	KL17A			5.80	KL17D			5.50
	Add 65c to prices above for coils over 117 volts.				Add 65c to prices above for coils over 60 volts.			

LC Series—PLATE CIRCUIT RELAYS

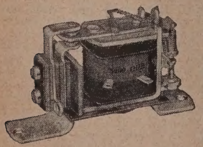


Small, rugged model offering dependable light duty operation. Fitted with molded bakelite bobbins with breakdown of 500 V. RMS minimum and are baked varnish impregnated against moisture and mechanical damage. Contacts rated at 5 amperes, 115 volts, 60 cycle non-inductive load. Frames, armatures and cores are made of high permeability magnetic relay steel, annealed after forming and cadmium plated. LC core measures ⅜″ x ⅞″ long. Available in all resistances up to and including 10,000 ohms. Requires .09 watt minimum actúating power.

LC 5	Single pole double throw, 2500 ohm coil, net	$2.15
	Single pole double throw, 5000 ohm coil, net	$2.25
	Single pole double throw, 10000 ohm coil, net	$2.40
	Size 2⅝″ x 1¼″ x 1-11/32″ high.	

When ordering, specify coil resistance or sensitivity.

LP Series—PLATE CIRCUIT RELAYS

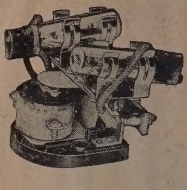


Designed for use in electronic circuits such as plate circuit of a vacuum tube used to amplify currents too small to actuate a relay. Ideal for mounting in confined spaces. Fitted with molded bakelite bobbins with breakdown of 500 V. RMS minimum and are baked varnish impregnated against moisture and mechanical damage. Provided with adjustable spring tension screws. Contacts rated at 5 amperes, 115 volts, 60 cycle non-inductive load. Available in all resistances up to and including 10,000 ohms. Requires .09 watt minimum actuating power.

LP 5	Single pole double throw, 2500 ohm coil, net	$2.85
	Single pole double throw, 5000 ohm coil, net	$2.95
	Single pole double throw, 10000 ohm coil, net	$3.15
	Size 2-15/16″ x 1¼″ x 1⅝″.	

When ordering, specify coil resistance or sensitivity.

HG Series—MERCURY CONTACT RELAYS



Designed for application in hazardous locations or where safety, simplicity, and low cost reliability are necessary. Hermetically sealed contacts and fresh contact surface presented at each operation plus precision actuating mechanism give dependability and long life under conditions of extreme temperature and humidity variation. No contact deterioration encountered when used in corrosive atmosphere. Ideal for air conditioning equipment, alarm systems, automatic controls, elevator controls, mines, hospitals, airway and outdoor lighting, medical equipment, refrigeration equipment, signal systems, chargers and testing equipment.

Supplied in a wide variety of contact combinations for both high and low amperage applications. High amperage tubes suitable for loads up to 20 amperes 115 or 230 volts 60 cycles or 10 amperes 115 or 230 volts DC. Low amperage tubes rated to handle 4 amperes 115 volts AC or DC or 2 amperes 230 volts AC or DC; or 1 ampere 440 volts AC or DC non-inductive load. Special coils or characteristics for individual circuit application available on order. Specify coil voltage and frequency.

LOW AMPERAGE TUBES

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	HGL1A	$5.80	HGL2A	$5.80	HGL1D	$5.80	HGL2D	$5.80
SPST DB	HGL3A	5.80	HGL4A	5.80	HGL3D	5.80	HGL4D	5.80
DPST	HGL7A	8.10	HGL8A	8.10	HGL7D	8.10	HGL8D	8.10
DPST DB	HGL9A	8.10	HGL10A	8.10	HGL9D	8.10	HGL10D	8.10
SPDT	HGL5A			6.65	HGL5D			6.65
SPDT DB	HGL6A			7.00	HGL6D			7.00
DPDT	HGL11A			9.65	HGL11D			9.65

HIGH AMPERAGE TUBES

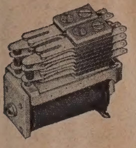
Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	HGH1A	$8.35	HGH2A	$8.35	HGH1D	$8.35	HGH2D	$8.35
SPST DB	HGH3A	10.55	HGH4A	10.55	HGH3D	10.55	HGH4D	10.55
DPST	HGH7A	10.55	HGH8A	10.55	HGH7D	10.55	HGH8D	10.55
SPDT	HGH5A			10.55	HGH5D			10.55

POTTER & BRUMFIELD

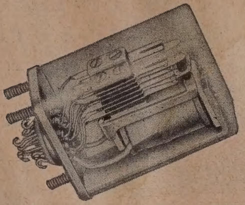
PRINCETON, INDIANA • EXPORT SALES AT 13 E. 40TH ST., NEW YORK, U. S. A.

PB TRADE-MARK OF QUALITY Potter & Brumfield

MT Series—TELEPHONE TYPE RELAYS



OPEN
DIMENSIONS
11/16″ x 1½″ x 1⅜″



SEALED
DIMENSIONS
1″ x 1-11/16″ x 2-5/32″

OPEN—Smallest and most versatile of the telephone type relays. Saves chassis mounting space. Supplied open or hermetically sealed 4 form C (4PDT) ⅛″ diameter coined pure silver contacts rated at 5 amperes 115 volt AC non-inductive load. Tin dipped solder terminals. Stack insulation, laminated phenolic . . . .Vibration and shock resistance to better than 10G with minimnm of 1.5 watts in coil.

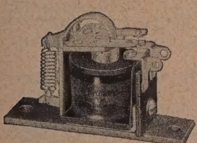
SEALED—Hermetically sealed against all environment conditions extends relay life indefinitely. This deep drawn enclosure housing either of the relays described in the columns below gives the smallest multiple contact assembly available. Occupies only 1″ x 1 11/16″ chassis space. The base is solder sealed to the housing. The kovar solder terminals are fused into the glass header which has a minimum leakage resistance of 10,000 megohms at 50% humidity and will stand extremely high thermal shock. Hermetically sealed relays are desiccated at high temperature and sealed in one atmosphere of dry nitrogen, which eliminates oxidation and reduces contact arcing. Housing finish hot tin dipped. Mounting 3 6/32 studs on ½″ x 1¼″ centers.

OPEN CONSTRUCTION (4 Form C Contacts)		HERMETICALLY SEALED (4 Form C Contacts)	
MT17D 6 volt DC, net	$4.85	MT17DM 6 volt DC, net	$12.10
MT17D 24 volt DC, net	$4.95	MT17DM 24 volt DC, net	$12.20
MT17A 6 volt AC 60 cycle, net	$5.15	MT17AM 6 volt AC 60 cy., net	$12.45
MT17A 24 volt AC 60 cycle, net	$5.30	MT17AM 24 volt AC 60 cy., net	$12.55
MT17A 115 volt AC 60 cycle, net	$5.40	MT17AM 115 volt AC 60 cy., net	$12.65

SPECIFY TYPE AND COIL VOLTAGE

MT relays for other voltages and sensitive current operation on request. Max. coil winding 22,000 ohms. Min. operating power .050 watts per movable spring. Max. coil power 4 watts.

CA Series—SPACE SAVER RELAYS

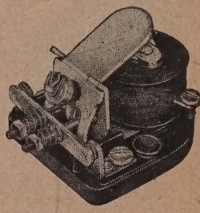


Constructed to meet the industry wide demand for small size and large current carrying capacity. Fine silver 3/16″ diameter contacts rated at 5 amperes, 115 volts AC non-inductive load. Phosphor bronze double break contact carrier with full wiping motion. Rivet type residual pin on all DC types for fast armature release. Actuating coils require 1.5 to 2 watts for DC or 1.25 to 1.5 watts for AC operation. Standard coils operate on 50 to 60 cycles. Special 25 cycle coils may be supplied up to 230 volts. Approximate size: 2⅝″ x 1¼″ x 1 9/16″ high.

Supplied with mounting base of Densite fiber with two 3/16″ holes spaced 2-7/32″ center to center. Metal base with two 5/32″ holes spaced 2⅝″ center to center available when specified.

Description	A.C. RELAYS 6-12-24-115-230 volts		D.C. RELAYS 6-12-24-115 volts	
SPST DB	Normally open	Net	Normally open	Net
	CA3A	$2.15	CA3D	$2.20
	Add 45c to above prices for coils over 150 volts.		Add 45c to above prices for coils over 55 volts.	

MS Series—MOTOR STARTING RELAYS



MS is ideally suited for use with hermetically sealed motors to avoid complete dismantle for repair of centrifugal switches, or in applications requiring explosion-proof motors. Voltage controlled relay insures throw-out of the starting winding when motor reaches rated speed regardless of the load on the motor. May be remotely located or totally enclosed for operation in corrosive or combustible atmosphere.

Pull-in voltage of MS can be varied over a wide range by adjusting armature gap. Unusual design permits an exceptionally wide differential between pull-in and drop-out voltages. Available with either an 800 ohm coil for operation with a 115 volt, 60 cycle motor or a 2100 ohm coil for operation with a 230 volt, 60 cycle motor. Normal adjustment for 115 volt motor is to pull in at 140 volts and release at 40 volts or less. For the 230 volt motor normal adjustment is to pull in at 255 volts and release at 80 volts or less.

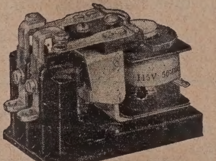
MS2A single break relay is designed for capacitor start, induction run motors up to and including ¾ HP. Available for 115 volt or 230 volt motors or other voltages on request.

MS4A double break relay is designed with special high current contacts for use on capacitor start motors up to 3 HP. MS4A equipped with silver-cadmium oxide contacts.

Approximate size of MS4A is 2¾″ x 2-1/16″ x 1⅞″ high.

MS2A 800 ohms (for 115 volt 60 cycle motor) net	$2.55
MS2A 2100 ohms (for 230 volt 60 cycle motor) net	$2.65
MS4A 800 ohms (for 115 volt 60 cycle motor) net	$3.75
MS4A 2100 ohms (for 230 volt 60 cycle motor) net	$3.85

SP Series—HEAVY DUTY SHOCK PROOF RELAYS



Constructed to withstand shock and vibration, dust, dirt or heat, SP Series represents a heavy duty relay of balanced armature construction which may be mounted in any position. Thick molded base and contact supports. SP coils are random wound on molded bakelite bobbins with breakdown of 500 V. RMS to core. Average power sensitivity for all DC types is 1.5 watts. Average power for AC types is 3 to 4 V. amperes. Contacts supplied are 3/16″ diameter fine silver. Rating is 8 amperes on double break and 5 amperes on single break at 115 volts, 60 cycle non-inductive load. Minimum contact pressure 25 grams. Approximate size of SP11 is 2-13/32″ x 1⅝″ x 2-21/32″ high. When ordering specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-115-230 Volts				D.C. RELAYS 6-12-24-115 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST DB	SP3A	$3.95	SP4A	$3.95	SP3D	$3.60	SP4D	$3.60
DPST	SP7A	4.30	SP8A	4.30	SP7D	3.95	SP8D	3.95
SPDT DB	SP6A			4.30	SP6D			3.95
DPDT	SP11A			4.75	SP11D			4.30
	Ad 45c to above prices for coils over 150 volts.				Add 45c to above prices for coils over 55 volts.			

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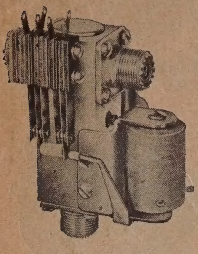
Advance RELAYS

COAXIAL RELAY


Type 7204

This relay, for use with 52 ohm RG coaxial cable, has SPDT internal contacts, rated at 880 watts maximum. If desired, DPDT auxiliary contacts (as illustrated) may be had. Tests on a 52 ohm line show VSWR of 1.02:1.0 at 100 meg.

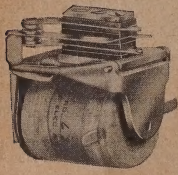
***List Prices:** (Up to 115 V A.C. or 40 V D.C.)

A.C.	D.C.		
7200	8200		$16.63
7204	8204	With auxiliary contacts	20.63

*For higher voltages up to 440 V A.C. or 240 V D.C., or for other Advance Coaxial Relays, see your nearest jobber.

Size (without auxiliary contacts): 1⅜" x 2⅞" x 3½"

MIDGET TELEPHONE RELAY


Type 5203A
"A" denotes
5-amp. contacts

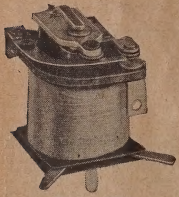
This small, yet sturdy relay is offered in any contact combination from SPST to 4PDT; with ⅛", 1.5 amp. contacts, or with 3/16", 5 amp. contacts. Coils draw from .1 to 2 watts D.C. or 1 to 1½ watts A.C. List prices below are for coils up to 115 V A.C. or 1000 ohms D.C.

A.C.	D.C.			
5201	6201	SPST	N. O.	$4.65
5201A	6201A	SPST	N. O.	4.92
5203	6203	SPDT		4.98
5203A	6203A	SPDT		5.51
5204	6204	DPDT		5.98
5204A	6204A	DPDT		7.05

For higher voltage coils, up to 220 V A.C. or 16,000 ohms D.C., see your nearest jobber. He can also show you other Advance Telephone Relays.

TINY MITE RELAYS

(FOR D.C. ONLY)

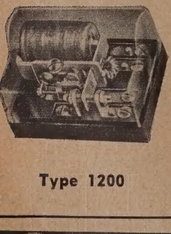

Type 003

In these tiny relays, which require less than ½ cubic inch mounting space, all switching is above ground. Contacts are rated at .35 amperes at 115 V A.C. (non-inductive). Power required is .2 to .5 watt. Coils are available for any D.C. voltage 1 to 80; resistances up to 5000 ohms. Weight: 10 grams. (45 relays per lb.). List prices below are for any coil up to 800 ohms (24 V D.C.). For higher resistances see your nearest jobber.

Type			List
003	SPST	N. O.	$3.52
005	DPST	N. O.	3.85

Size: 13/16" x 13/16" x 9/16"
(Overall dimensions with lugs as illustrated).
If desired, can be supplied with leads.

ULTRA-SENSITIVE D.C. RELAYS


Type 1200

This relay combines many superior features — transparent plastic cover-molded Bakelite base — counter-balanced armature — high overall sensitivity . . . 5 milliwatts for positive operation — 2½ milliwatts with careful adjustment, and light contact load . . . Three adjustments with vernier screws: spring, and each contact. Contacts are SPDT, pure silver rated at 1.5 amperes at 115 V A.C. (non-inductive).

Supplied in coil resistances up to 40,000 ohms. **Be sure to specify resistance desired!**

List Prices:

Up to 2200 ohms	$10.97	8700 ohms	$11.98	30000 ohms	$15.30
3500 ohms	11.31	14000 ohms	12.64	40000 ohms	18.63
5500 ohms	11.64	20000 ohms	13.31		

Base Dimensions: 2" x 2 9/16". **Height:** 1½". **Weight:** 6¼ ounces.
Currently available only with DO priority

MIDGET RELAY

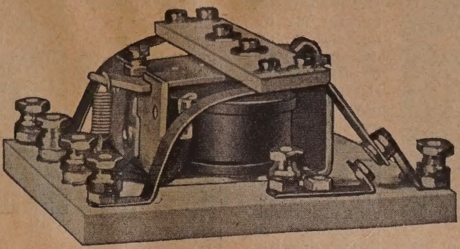
D.C. VOLTS A
60 CYCLES
Series K1500 and K1600

Of particular interest where size and cost are factors, this new series of Midget Relays, of improved design, incorporates all of the fine construction features typical of the ADVANCE line. This unit measures only 1½" x ¾" x 1⅛" high. Pure Silver contacts are used, ⅛" in diameter. Standard coils are obtainable from 2 to 40 V D.C. and 1 to 115 V A.C. The following switch combinations can be supplied:

TYPE A.C.	TYPE D.C.	CONTACT COMBINATION	LIST PRICES
K1503S	K1603S	SPDT	$4.31
K1504	K1604	DP-DT	4.65

Advance RELAYS

TRANSMITTER RELAYS



Type 400

Isolantite model Antenna Change-Over. Designed for use in Amateur Transmitters.

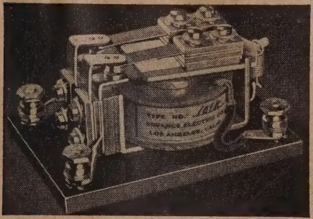
The contact system is Double Pole-Double Throw, using ¼″ Pure Silver contacts, with exceptional wiping action.

For high radio frequency control. Entirely hum-free where intended for A.C. operation, and highly efficient on D.C. supplies. All metallic parts are cadmium and chromium plated.

Standard coils are for 110V A.C. They will also be supplied for lower A.C. or D.C. voltages at no increase in price.

List Price..................**$13.17**

KEYING RELAYS



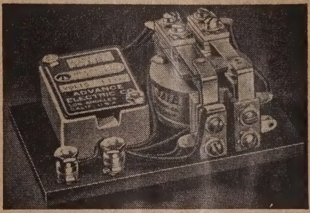
Type 101K—A.C.
Type 201K—D.C.

Designed expressly for use in Keying Circuits where it is desired to use low voltage across the key to control high voltage transmission through the Relay contacts. The heavy duty coil and strong return spring makes possible an exceptional keying speed. Two sets of ¼″ Pure Silver contacts in series allow a carrying capacity of 2500 volts. The complete unit, mounted on a 3/16″ Bakelite base with binding posts for coil connections, has over-all dimensions of 3″ x 2″ x 1⅜″ and is obtainable for A.C. operation to 115 volts or D.C. operation to 60 volts.

List Price $7.32

TIME DELAY RELAYS

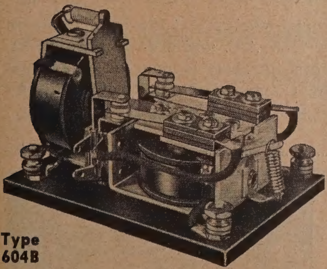
Type 304B
Type 354B



Available either with delay before make, 304B, or delay before break, 354B. This relay is provided with an adjustable range of 10 seconds to one minute. Recycling time is approximately 10 times the delay period. Both models are DPDT with ¼″ 10 ampere contacts (non-inductive). Available in voltages from 3 to 230 volts A.C. or D.C. Standard price applies up to 115V A.C., or 40V D.C. Dimensions 3¾″ x 2⅝″ x 1½″.

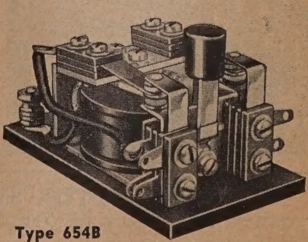
List Price **$11.31**

LATCHING RELAYS



Type 604B

These Relays are highly desirable for applications where it is impractical to have the holding coil in constant service. When the coil actuating the contact arrangement is momentarily energized, the armature is locked in the closed position, and may be released electrically (Type 604B) or manually (Type .654B).



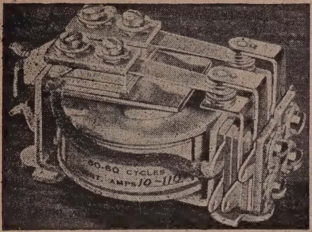
Type 654B

	List			List
Type 604B	**$12.77**	..............................Double Pole-Double Throw..............................	**Type 654B**	**$9.50**

The above list prices are for ¼″ contacts. For 3/16″ points deduct 25c—for ⅛″ points deduct 50c. When ordering these types SPECIFY THE VOLTAGE.

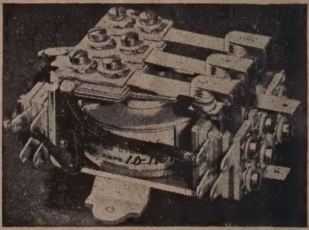
Advance RELAYS

INDUSTRIAL CONTROL RELAYS


Type 964B

Designed mainly for industrial applications — air conditioning, lighting, and power transfer systems, the Type 964B Relays embody all of the rugged construction features demanded in units of this type without sacrificing the desirable qualities of the midget style. Available in DPDT, and to operate on standard A.C. and D.C. voltages.

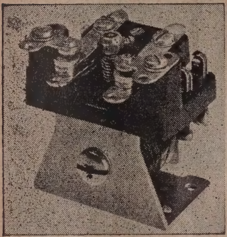
	List
Type 964B—Double Pole-Double Throw	$7.32


Type 979B

This three pole, double throw relay has the same general characteristics as the Type 964B except that it requires a slightly larger mounting area. Contacts are ¼″ silver, rated at 10 amperes at 115 V A.C. non-inductive. Solder lug terminals are provided for all connections and the metal mounting bracket has two tapped holes on 2″ centers for 6-32 screws.

	List
Type 979B	$8.78

GENERAL PURPOSE RELAY

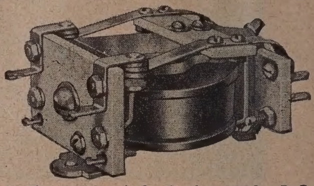


This Advance relay, with molded bakelite insulation, is compact, sturdy, and all electrical connections are well spaced and easily accessible.

Contacts are ¼″ diameter pure silver, rated at 15 amps. at 115 V. A.C. or 24 V. D.C. non-inductive. BE SURE TO SPECIFY CORRECT TYPE NUMBER AND OPERATING VOLTAGE WHEN ORDERING. PRICES BELOW ARE FOR A.C. COILS UP TO 115 VOLTS OR D.C. COILS UP TO 40 VOLTS.

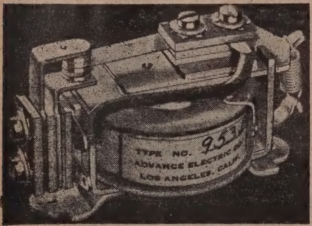
	D.C.	A.C.		List
Type	9003	9103	SPDT—Double Make and Break	$8.47
Type	9004	9104	DPDT—Single Make and Break	8.47

MIDGET TYPE R.F. RELAYS


Series 1000—A.C. Series 2000—D.C.

These models are sturdy, compact Double Pole - Double Throw Transmitter Relays, designed expressly for use in all types of mobile-portable communications equipment where space is at a premium. The insulation on this, as on the Type 400's, is Isolantite for both the cross-arm and end pieces, with all holes adequately well spaced to prevent structural weakness and possible "creepage." Coils are obtainable for all A. C. and D. C. voltages, and will operate in any position, the former consuming approximately four watts—the latter, two watts of power. Dimensions are 2¾″ x 1½″ x 1¼″.

List Price	$10.97



GENERAL PURPOSE RELAYS

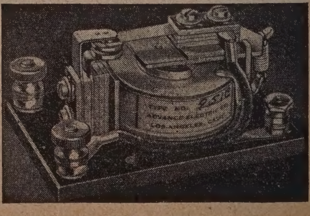
Type 953B

This relay affords maximum power and efficiency at low cost. Contacts are SPDT, rated at 10 amperes at 115V A.C. and are ¼″ pure silver. Solder lug terminals are provided and the relay is mounted on a metal bracket, same as the 964B and 979B. Coils available up to 40V D.C. and 115V A.C. at standard prices.

List Price	$5.12

GEN-E-MOTOR STARTING RELAY

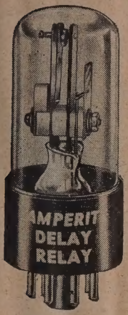
Type 951C



An exceptionally sturdy power transfer Relay, easily capable of handling the heavy current surge encountered on "cold" starts in motor-generator systems. The contacts are ⅜″ Pure Silver and have ample carrying capacity for the usual 200-500V converters. Heavy-duty in every phase of construction, this unit is not to be compared with the common five and ten ampere circuit controls. Base dimensions are 3″ x 2″ and each unit is complete with a braided generator-cable pig-tail and binding posts for all connections. Coils for 5½ to 32V D. C. or 1 to 115 A.C. .... **List Price** 8.78

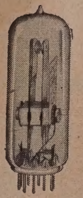
THERMOSTATIC **AMPERITE** DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT


STANDARD

AMPERITE

THERMOSTATIC DELAY RELAYS


MINIATURE

EXCLUSIVE FEATURES:

- Actuated by a heater.
- Operates on A.C., D.C., or Pulsating Current.
- Hermetically sealed, Amperite Relays are not affected by altitude, moisture or other atmospheric conditions.
- Compact, lightweight and inexpensive.

TECHNICAL CHARACTERISTICS

CIRCUITS: SPST only—Normally open or normally closed.

HEATER WATTAGE: 2 W prox.—Heaters can be operated continuously.

CONTACT RATING: 115 V–3A A.C. (or 440 V–0.5A A.C.); Maximum voltage between contacts and heater—1500 V. D.C.

AMBIENT TEMPERATURES: Relays are compensated for temperatures of −55° to +70° C.

LIFE: With 115 V–2A A.C., non-inductive, at least 500,000 operations.

BASE WIRING:

Standard Radio Octal:	**9-Pin Miniature:**
Prongs 2-3-heater; Prongs 5-7- contacts.	Prongs 1-6-heater; Prongs 3-4 1 contact; Prongs 8-9-2nd contact.

LIST PRICES: Standard and miniature types listed $4.00

RESALE: Standard and miniature types listed $2.40

DELIVERY: The types shown in bold type are most popular, and usually available from stock. Other types delivered in approximately 6 weeks.

Delay-Seconds	Tolerance Seconds	NORMALLY OPEN CONTACTS						NORMALLY CLOSED CONTACTS					
		HEATER VOLTAGES						HEATER VOLTAGES					
		2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.	2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.
2	± 1	2N02	5N02	**6N02**	12N02	26N02	115N02	2C2	5C2	**6C2**	12C2	26C2	115C2
5	± 2	2N05	5N05	**6N05**	12N05	**26N05**	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	**115C5**
10	± 3	2N010	5N010	**6N010**	12N010	**26N010**	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	**115C10**
15	± 3	2N015	5N015	**6N015**	12N015	**26N015**	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	**115C15**
20	± 4	2N020	5N020	**6N020**	12N020	**26N020**	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	**115C20**
30	± 8	**2N030**	**5N030**	**6N030**	**12N030**	**26N030**	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	**115C30**
45	± 10	2N045	5N045	**6N045**	12N045	**26N045**	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	**115C45**
60	± 12	**2N060**	5N060	**6N060**	12N060	**26N060**	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	**115C60**
75	± 15	2N075	5N075	**6N075**	12N075	**26N075**	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	**115C75**
90	± 15	2N090	5N090	**6N090**	12N090	**26N090**	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	**115C90**
120	± 30	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	**115C120**

MINIATURE TYPES: Designated by letter T. (e.g. 6NO5T) is available in all delays shown above bold dotted line. Delays of 2 to 75 seconds (except 115NO60 and 115NO75) are available in both standard radio octal and 9-Pin miniature. Prices of both standard and miniature types . . . . List—$4.00

Flashers available only in low voltage heaters . . . . 6.3 — 26 V.

Flash Rate available — pre-set at factory — 15 to 100 fpm. . . . . List — $4.00 each

Dealer Cost — $2.40 each

Net

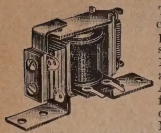
Staco
STANDARD ELECTRICAL PRODUCTS CO.
A QUALITY PRODUCT
DAYTON, O. U.S.A.

RELAYS

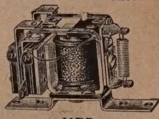
FOR AMATEUR AND INDUSTRIAL USES

NATIONAL ASSOCIATION RELAY MANUFACTURERS
NARM

MINIATURE RELAYS



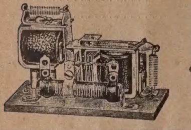
These units are very compact and are especially designed for plate circuit and general purpose control application. Overall dimensions: MR 1⅞″ x 1⅜″ x ⅞″—MRD 1⅞″ x 1⅜″ x 1¼″. Contacts are fine silver rated 5 amps at 115 V. All AC relays are free from hum and AC chatter. The MR-2 and MRD-2 have 2500 ohm coil, will pick up at 6 ma. and 12 ma. respectively. The MR-5 and MRD-5 have 5000 ohm coils, will pick up at 3 ma. and 7.5 ma. respectively. The drop out value of these relays is approximately 50% of the pick up value.



MRD

Type	A.C.	D.C.	Contacts	Net Prices
MR-2		Plate Circuit	SPDT	$2.10
MR-5		Plate Circuit	SPDT	2.40
MR-6		6 V.	SPDT	2.10
MR-7	6 V.		SPDT	2.19
MR-11	110 V.		SPDT	2.19
MRD-2		Plate Circuit	DPDT	3.60
MRD-5		Plate Circuit	DPDT	3.90
MRD-6		6 V.	DPDT	3.60
MRD-7	6 V.		DPDT	3.69
MRD-11	110 V.		DPDT	3.69

OVERLOAD RELAYS



Adjustable overload relays provide accurate and positive protection against current surges and continuous overloads. Contact arrangements SPDT using 3/16″ fine silver contacts. This allows the use of either audible or visual signal to advise of overload. All models are of the electrical reset type which allows remote control resetting of the relay. Size—3¾″ x 2″ x 1½″.

Type	Current Range	Reset Coil	Net Prices
OA-2	250–500 ma.	110 V. A.C.	$5.40
OA-5	500–1000 ma.	110 V. A.C.	5.40
OC-2	250–500 ma.	6 V. A.C.	5.40
OC-5	500–1000 ma.	6 V. A.C.	5.40
OD-2	250–500 ma.	6 V. D.C.	5.40
OD-5	500–1000 ma.	6 V. D.C.	5.40

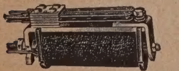
LATCHING RELAYS

These relays are employed where it is not desirable to have current continuously on the coil. The latching arrangement is such that when the relay coil is energized the armature closes and locks in a closed position by mechanical latching. An electrical impulse on the reset coil releases the armature from the latch and allows the relay to assume its initial position. 3/16″ fine silver contacts. Bakelite Base. Size—3¾″ x 2″ x ¾″.

Type	Reset Coil	Pull-in Coil	Net Prices
LEA	110 Volts A.C.	110 Volts A.C.	$4.50
LEA-6	6 Volts A.C.	6 Volts A.C.	4.50
LED	6 Volts D.C.	6 Volts D.C.	4.50

COMMUNICATION RELAYS

Ideally suited for use in telephone, remote control, signaling, communications circuits etc. High speed operation plus high sensitivity with high contact pressure. Contacts will handle 4 amps at 115 V. non-inductive load. Each relay has one make and one break contact sets. Size—3¾″ x 13/16″ x 1⅝″.

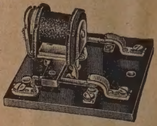


Type	Res. of Coil Ohms	Volts Pick-up	M.A. Pick-up	Net Prices
T10G	10,000	31	3.2	$4.20
T63F	6,300	24	4.0	4.20
T40F	4,000	19	5.0	4.05
T10F	1,000	10	10.0	3.75
T25E	250	5	20.0	3.45
T10E	100	3	31.6	3.45

ANTENNA CHANGE-OVER

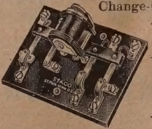
Mycalex Insulation is satisfactory for operation up to 60 MC. Triple-X insulation for operation up to 15 MC. All models use 3/16″ fine silver wiping action contacts rated at 4 amps. These relays are designed with ball-bearing armature pivot and have large contact spacing to assure minimum capacity between contact arms. The armature is designed so as to eliminate AC chatter. Size—3⅛″ x 3⅛″ x 23/16″.

Type	Insulation	Coil Voltage	Net Prices
BA	TRIPLE-X	110 V. A.C.	$4.50
BD	TRIPLE-X	6 V. D.C.	4.50
[illegible]	MYCALEX	110 V. A.C.	5.70
AMD	MYCALEX	6 V. D.C.	5.70



BREAK-IN RELAYS

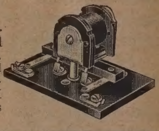
Same type of relay as above only two additional poles are added, one normally open, one normaly closed. This arrangement is perfect for PUSH-TO-TALK control. Contacts etc. identical with Antenna-Change-Over Relay. Size—4½″ x 3⅛″ x 23/16″.



Type	Insulation	Coil Voltage	Net Prices
BBA	TRIPLE-X	110 V. A.C.	$5.70
BBD	TRIPLE-X	6 V. D.C.	5.70
BMA	MYCALEX	110 V. A.C.	7.50
BMD	MYCALEX	6 V. D.C.	7.50

R.F. AND GENERAL PURPOSE RELAY

An excellent relay for R.F. or high voltage remote control. Contacts are 3/16″ fine silver rated 4 amps. Designed with extremely short R.F. path, Ball-bearing armature pivot. All metal parts cadmium plated. RB Series are TRIPLE-X insulated for frequencies up to 15 MC. RM series are MYCALEX insulated for frequencies up to 60 MC. Size—2¼″ x 3⅛″ x 23/16″.



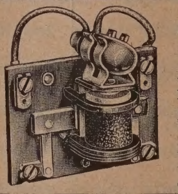
Type	Insulation	Contact Combination	Coil Voltage	Net Prices
RBA-1	TRIPLE-X	SPST (dble-break)	110 V. A.C.	$3.30
RBD-1	TRIPLE-X	SPST (dble-break)	6 V. D.C.	3.30
RMA-1	MYCALEX	SPST (dble-break)	110 V. A.C.	4.05
RMD-1	MYCALEX	SPST (dble-break)	6 V. D.C.	4.05
RBA-2	TRIPLE-X	DPST (sgle-break)	110 V. A.C.	3.45
RBD-2	TRIPLE-X	DPST (sgle-break)	6 V. D.C.	3.45
RMA-2	MYCALEX	DPST (sgle-break)	110 V. A.C.	4.65
RMD-2	MYCALEX	DPST (sgle-break)	6 V. D.C.	4.65

KEYING RELAY

Same specifications as RB Series except that the coil and return spring are faster acting. Follows a "Bug" with ease.

Type	Coil Voltage	Contacts	Net Prices
KBA	110 V. A.C.	SPST (double-break)	$3.30
KBD	6 V. D.C.	SPST (double-break)	3.30
KBA-6	6 V. A.C.	SPST (double-break)	3.30

MERCURY-SWITCH RELAY



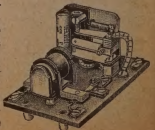
This type relay is used for controlling inductive loads and may be safely used in the presence of explosive dust, gas and vapor. This unit will safely handle a ¼ H.P. motor or its equivalent. This single pole single throw mercury relay can easily be changed from normally open to normally closed by reversing the mercury tube in the clip. In addition this relay is equipped with SPST double break 3/16″ fine silver contact sets which can be used to electricaly lock this relay, or other applications. Mounts vertically with adjusting screws. Size—3⅛″ x 2⅞″ x 3½″.

Type	Coil Voltage	Net Prices
MSA	110 V. A.C.	$4.50
MSA-6	6 V. A.C.	4.50
MSD-6	6 V. D.C.	4.50

TIME-DELAY RELAY

Low cost Thermostatic Time delay relays designed for transmitting and industrial use. Prevents damage to tube filaments due to application of plate current before filaments are thoroughly heated. TD-11 is equipped so that it automatically compensates for ambient temperature changes. Time delay can be adjusted by means of screwdriver. Stock models are 110 V. AC. Size—3⅛″ x 3⅛″ x 23/16″.

TD-11 (10-60 Sec.)—With compensator........ Net $6.00



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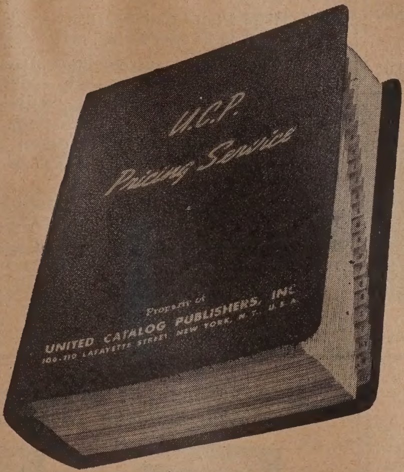
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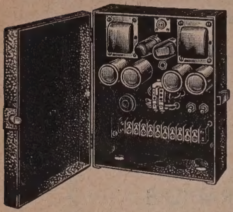
DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery **information.**

ELECTRONICALLY OPERATED RELAYS MODEL 63



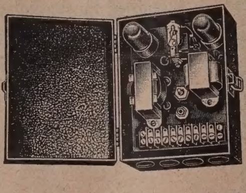
Especially designed for use with a correct combination of the standardized Worner Photo-Cell and Exciter Lamp units shown at right. However, this Electronically Operated Relay will operate also from light source units such as daylight, artificial lights, radiant energy from metallic processing, etc.

Model 63 Electronically Operated Relay is a specially engineered, highest quality unit. It enjoys wide preference as it efficiently meets exacting requirements and replaces the need of costly individually engineered equipment. Technical details on request.

ELECTRONICALLY OPERATED RELAYS

	Price, Each
Model 63, Described Above	**$100.00**
Model 63-A, combines Model 63 and Time Delay Circuit giving delay from zero to 45 seconds	**$150.00**
Model 63-B, same as Model 63 with additional amplification to operate on less active change of light	**$150.00**

ELECTRONICALLY OPERATED RELAY MODEL 64



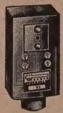
An economical unit for practically any industrial application where cost is a factor. Designed for use with a combination of standardized Worner Photo-Cell and Exciter Lamp units shown at right.

Model 64 Electronically Operated Relay......each **$67.50**

EXCITER LAMP & PHOTO-CELL RECEIVER UNITS

For Use With Models 63, 63-A, 63-B and 64 Electronically Operated Relays

Model 33



Model 23

Model 31

Model 21

The Exciter Lamp unit is designed to project the light beam and the Photo-Cell Receiver is designed to pick up the beam and convert its light into electrical energy through the Electronically Operated Relay unit.

Model 33 Exciter Lamp is "standard" for general applications and is most generally recommended. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Heavy duty, cast iron unit with ½-inch conduit fittings. Gray finish.

Model 23 Photo-Cell Receiver is engineered for use with Model 33 Exciter Lamp. Same case specifications.

For use in damp surroundings, Models 33 and 23 can be made water-proof at slight additional cost.

Model 31 Exciter Lamp is "standard" where a lighter weight case is practical. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Case is 18 gauge steel, gray wrinkle finish. Has ½-inch knockout.

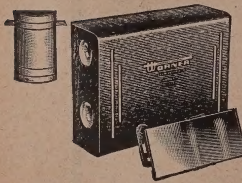
Model 21 Photo-Cell Receiver is engineered for use with Model 31 Exciter Lamp. Same case specifications.

Model No.	Description	Size, Inches	Price, Each
33	Exciter Lamp	4¼ x 2¾ x 2¾	**$13.50**
23	Photo-Cell Receiver	4¼ x 2¾ x 2¾	**19.50**
31	Exciter Lamp	6⅝ x 2 x 1¾	**11.00**
21	Photo-Cell Receiver	6⅝ x 2 x 1¾	**17.00**

FOTOLECTRIC ANNOUNCER SET

Automatically Announces the Entrance or Passing of Any Person

COMPLETE WITH MIRROR AND CHIME



The Fotolectric Announcer is a complete three-piece set. It is designed to project a beam of light across any entrance to any room or building. Breaking of this light beam by person entering activates a pleasant chime, automatically announcing the entrant. Chime can be located wherever signal is desired.

The unit has efficient grid controlled rectifier circuit which insures maximum stability. The Unit combines Exciter Lamp and sensitive Photo-Cell in metal case, size 8¼" x 6½" x 2¾", beautifully finished in gray hammerloid. Bulb has long lamp-life rating of 2000 hours. Operates on 110-120V; 50-60 cycle, A.C.

Model 61 Fotolectric Announcer, three-piece set including Unit, Mirror and Chime..........Set, each **$32.00**

MODEL 62 R & L ELECTRONICALLY OPERATED RELAY AND EXCITER LAMP SET

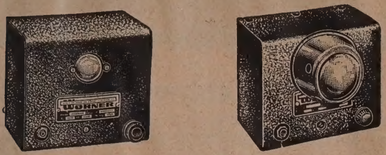
Model 62-R Electronically Operated Relay

Model 62-L Exciter Lamp

This "two-unit" set has specially designed Exciter Lamp Unit and an Electronically Operated Relay unit that includes the Photo-Cell Receiver, Relay and other electrical components. This combination has proved efficient for countless simple applications for distances from a few inches to 75 feet or where Relay is not required to operate in excess of 300 times a minute. Supervises efficiently on simple applications such as: Counting or sorting large objects; limit switches; start and stop operations; light density; fire protection; flame control; opening doors, etc.

Model 62 R & L "Two-Unit Set"	per set	**$85.00**
Model 62-R Electronically Operated Relay	each	**69.75**
Model 62-L Exciter Lamp	each	**21.75**

MODEL 9000 SERIES FOTOLECTRIC BURGLAR ALARM SYSTEM



Electronically Operated Relays

Model 9100-R Model 9150-R

This series consists of One Master Control Panel operating with one or more (up to 4) Fotolectric Exciter Lamp and Electronically Operated Relay sets. The combination may be used with traps, foil systems and other equipment as used by professional burglar alarm companies, to operate audible or visible alarms.

Any interruption of the light beam operates whatever alarms the user wishes to install. The complete alarm circuit is supervised by the Master Control Panel which is remotely located for operator's convenience.

All Model 9000 series Electronically Operated Relays contain the following: Heavy duty transformers 110-120-volt, 50 to 60 cycle, A.C. with dual secondary. Potentiometer type sensitivity control. Meter Jack to determine correct cut-off and plate current in Relay circuit. Electrolytic condensers. Double pole, double throw 5-amp. relay.

Constructed of 18-gauge steel, welded, gray wrinkle finish. Size: 7 x 6¼ x 4¼ inches. (Not weatherproof.)

Model No.	Description	Range per Set	Price, Each
9100	Master Trespass Trap	100 ft.	$84.00
9150	Master Trespass Trap	150 ft.	108.00
9250	Master Trespass Trap	250 ft.	145.00
9500	Master Trespass Trap	500 ft.	225.00

Model 9000 Control Panel. Supplied with plate relays equal to the 9000 series Electronically Operated Relays ordered. If 9000 series Electronically Operated Relays are ordered with Control Panel, plate relay is supplied with Electronically Operated Relays to be mounted in Control Panel.

each **$54.00**

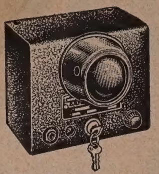
MODEL 7000 SERIES FOTOLECTRIC BURGLAR ALARM SYSTEM

The Model 7000 series operates in conjunction with professional independent burglar alarm company's central office or local equipment.

The 7000 series Electronically Operated Relays are complete with the following scientifically engineered equipment: Tubes. Lenses. Heavy duty shielded Electronically Operated Relay transformer 110-120 volt, 50-60 cycle, A.C. with dual secondary. Potentiometer sensitivity control. Meter Jack to determine correct cut-off and plate current in relay circuit. Electrolytic condensers. Single-pole, double throw relay, self-wiping contacts rated at 5 amp. non-inductive at 110-120 volts, 50 to 60 cycle.

Model No.	Description	Range per Set	Price, Each
7100	Remote Cont. Trespass Trap	100 ft.	$84.00
7150	Remote Cont. Trespass Trap	150 ft.	108.00
7250	Remote Cont. Trespass Trap	250 ft.	145.00
7500	Remote Cont. Trespass Trap	500 ft.	225.00

MODEL 5000 SERIES FOTOLECTRIC BURGLAR ALARM SYSTEM



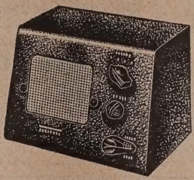
Model 5000 series consists of Exciter Lamp unit and an Electronically Operated Relay unit. This combination is designed for interior use where a single beam is considered ample protection; it is not intended for use with protective devices such as foil systems, etc. Furnished for 110 volts. Electronically Operated Relay Model 5150-R (illustrated) is equipped with a scientifically engineered "unwanted light rejector," which materially increases the day-light range of the unit and makes it equal to the night-time range if equipment is installed so that 90 per cent of the light reaching the Photo-Cell is that generated by the Exciter Lamp.

Model No.	Description	Range	Price, Each
5100	Single Beam Trespass Trap	100 ft.	$90.00
5150	Single Beam Trespass Trap	150 ft.	114.00

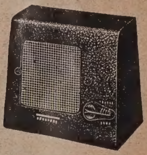
EXCITER LAMP For All Burglar Alarm Sets

with ranges of 100 feet to 150 feet are similar in appearance to Model 62-L. For ranges of 250 feet to 500 feet units are designed for out-door installations and are weather-proofed.

WORNER COMMUNICATING SYSTEMS



Models P-359, P-353



Model P-360

All WORNER units operate efficiently as far as 2000 feet apart. Persons at or near Sub-stations when called may answer without leaving their work, from as far away as 25 feet. "Silent feature" shuts out noise in vicinity at Station. 110 volt to 120 volt, A.C. or D.C. Units are shipped complete with wiring diagrams and instructions for easy installation.

Model P-359 Selective Master Station. Handles 1 to 5 Sub-stations. Has 3-tube amplifier. 1 watt output. Contains 5-inch speaker for maximum input without talking directly into unit. In substantial all-metal cabinet; size: 9 x 6¼ x 6 inches. Finished in hammered walnut lacquer finish. Complete with tubes and instructions ....each **$34.75**

Model P-353 Combination Master Station. 2 to 5 units may be used, in any combination of Masters to Masters, or Masters to Sub-stations. Contains 3-tube amplifier. Complete with tubes and instructions.

each **$47.50**

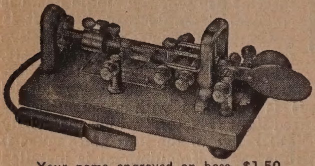
Model P-360 Sub-station. Has 5-inch speaker. Talk-listen switch used by Sub to originate call; not used after Master answers. In substantial all-metal cabinet as illustrated; size: 7¼ x 4 x 6 inches; finished in attractive hammered walnut lacquer finish.

each **$11.50**

The Vibroplex

THE VIBROPLEX COMPANY INC — TRADE MARK

Telegraph & Wireless Transmitting Machines



Your name engraved on base, $1.50
Additional engraving, 15c per letter

New SUPER DE LUXE "PRESENTATION" VIBROPLEX

The Finest Bug Ever Built! 24K Gold-Plated Base Top, Patented Jewel Movement and Super-Speed Control!

New patented adjustable main spring affords wider range of speed than ever obtained before in semi-automatic transmitting key. Beautifully-designed with polished chromium precisioned machined parts mounted on a 24K gold-plated base top with colorful red switch knob, finger and thumb piece. This new Super-DeLuxe "Presentation" Vibroplex key at $29.95 affords a life-time of sending enjoyment. Harder than metal, the jewels in this key reduce friction, maintain smoother, easier operation and prolong life.

Amateur Net Price........ **$29.95**

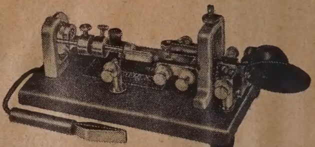
THE *Improved "ORIGINAL"* VIBROPLEX

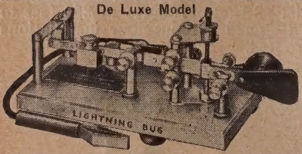
Suitable for All Classes of Transmitting work Where Speed and Perfect Morse Are Prime Essentials

This great new Vibroplex is a smooth and easy working BUG. It has won fame on land and sea for its clarity, precision and ease of manipulation. Can be slowed down to 10 words per minute or less or geared to as high rate of speed as desired. Maintains the same high quality signal at whatever speed, insuring easy reception under all conditions.
Weight, 3 lbs. 8 oz. Complete with cord and wedge.

Standard—Chromium top parts, black base. Amateur Net Price........ **$17.95**

DeLuxe—Chromium base and top parts, with jeweled movement. Amateur Net Price **22.50**





THE "LIGHTNING BUG" VIBROPLEX

High Quality Signals at All Speeds

Flat pendulum model. Complete with cord and wedge. Weight 3 lbs. 8 oz.

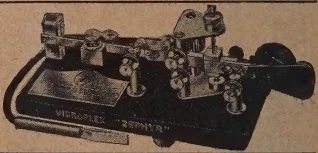
Standard—Polished Chromium top parts, black base.
Amateur Net Price........ **$15.95**

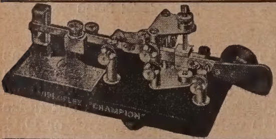
DeLuxe—Polished Chromium base and top parts, with jeweled movement.
Amateur Net Price........ **21.50**

THE "ZEPHYR" VIBROPLEX

⅛" size contact points. Slightly smaller base. Weight 3 lbs. 2 oz. Cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price........ **$13.95**





THE "CHAMPION" VIBROPLEX

Weight 3 lbs. 8 oz. Without circuit closer, cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price........ **$12.95**

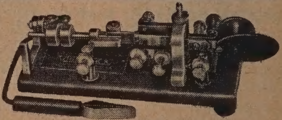
THE "BLUE RACER" VIBROPLEX

Weight, 2 lbs. 8 ozs. Complete with cord and wedge.

Standard—Finish Chromium top parts, black base . . . Amateur Net Price........ **$17.95**

DeLuxe—Polished Chromium base and top parts, with jeweled movement. Amateur Net Price........ **22.50**

NOTE: All Machines Above Available in Left Hand Models $1.00 Extra.



Small and Compact

VIBROPLEX CARRYING CASE

Keeps the Machine Free From Dust, Dirt & Moisture — Insures Safe-keeping when Not in Use.

A cloth-lined case, finished in handsome simulated black morocco. Has lock and key.

PRICE........ **$5.75**

Announcing the new edition of the

PHILLIPS CODE

SPECIAL EDITION Including:

- **Radio Code Signals**
- **International Morse**
- **American Morse**
- **Russian, Greek, Arabic, Turkish**
- **and Japanese Morse Codes**
- **World Time Chart**
- **United States Time Chart**
- **Commercial "Z" Code**
- **Aeronautical "Q" Code**

THE PHILLIPS CODE
TCR EDITION
With RADIO CODE SIGNALS and various MORSE ALPHABETS

$2.00 Post Paid

Net

RCA Radio Batteries

RCA RADIO BATTERY PRICE SCHEDULE

•RCA Type	Voltage	Interchangeable with Eveready	Interchangeable with Burgess	St. Pkg. Qty.	St. Pkg. Approx. Wt. Lbs.	Max. Overall Dimen. L.	Max. Overall Dimen. W. or Dia.	Max. Overall Dimen. Hgt.	Sug. List Price Each	Sug. Dealer Price
PORTABLE "AB" BATTERY PACKS										
VS018	7½-9-90	754	G6M60	6	42	10⅝	3 7/16	4⅛	Use Replacement Type VS019	
VS019	7½-9-90	753	F6A60	6	34	9½	2 23/32	4⅜	$ 5.65	$ 3.96
†VS020	6-7½-67½	—	F5M45	6	32	9 7/16	2⅝	4⅜	4.95	3.45
†VS037	1½-90	—	6FA60	5	26	11⅞	1½	6 7/16	5.95	4.17
†VS038	7½-63	—	G5A42	5	22	8⅝	2¾	4 1/16	4.50	3.15
†VS041	1½-7½-67½	—	—	5	21	4 5/16	3¾	6⅜	5.50	3.85
VS043	1½-90	—	5DA60	5	25	5½	2 11/16	7⅛	5.50	3.85
VS046	6-75	Zenith Z675	G4B50	6	39	12⅝	2¾	4⅛	5.65	3.94
VS047	9-90	Zenith Z985	G6B60	6	47	13⅝	2¾	4 9/16	6.25	4.38
†VS048	6-90	Zenith Z659	F4B60	5	34	10¾	2¾	5	5.95	4.17
VS050	6-7½-75	755	T5Z50	6	21	8 9/16	2 7/16	3 11/16	5.25	3.68
VS052	1½-61½	Philco P41A4G	4GA41	10	40	9⅜	2 11/16	3 7/16	4.50	3.15
VS053	1½-63	Philco P41A4FL	4GA42	5	21	9⅛	2	4¾	4.50	3.15
VS054	1½-90	—	6TA60	5	27	10	2 3/16	4⅞	5.75	4.02
VS057	7½-9-90	Philco P361, P363	T6Z60	6	25	9⅜	2 3/16	3¾	5.75	4.03
VS058	9-90	Zenith Z909	F6A60P	6	33	9½	2 23/32	4⅜	5.95	4.17
PORTABLE "A" BATTERIES										
VS002	4½	746	G3	6	7	4	1⅜	4 11/16	Use Replacement Type VS067	
VS003	7½	687	G5	5	11	3⅞	2⅝	4 9/16	1.25	.88
VS004	1½	742	4F	6	8	2⅝	2⅝	4 1/16	1.10	.77
VS005	1½	—	4FL	5	7	3 13/16	1⅜	5⅝	1.00	.70
VS007	1½	743	6F	4	8	3 15/16	2⅝	4 1/16	Use Replacement Type VS004	
VS008	1½	745	8FL	6	17	3⅞	1 7/16	10¾	2.00	1.40
VS009	6	744	F4PI	6	8	2⅝	2⅝	4¼	1.10	.77
VS010	6	718	2F4	10	29	3⅞	2 13/16	5½	2.00	1.40
VS011	6	747	2FL4L	6	17	3⅞	1 7/16	10¾	2.00	1.40
△VS035	1½	935	1	100	12	—	1 1/32	1 15/16	.125	.08125
△VS036	1½	950	2R	192	43	—	1 5/16	2⅜	.125	.08125
VS065	7½	717	C5	12	7	2 5/16	2	3 1/16	1.00	.70
VS067	4½	736	F3	6	6	4	1⅜	4⅛	.85	.60
VS068	6	724	Z4	24	8	1 5/32	1 5/32	2 11/32	.60	.42
VS069	1½	720	2D	12	6	2 9/16	1 5/16	2 27/32	.55	.39
VS072	4½	726	D3	12	8	3 15/16	1 5/16	2 15/16	.70	.49
VS129	7½	—	B5	12	6	4 1/16	15/16	3	1.10	.77
PORTABLE "B" BATTERIES										
VS012	45	762	B30	6	17	4⅛	2⅝	5 5/16	Use Replacement Type VS013	
VS013	45	482	M30	12	22	3 9/16	1 13/16	5½	2.25	1.58
VS014	45	—	A30	6	10	3 7/16	2¼	4 9/16	2.25	1.58
VS015	45	738	Z30	10	13	3	2¼	4	2.85	2.00
VS016	67½	467	XX45	24	21	2 23/32	1 11/32	3¾	2.50	1.75
VS016C	67½	467	XX45	12	10	2 13/16	1	3¾	3.25	2.28
VS055	45	455	XX30	12	7	2 21/32	31/32	3 11/16	1.95	1.32
VS090	90	490	N60	12	13	3 11/16	1⅜	3¾	3.25	2.28
FARM "AB" BATTERY PACKS										
VS022	1½-90	759	17GD60	1	19½	15¾	4¼	6 13/16	6.95	5.21
VS045	1½-90	Zenith Z28	18GD60	1	20½	12 9/16	5⅜	6 13/16	6.95	5.21
FARM "B" BATTERIES										
VS026	22½-45	485	2308PI	6	50	8 1/16	3 3/16	7 3/16	3.15	2.21
VS027	22½-45	386	10308PI	4	46	8 1/16	4 5/16	7 3/16	Use Replacement Type VS026	
RADIO-HEARING AID "A" BATTERIES										
**VS070	1½	Zenith Z1-S	TE	20	8	—	1 5/16	4 1/16	.30	.20
FLASHLIGHT BATTERIES										
VS034	1½ (Penlite)	915	Z	120	4½	—	37/64	2	.10	.065
△VS035	1½ (Baby)	935	1	100	12	—	1 1/32	1 15/16	.125	.08125
△VS036	1½	950	2R	192	43	—	1 5/16	2⅜	.125	.08125
BATTERIES FOR INDUSTRIAL AND ELECTRONIC APPLICATIONS										
†VS006C (Clip)	1½	6 IGN	—	25	55	—	2⅝	6⅝	.80	.53
VS006S (Screw)	1½ (Ignition)	6	—	12	26	—	2⅝	6 9/16	.80	.53
VS028	4½	781	5360	10	3	2⅜	13/16	2⅞	.55	.39
VS029	1½-3-4½-6-7½	773	5540	10	6	3 15/16	⅞	3⅛	1.05	.74
†VS030	3-4½	X771	2370PI	15	12	4 1/16	1 7/16	3 1/16	.90	.62
†VS031	3-4½-16½-22½	768	5156PI	5	9	4	2½	3	2.05	1.43
VS039	6 (Hotshot)	1461-2	4F4H	4	42	10⅜	2⅞	7⅜	3.50	2.35
VS040C (Spring)	6 (Lantern)	409	F4H	10	16	2 11/16	2 11/16	4 5/16	.80	.54
†VS040S (Screw)	6 (Lantern)	—	F4BP	10	16	2 11/16	2 11/16	4 3/16	.80	.54
†VS093	300	493	U200	4	5	2 9/16	2 3/16	3 9/32	11.00	7.70
VS100	3	—	F2BP	10	9	2⅝	1⅜	4 11/16	.80	.56
†VS101	1½	—	2FBP	10	10	2⅝	1⅜	4 9/16	.80	.56
VS102	22½	763	4156	10	10	3⅜	2⅛	2¾	1.95	1.36
VS106	1½	—	4FH	10	13	2 11/16	2 11/16	4 9/16	.75	.52
VS112	22½-45	762S	5308	5	17	4⅛	2⅝	5 7/16	2.58	1.80
VS114	22½-45	—	Z30NX	10	17	2 31/32	1 27/32	4 15/16	2.80	1.95
†VS126	22½-45	—	2308SC	5	43	8⅛	3¼	7 9/16	3.35	2.30
§VS127W	22½-45	—	10308SC	5	55	8	4	7⅜	4.25	3.10
VS130	1½-3-4½	761T	2370ST	10	10	3 15/16	1⅜	3	.95	.63
VS131	3-4½-6-9-10½-16½-22½	778	5156SC	5	9	4⅛	2½	3 5/16	2.05	1.45
†VS132	9	—	D6BP	5	8	4 1/16	2 13/16	2⅞	1.90	1.33
†VS133	4½	703	532	10	3	2⅜	13/16	3 1/16	.45	.31
†VS136	3	—	2F2H	10	15	2 11/16	2 11/16	4 3/16	1.00	.67
†VS137	18-22½	766	2156	5	26	6½	4	3⅞	2.65	2.35
†VS138	3	—	4F2H	10	28	3⅞	2 11/16	5⅞	1.45	1.00
†VS139	7½	—	4F5H	5	40	7 13/16	4	6 5/16	4.10	2.90
†VS140	9	1662	4F6H	5	50	8½	4 1/16	6 7/16	4.85	3.40
†VS157	22½-45	794	21308SC	4	54	8⅛	4⅝	7 11/16	4.50	3.35

△Sealed-in-Steel. †Non-Warehouse Types—Shipping Time, 2-4 Weeks. **Exact Equivalent of Zenith Z1-S and Ray-O-Vac PFI; Slightly larger than Burgess TE and Eveready 1052P. §Wax Coated.

Forward all orders to your nearest RCA Battery Warehouse. Terms and Conditions of Sale and general information are set forth in our current applicable booklet covering sale of these products.

SERVICING 99% OF PORTABLE & FARM HOME RADIO REQUIREMENTS

RCA
EXTRA LISTENING HOURS
RADIO AB BATTERY
NO. VS019 - 9 VOLTS A - 90 VOLTS B

VS019

RCA
RADIO AB BATTERY
NO. VS047 - 9 VOLTS A - 90 VOLTS B

VS047

RCA
RADIO A BATTERY

VS002

RCA
RADIO B BATTERY

VS013

RCA's selective distribution primarily to the RADIO TRADE steers customers back to you!

RCA
EXTRA LISTENING HOURS
RADIO AB BATTERY
NO. VS022 - 1½ VOLTS A - 90 VOLTS B

VS022

RCA
EXTRA LISTENING HOURS
RADIO A BATTERY
NO. VS025 3 VOLTS

VS025

The RCA Trademark and attractive package guarantee immediate customer acceptance!

VS006S

BURGESS BATTERIES

BURGESS
4FH
LITTLE-SIX
GENERAL UTILITY
BATTERY

4FH

BURGESS
4F2H
TWIN-SIX
GENERAL UTILITY
BATTERY

4F2H

BURGESS
CHROME
PROTECTED
FRESH
POWER
GUARANTEED

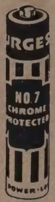
No. 2

BURGESS
CHROME
PROTECTED
FRESH
POWER
GUARANTEED

No. 1

URGE
NO. Z
CHROME
PROTECTED
POWER

Z


RGE
NO. 7
CHROME
PROTECTED
POWER

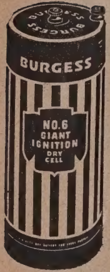
No. 7

BURGESS
4F5H

4F5H

BURGESS FLASHLIGHT BATTERIES

No. 1.	1½ volts.	Size, 1"x 1 13/16".	Standard package 36.	List price, $.125
No. 2.	1½ volts.	Size, 1 15/16"x 2 5/16".	Standard package 48	List price, .125
No. Z.	1½ volts.	Size, 9/16"x 1⅞".	Standard package 48	List price, .10
No. 7.	1½ volts.	13/32"x 1¾".	Standard package 24.	List price, .10


BURGESS
BURGESS
NO. 6
GIANT
IGNITION
DRY
CELL

6 Ign.

BURGESS
BURGESS
NO. 6
GIANT
TELEPHONE
DRY
CELL

6 Tel.

BURGESS IGNITION BATTERIES

4FH.	1½ volts.	Size, 2 9/16"x2 9/16"x3 15/16"x4¼".	Standard package 12.	List price, .80
4F2H.	3 volts.	Size, 3 29/32"x 2 11/16"x 5 13/32".	Standard package 8	List price, 1.45
4F4H.	6 volts.	Size, 8¼"x2¾"x5 13/16"x6⅜".	Standard package 6.	List price, 3.40
4F5H.	7½ volts.	Size, 7 3/16"x3 31/32"x5 13/16"x6⅜".	Standard package 4	List price, 4.15
4F6H.	9 volts.	Size, 8½"x3 31/32"x5 13/16"x6⅜".	Standard package 4.	List Price, 4.85

BURGESS NO. 6 LINE

No. 6 IGN.	1½ volts.	Size 2½" Diam. 6⅝".	Standard package 12	List price, .80
No. 6 TEL.	1½ volts.	Size 2½" Diam. 6⅝".	Standard package 12	List price, .75
S 461.	6 volts.	Size 10½"x 2¾"x7 13/32".	Standard package 6	List price, 3.50

BURGESS
RADIO
"A" BATTERY

2F2H

FOR INDUSTRIAL APPLICATIONS

BURGESS "A" BATTERIES

No. 2F2H.	3 volts.	Size, 2 9/16"x 2 9/16"x 4"x 4¾".	Standard package 5	List price, 1.00
No. 2FBP.	1½ volts.	Size, 2⅝"x 1 11/32"x 3 31/32"x 4 11/32".	Standard package 5	List price, .83
No. 4FH.	1½ volts.	Size 2 9/16"x 2 9/16"x 3 15/16"x 4¼"	Standard package 12	List price, .80
No. F2BP.	3 volts.	Size, 2⅝"x 1 11/32"x 4"x 4 7/16".	Standard package 5.	List price, .83
No. F4BP.	6 volts.	Size, 2 9/16"x 2 9/16"x 3 15/16"x 4 3/16".	Standard package 5	List price, .80

BURGESS
IGNITION
BATTERY

F2BP

BURGESS "B" BATTERIES

No. W30.	45 volts.	Size, 2 31/32"x1 7/32"x3¾"x4 3/16".	Standard package 6	List price, 3.00
W30PBX.	45 volts.	Size, 2 15/16"x1 7/32"x3 19/32"x4⅛".	Standard package 6	List price, 2.73
No. Z30NX.	45 volts.	Size, 2 21/32"x 1 13/16"x 4 17/32"x 5".	Standard package 5	List price, 2.90

BURGESS "C" BATTERIES

No. A8BP.	12 volts.	Size, 2¾"x 1 23/64"x 2 7/16"x 2¾"	Standard package 3	List price, 2.25
No. B2BP.	3 volts.	Size, 1 19/32"x 25/32"x2 21/32"x2 29/32".	Standard package 6.	List price, .95
No. W5BP.	7½ volts.	Size, 23/32"x 2 21/32"x 1⅜"x 1 1/16".	Standard package 6.	List price, 1.37

A QUALITY DRY BATTERY FOR EVERY PURPOSE

(Subject to Trade Discount)

BURGESS BATTERIES

5308

5540

2370

10308

2308

BURGESS RADIO "B" BATTERIES

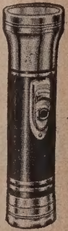
No. 10308.	45 volts.	Size, 8 1/32"x 4 1/32"x 7 1/16".	Standard package 6	List price, $4.23
No. 21308.	45 volts.	Size, 8⅛"x 4 15/32"x 7 11/32".	Standard package 6	List price, 4.39
No. 2308.	45 volts.	Size, 8 1/32"x 2 29/32"x 7 1/16".	Standard package 6	List price, 3.10
No. 5156.	22½ volts.	Size, 4 1/32"x2 7/16"x2 23/32"x3¼".	Standard package 10	List price, 2.06
No. 5308.	45 volts.	Size, 4"x 2 17/32"x 5 1/16"x 5 9/16".	Standard package 5	List price, 2.57

346

150

BURGESS RADIO "B" & "C" BATTERIES

No. 2156.	22½ volts.	Size, 6 21/32"x 4 1/16"x 2 21/32"x 3 17/32".	Standard package 6	List price, 2.62
No. 2370.	4½ volts.	Size, 4 1/32"x 1 13/32"x 2 15/16"x 3 5/16".	Standard package 5	List price, .88
No. 4156.	22½ volts.	Size, 3 15/32"x 2 1/16"x 2 19/32"x 2⅞".	Standard package 5	List price, 1.97
No. 5360.	4½ volts.	Size, 2⅜"x 27/32"x 2⅝"x 2 15/16".	Standard package 5	List price, .57
No. 5540.	7½ volts.	Size, 3⅞"x 27/32"x 2 11/16"x 3 1/32".	Standard package 5	List price, .99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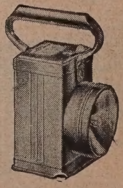
BURGESS FARM RADIO "A" BATTERIES

No. 20F.	1½ volts.	Size, 7⅝"x 2 19/32"x 6 15/16".	Standard package 3	List price, 4.25
No. 20F2.	3 volts.	Size, 11⅜"x 3 15/16"x 6⅛".	Standard package 1	List price, 6.07

FLASHLIGHT CASES AND LANTERNS

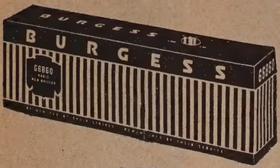
146.	2 cell prefocused Maroon & Chrome.	Standard package 6	List price, $1.65
346.	2 cell Baby Prefocused Maroon & Chrome	Standard package 6	List price, $1.50
446.	3 cell Prefocused Maroon & Chrome.	Standard package 6	List Price, $2.10
248.	5 cell Prefocused Chrome.	Standard package 1	List price, $3.95
250.	Rangefinder 2 cell focusing Chrome.	Standard package 4.	List price, $2.25
150.	Penlight new small. Chrome.	Standard package 12	List price, .80
TW2.	Focusing Lantern.	Standard package 4	List price, $3.10


TW2

A QUALITY DRY BATTERY FOR EVERY PURPOSE

(Subject to Trade Discount)

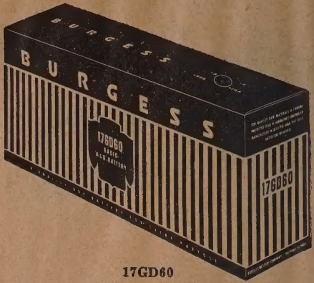
BURGESS BATTERIES


BURGESS
G6B60
RADIO
A & B BATTERY
G6B60

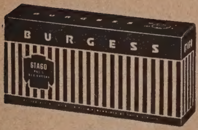
G6B60

BURGESS
4GA42
RADIO
A & B BATTERY
4GA42

4GA42


BURGESS
17GD60
RADIO
A & B BATTERY
17GD60

17GD60


BURGESS
6TA60

6TA60

BURGESS
5DA60
RADIO
A & B BATTERY

5DA60

BURGESS
F6A60
RADIO
A & B BATTERY
F6A60

F6A60

BURGESS
F4B60
RADIO
A & B BATTERY
F4B60

F4B60

BURGESS FARM "A & B" BATTERIES

No. 17GD60. 1½ volt "A", 90 volt "B". Size, 15⅝″x 4 5/16″x 7″. Standard package 1. List price, $6.95

No. 4SD60. 1½ volt "A", 90 volt "B". Size 10 11/16″x 4 5/16″x 6 13/16″. Standard package 1. List price, $6.95

No. S6D60. 7½ volt "A", 90 volt "B". Size 9⅞″x 4⅛″x 7 3/16″. Standard package 1. List price, $8.29

BURGESS PORTABLE "A" & "B" BATTERIES

No.	Voltage	Size	List Price
2TXX40.	1½ A, 60B	2⅜″x 1 5/16″x 7⅛″	3.30
4GA41.	1½ A, 61½ B	9 3/16″x 2 11/16″x 3 5/16″	4.35
4GA42.	1½ A, 63B	9″x 2 1/16″x 4 11/16″	4.50
4TA60.	1½ A, 90B	8⅛″x 2 11/32″x 4 25/32″	6.00
5DA60.	1½ A, 90B	5 9/16″x 2 9/16″x 6 15/16″	5.59
6TA60.	1½ A, 90B	9 15/16″x 2 7/32″x 4 13/32″	5.79
F4A50.	6A, 75B	9 1/16″x 2 11/16″x 3⅝″	5.53
F4B60.	6A, 90B	10¾″x 2 11/16″x 4 31/32″	6.00
F6A60.	9A, 90B	9¼″x 2¾″x 4 7/16″	5.65
F4B60.	6A, 90B	10¾″x 2 25/32″x 5″	6.00
G5A42.	7½ A, 63B	9 1/16″x 2¾″x 4 9/32″	4.48
T5Z50.	7½ A, 75B	8½″x 3 11/32″x 2⅜″	5.25
T5Z60.	7½ A, 90B	9½″x 2⅛″x 3¾″	6.00
G6B60.	9A, 90B	13⅞″x 2 25/32″x 4⅝″	6.25
G6M60.	9A, 90B	10 3/16″x 3⅛″x 4 1/32″	5.95
T6Z60.	7½, 9A, 90B	2 3/16″x 9 9/16″x 3 13/16″	5.75

A QUALITY DRY BATTERY FOR EVERY PURPOSE

BURGESS BATTERIES

4F

2R

G3

F4PI

T5

F4L

BURGESS PORTABLE "A" BATTERIES

No. 2F. 1½ volts. Size, 2 17/32"x 1 5/16"x 4 3/16". Standard package 1............List price, $ .75
No. 2F4. 6 volts. Size, 3 15/16"x 2¾"x 5⅜". Standard package 1............List price, 2.00
No. 2F4L. 6 volts. Size, 3 29/32"x 1 7/16"x 10 11/16". Standard package 2.........List price, 2.00
No. 2R. 1½ volts. Size, 2 5/16"x 1 5/16" diameter. Standard package 48....List price, .125
No. 4F. 1½ volts. Size, 2 9/16"x 2 9/16"x 4 1/32". Standard package 6...........List price, 1.05
No. 4FL. 1½ volts. Size, 3 27/32"x 1 5/16"x 5 17/32". Standard package 1...........List price, 1.02
No. 6F. 1½ volts. Size, 4 1/32"x 2 11/16"x 4". Standard package 3.................List price, 1.50
No. 8F. 1½ volts. Size, 3 27/32"x 2 21/32"x 5 7/16". Standard package 1...........List price, 1.95
No. 8FL. 1½ volts. Size, 3 29/32"x 1 13/32x 10 11/16".Standard package 3.............List price, 1.95
No. F4PI. 6 volts. Size, 2 19/32"x 2 19/32"x 4 1/16". Standard package 6...........List price, 1.03
No. G3. 4½ volts. Size, 4"x 1⅜"x 4⅝". Standard package 6.................List price, .90
No. T5. 7½ volts. Size, 2½"x 2 9/16"x 3⅞". Standard package 3...........List Price, 1.38
No. D3 4½ volts. Size, 3⅞"x 1 5/16"x 2 15/16". Standard package 6...........List price, .70
No. 2D 1½ volts. Size, 2 9/16"x 1 9/32"x 2 31/32". Standard package 12.........List price, .55
No. Z4 6 volts. Size, 1 3/16"x1 3/16"x 2 7/32". Standard package 12..........List price, .60
No. B5 7½ volts. Size, 3 29/32"x⅞"x2 27/32".Standard package 6.................List price, 1.00
No. C5 7½ volts. Size, 2 7/32"x 1 15/16"x 3 1/32". Standard package 6...........List price, 1.00
No. F3 4½ volts. Size, 4"x 1 7/16"x 4⅛". Standard package 6..............List price, .83

A30

B30

M30

BURGESS PORTABLE "B" BATTERIES

No. A30. 45 volts. Size, 3½"x 2 3/16"x 4 9/16". Standard package 2..............List price, 2.45
No. B30. 45 volts. Size, 4 1/16"x 2 17/32"x 5 5/16". Standard package 2..............List price, 2.45
No. M30. 45 volts. Size, 3½"x 1 11/16"x 5 7/16". Standard package 6..............List price, 2.25
No. XX30. 45 volts. Size, 2 19/32"x 15/16"x 3 21/32". Standard package 6...............List price, 1.95
No. XX45. 67½ volts. Size, 2 23/32"x 1 5/16"x 3 43/64".Standard package 6...........List price, 2.50
No. Z30. 45 volts. Size, 2 15/16"x 2¼"x 4 1/32". Standard package 2..............List price, 2.85
No. U200. 300 volts. Size, 2¾"x 2 9/32"x 3⅞". Standard package 1...........List price, 11.40

XX45

XX30

A QUALITY DRY BATTERY FOR EVERY PURPOSE

(Subject to Trade Discount)

THE COMPLETE LINE OF EVEREADY FLASHLIGHTS

No. 2231 TWO-CELL "EVEREADY" AUTOMATIC SPOTLIGHT—Seamless brass tube. Chromium finish with rolled-on black decoration. Uses 2 "Eveready" No. 935 batteries and "Eveready" Lamp No. PR4. Unit package quantity 1. **List Price Each (Without Batteries)** **$1.60**

No. 2250 TWO-CELL "EVEREADY" FLOODLIGHT—Seamless brass chromium finish with rolled-on black decoration. Uses two "Eveready" No. 950 batteries and "Eveready" Lamp No. 14. Unit package quantity 1. **List Price Each (Without Batteries)** **$1.60**

No. 2351 THREE-CELL "EVEREADY" AUTOMATIC SPOTLIGHT—Seamless brass tube. Chromium finish with rolled-on black decoration. Uses 3 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR3. Unit package quantity 1. **List Price Each (Without Batteries)** **$1.95**

No. 2552 FIVE-CELL "EVEREADY" FOCUSING SEARCHLIGHT—Chromium fittings, seamless brass tube with durable black, baked-on finish equipped with ring hanger. Uses 5 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR-12. Unit package quantity 1. **List Price Each (Without Batteries)** **$3.95**

EVEREADY
AUTOMATIC SPOTLIGHT
$1.85

DISPLAY PACKAGE No. 25

Contains 6 No. 2251 two-cell "Eveready" Automatic Spotlights, displays 6. Seamless brass tube, chromium finish with rolled-on black decoration. Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR2.

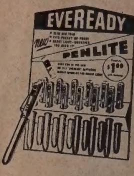
List Price Each (Complete With Batteries) ... **$1.85**

EVEREADY
SQUARE
FLASHLIGHTS
$1.95

DISPLAY PACKAGE No. 72

Contains 6 No. 7251 "Eveready" Square Masterlites. Constructed of seamless brass with rolled-on black decoration trimmed in chromium. Uses 2 "Eveready" No. 950 batteries and "Eveready" lamp No. PR-2.

List Price Each (Complete With Batteries) ... **$1.95**



DISPLAY PACKAGE No. 21

Contains 12 No. 212 Penlights . . . assorted in all chrome and black and chrome styles. Uses 2 No. 912 batteries and "Eveready" lamp No. 224.

List Price Each (Complete With Batteries) ... **$1.00**

No. 1351

Three-Cell Prefocused Industrial Flashlight —General purpose type. Uses 3 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR7. Unit Package quantity 1.

List Price Each (Without Batteries)

$3.15

No. 1251

Two-Cell Prefocused Industrial Flashlight —General purpose type. Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR6. Unit package quantity 1.

List Price Each (Without Batteries)

$2.95

No. 1259

Two-Cell Prefocused Permissible Safety Flashlight — Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR6. Extra lamp in bottom cap included. Unit package quantity 1.

List Price Each (Without Batteries)

$5.00

No. 1359

Three-Cell Prefocused Permissible Safety Flashlight — Uses 3 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR7. Extra lamp in bottom cap included. Unit package quantity 1.

List Price Each (Without Batteries)

$5.20

No. 912

1½ volts.
Height 1¾"
Diameter 0.4"
Weight 0.3 oz.

No. 915

1½ volts.
Length $1\frac{31}{32}$"
Diameter $\frac{35}{64}$"
Weight ½ oz.

EVEREADY
NINE LIVES

No. 935

1½ volts.
Length 2"
Diameter $1\frac{1}{32}$"
Weight 1⅓ oz.

EVEREADY
NINE LIVES
BOUNCES BACK FOR EXTRA LIFE

No. 950

1½ volts.
Length $2\frac{27}{64}$"
Diameter $1\frac{21}{64}$"
Weight 3⅓ oz.

EVEREADY
NINE LIVES
LANTERN BATTERY

No. 509

Lantern Battery.
6 volts.
2⅝" x 2⅝" x $3\frac{27}{32}$".
Weight 1 lb., 7 oz.

SCHEDULE OF PRICES

Cat. No.	No. of Cells	Cell Size	List Price Each	Unit Pkg. Qty.	Weight of Unit Packages Lbs.	Weight of Unit Packages Ozs.
912	1	—	$ .10	12	—	4
915	1	AA	.10	12	—	7½
935	1	C	.125	12	1	4
950	1	D	.125	48	9	4
Lantern Battery						
509	4	F	.80	12	16	8

"Eveready" Miniature Lamps for Radio Panel Service

"Eveready" No.	Bulb	Volts	Amp.	List Price
40	T-3¼	6-8	0.15	$.11
41	T-3¼	2.5	0.50	.11
44	T-3¼	6-8	0.25	.11
46	T-3¼	6-8	0.25	.11
47	T-3¼	6-8	0.15	.11
48	T-3¼	2	0.06	.16
49	T-3¼	2	0.06	.16
50	G-3½	6-8	C.P. 1	.11
1490	T-3¼	3.2	0.16	.11

FLASHLIGHT LENS ASSORTMENT

Cat. No.	Type	Unit Package Quantity
102	40 No. 53419 Spotlight Lenses for Nos. 2251, 2671, 2351, 7251 Spotlights .... 2 No. 53123 Spotlight Lenses for No. 2231 Baby Spotlight .... 2 No. 53390 Searchlight Lenses for No. 2552 Searchlight	1 Assortment

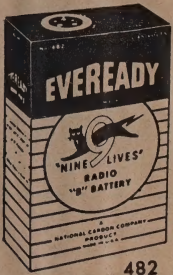
"EVEREADY" LAMPS *TWO CELL*

"Eveready" No.	Bead Color	Bulb	Volts	Amp.	List Price	Use with Following "Eveready Batteries"
14	Blue	G-3½	2.5	0.30	$.11	2 Nos. 935 or 950
PR-2	Blue	B-3½	2.4	0.50	.15	2 No. 950
PR-4	Lt. Gr.	B-3½	2.3	0.27	.15	2 No. 935
PR-6	Brown	B-3½	2.5	0.30	.15	2 Nos. 935 or 950
222	White	TL-3	2.2	0.25	.11	2 No. 915
224	—	TL-2¾	2.15	0.22	.12	2 No. 912
THREE CELL						
13	Green	G-3½	3.8	0.30	$.11	3 No. 950
PR-3	Green	B-3½	3.6	0.50	.15	3 No. 950
PR-7	Pink	B-3½	3.8	0.30	.15	3 No. 950
FIVE CELL						
605	Brown	G-4½	6.0	0.50	$.13	5 No. 950
PR-12	—	B-3½	6.0	0.50	.15	5 No. 950

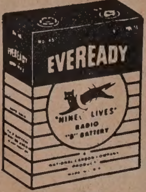
EVEREADY
TRADE-MARK
Radio Batteries

Sell the one brand your customers will always buy—"Eveready" Radio Batteries—for fast turnover, repeat sales! Famous for fine craftsmanship and quick profits, "Eveready" Radio Batteries—portable and farm packs—equip virtually every battery-type radio in use today!

Complete data describing these best-selling batteries are given on page M-8.


EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY
A NATIONAL CARBON COMPANY PRODUCT

482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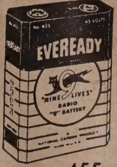
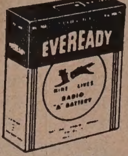
"NINE LIVES"
RADIO
"B" BATTERY

467


EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

455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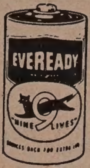
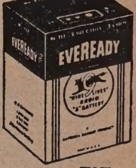
NINE LIVES
RADIO
"A" BATTERY

746


EVEREADY
NINE LIVES

950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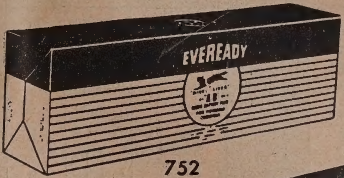
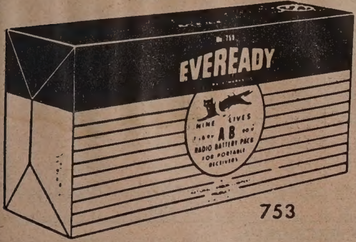
"NINE LIVES"
RADIO
"A" BATTERY

717


EVEREADY
"NINE LIVES"
AB

752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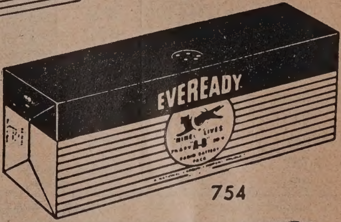
NINE LIVES
AB
RADIO BATTERY PACK
FOR PORTABLE RECEIVERS

753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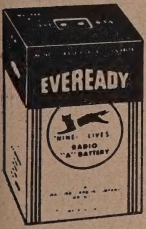
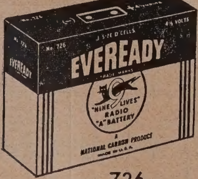
AB
RADIO BATTERY PACK

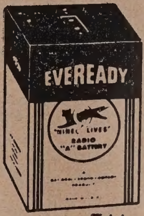
754


EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

742


No. 726
EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY
A NATIONAL CARBON PRODUCT

726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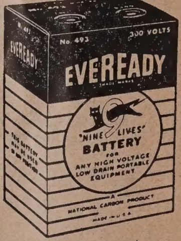
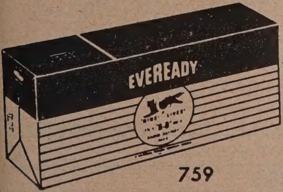
"NINE LIVES"
RADIO
"A" BATTERY

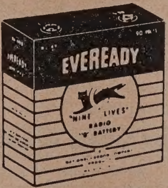
744


No. 493
300 VOLTS
EVEREADY
"NINE LIVES"
BATTERY
FOR ANY HIGH VOLTAGE LOW DRAIN PORTABLE EQUIPMENT
A NATIONAL CARBON PRODUCT

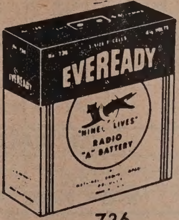
493


EVEREADY
"NINE LIVES"

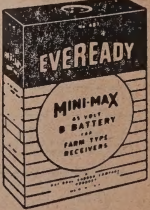
759


EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

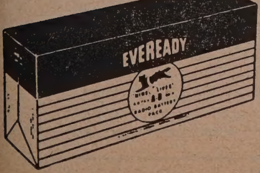
490


EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

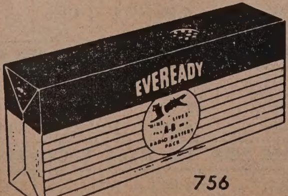
736


EVEREADY
MINI-MAX
45 VOLT
B BATTERY
FOR FARM TYPE RECEIVERS

487


EVEREADY
"NINE LIVES"
RADIO BATTERY PACK

755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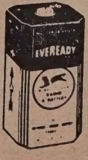
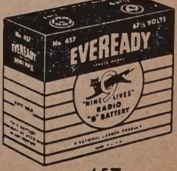
"NINE LIVES"
A-B
RADIO BATTERY PACK

756



724


No. 457
67½ VOLTS
EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

457

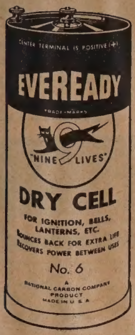
"EVEREADY" BATTERY SPECIFICATIONS

alog ..ber	VOLTAGE	Overall Dimensions Length	Overall Dimensions Width	Overall Dimensions Height	List Price Each	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals
"B" BATTERIES FOR PORTABLE RECEIVERS									
455	45	2 21/32″	1″	3 11/16″	$1.95	6	3¼	7⅘ oz.	Snap Type —, +45
457	67½	2 13/16″	1⅜″	2½″	2.50	6	3	7⅖ oz.	Snap Type —, +67½
467	67½	2 13/16″	1⅜″	3 45/64″	2.50	6	4¾	12 oz.	Snap Type —, +67½
482	45	3 19/32″	1 27/32″	5½″	2.25	6	11½	1 lb. 15 oz.	Socket —, +45
490	90	3 23/32″	1⅜″	3 45/64″	3.25	6	6½	15 oz.	Snap Type —, +90
493	300	2 11/16″	2 7/32″	3 29/32″	11.00	1	1	14½ oz.	Pin Jacks —, +300
738	45	3″	2 5/16″	4⅛″	2.85	2	2½	1 lb. 3⅖ oz.	Socket —, +22½, +45
"A" BATTERIES FOR PORTABLE RECEIVERS									
717	7½	2 7/32″	1 15/16″	3 1/32″	$1.00	6	3	8 oz.	Socket —, +7½
718	6	3 29/32″	2¾″	5 7/16″	2.00	1	2¾	2 lb. 4 oz.	Socket —, +6
720	1½	2 19/32″	1⅜″	3 1/32″	0.55	6	2⅝	6½ oz.	Socket —, +7½
724	6	1 7/32″	1 7/32″	2 11/32″	0.60	12	2	2½ oz.	Flashlight
726	4½	3 15/16″	1 5/16″	2 15/16″	0.70	6	4	10½ oz.	Socket —, +4½
736	4½	3 15/16″	1 5/16″	4 3/32″	0.85	6	6¼	1 lb.	Socket —, +4½
741	1½	3⅞″	2 11/16″	5⅜″	1.95	1	2¾	2 lb. 10 oz.	Socket —, +1.5
742	1½	2 9/16″	2 9/16″	3 31/32″	1.05	6	8	1 lb. 5 oz.	Socket —, +1.5
743	1½	3 13/16″	2 21/32″	4 1/32″	1.50	3	6	1 lb. 15¼ oz.	Socket —, +1.5
744	6	2 21/32″	2 21/32″	3 31/32″	1.05	6	8¼	1 lb. 5 oz.	Socket —, +6
745	1½	3⅞″	1 7/16″	10 25/32″	2.00	2	5½	2 lb. 10½ oz.	Socket —, +1.5
746	4½	3 15/16″	1 5/16″	4 21/32″	0.90	6	7¼	1 lb. 3⅖ oz.	Socket —, +4.5
747	6	3⅞″	1 7/16″	10 25/32″	2.00	2	5½	2 lb. 11 oz.	Socket —, +6
950	1½	1 21/64″ Diam.		2 27/64″	0.125	48	9¼	3 oz.	Flashlight
"A-B" PACK FOR 1.4 VOLT PORTABLE RECEIVERS									
752	9 "A" 90 "B"	14 1/16″	2 11/16″	4 1/16″	$6.25	1	6¼	6 lb. 5 oz.	Recessed Plug — "A", +9"A",—"B",+90"B"
752-W	10½ "A" 90 "B"	14 1/16″	2 11/16″	4 1/16″	6.50	1	7¼	6 lb. 8 oz.	Recessed Plug — "A", +10½ "A" —"B", +90"B"
753	7½ & 9 "A" 90 "B"	9 7/32″	2 23/32″	4 5/16″	5.65	1	5	4 lb. 12 oz.	Socket —"A" +7½ "A", +9 "A" —"B", +90 "B"
754	7½ & 9 "A" 90 "B"	10 15/32	3¼″	4″	5.95	1	6¼	6 lb. 1 oz.	Socket —"A", +7½ "A", +9 "A", — "B", +90 "B"
755	6 & 7½ "A" 75 "B"	8 9/16″	2 7/16″	3¾″	5.25	1	3¾	3 lb. 9 oz.	Socket—"A",+6"A", +7½"A"—"B",+75 "B"
756	7½ & 9 "A" 90 "B"	8⅞″	2⅛″	3 25/32″	5.75	1	3	2 lb. 14 oz.	Socket—"A", +7½ "A",+9 "A" —"B", +90"B"
"B" BATTERY FOR HOME RECEIVERS									
487	45 Volt...	5⅛″	2 1/16″	7¼″	$3.15	10	44	4 lb. 2 oz.	Socket —, +22½, +45
"A-B" PACK FOR 1.4 VOLT HOME RECEIVERS									
758	1½ "A"... 90 "B"...	10 11/16″	4⅛″	6 13/16″	$6.95	1	14¾	14 lbs. 4 oz.	Socket —, +1.5 Socket —, +90
759	1½ "A"... 90 "B"...	15 11/16″	4 5/32″	6 15/16″	6.95	1	18½	17 lb. 9 oz.	Socket —, +1.5 Socket —, +90
"AIR CELL" "A" BATTERIES FOR 2 VOLT RECEIVERS									
A-2600	2½	9 29/32″	6 19/32″	11 3/16″	$10.95	1	24	20 lb. 9 oz.	Screw —, +2.5
SA-2600	2½	9 29/32″	6 19/32″	11 3/16″	12.10	1	24	20 lb. 9 oz.	Screw —, +2.5
A-2300	2½	8¼″	5 5/16″	8⅝″	8.50	1	12½	10 lb. 14 oz.	Screw —, +2.5
"A" BATTERIES FOR 1.4 VOLT RECEIVERS									
*A-1300	1¼	5 5/16″	4 11/32″	8⅝″	$4.85	1	7	5 lb. 12 oz.	Socket —, +1.25
740	1¼	4 19/32″	3⅞″	7¾″	4.25	1	6¼	6 lb.	Socket —, +1.5

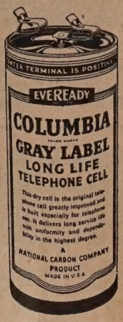
*Air Cell "A" Battery

EVEREADY
TRADE-MARK
Dry Batteries

Illustrated below are "Eveready" Dry Batteries, known for dependable and long service. Information describing famous "Eveready" Dry Batteries is given with each illustration.


CENTER TERMINAL IS POSITIVE (+)
EVEREADY
TRADE-MARK
NINE LIVES
DRY CELL
FOR IGNITION, BELLS, LANTERNS, ETC.
BOUNCES BACK FOR EXTRA LIFE
RECOVERS POWER BETWEEN USES
No. 6
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U. S. A.

NUMBER 1461
4 CELL POWER 6 VOLTS
EVEREADY
TRADE-MARK
NINE LIVES
HOT SHOT
TRADE-MARK
MULTIPLE BATTERY
FOR ELECTRIC FENCE CONTROLLERS, IGNITION, ALARMS, ETC.
BOUNCES BACK FOR EXTRA LIFE
RECOVERS POWER BETWEEN USES
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U. S. A.


CENTER TERMINAL IS POSITIVE
EVEREADY
COLUMBIA
TRADE-MARK
GRAY LABEL
LONG LIFE TELEPHONE CELL
This dry cell is the original telephone cell greatly improved and is built especially for telephone use. It delivers long service life with uniformity and dependability in the highest degree.
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U.S.A.

"EVEREADY" "IGNITOR" DRY CELL NO. 6 — For extra long life and heavy service in all Dry Cell applications. Its exceptionally high quality and recuperative powers have made the "Eveready" "Ignitor" dry cell famous for ignition, radio, bells, buzzers, electric games, toys, lanterns and other battery operated devices.

"EVEREADY" R.R. AND INDUSTRIAL NO. 6 — Especially designed for Railroad and Industrial use where a wide range of service conditions, from extremely heavy to extremely light are encountered.

"EVEREADY" "COLUMBIA" "GRAY LABEL" TELEPHONE CELL NO. 6 — Especially designed for telephone service. Noted for its long life on light drain service.

Brand and Type	Jacket	Voltage	Overall Dimensions In Inches		Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each	†P. C. List Price Each
			Diameter	Height				
*"Eveready" "Ignitor" No. 6	Round	1½	2⅝	6⅝	12	27	$0.80	$0.85
*"Eveready" R.R. and Industrial No. 6	Round	1½	2⅝	6⅝	12	27½	0.85	0.90
**"Eveready" "Columbia" "Gray Label" Telephone Cell No. 6	Round	1½	2⅝	6⅝	12	26	0.75	0.80

**Equipped with screw terminals unless Fahnestock spring terminals are specified.*

***Equipped with Fahnestock spring terminals unless screw terminals are specified.*

"EVEREADY" "HOT SHOT" BATTERIES — For all purposes requiring four or more dry cells in series. Particularly adapted for electric fences, gas engines (tractors, motor boats, etc.), blasting, fire and burglar alarms, gongs, bells, annunciators, signals, lights for closets, out-houses, camps, boats, searchlights, etc.

"Eveready" "Hot Shot" Batteries are composed of specially selected cells. Internal connections are securely soldered and the cells are completely insulated against accidental short circuits. Terminals are insulated.

Brand and Type	Voltage	Overall Dimensions In Inches			Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each	†P. C. List Price Each
		Length	Width	Height				
"Eveready" No. 1461	6	10⅜	2¾	7¼	6	58¼	$3.50	$3.80
"Eveready" No. 1462	6	5⁵⁄₁₆	5⁵⁄₁₆	7¼	4	39¼	3.50	3.80
"Eveready" No. 1562	7½	7⅞	5	7¼	4	50½	4.50	4.90
"Eveready" No. 1662	9	7¹³⁄₁₆	5¼	7¼	4	60¼	5.25	5.70

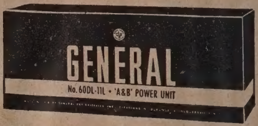
Standard Packages Contain One Type of 6-Inch Dry Cell or "Hot Shot" Battery Only.

†Pacific Coast Price

be sure with GENERAL DRY BATTERIES

GENERAL dry batteries contain many outstanding advancements such as extra heavy seamless extruded zinc cups, the famous paper thin separator permitting more mix and more active zinc area by utilization of the cell bottom, the curled rim lock seal which seals each cell individually. These features, found only in Generals, assure long shelf life as well as the maximum in dry battery performance.

GENERAL A & B RADIO FARM PACKS



General A-B packs are made with L size cells in the A section. These cells are 40% longer than the largest conventional 1¼" diameter cell. This construction assures the perfect balance between these "A" and "B" sections for current drains established by the Radio Industry.

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price	
				Eveready	Burgess	Ray-O-Vac	East	Pacific Coast
60DL11L	1½-90	1	24.5	759	17GD60	AB82	$6.95	$7.10
60D12L6	9-90	1	24	—	3G6D60	AB982	8.50	8.50
60D6L	1½-90	4	39	758	—	AB85	6.45	6.45
90FL6D	135-9C	1	45	—	F90-D6	P8960	10.50	11.11

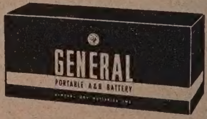
GENERAL ABC HOME RADIO BATTERIES

GENERAL
No. V30D • B BATTERY

All cells used in General batteries are filled with active mix by loading equipment developed by General which automatically puts the right amount of mix into each cell and packs it uniformly. General home radio batteries are accepted for their uniformity, dependability and long service.

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price	
				Eveready	Burgess	Ray-O-Vac	East	Pacific Coast
12L1L	1½	4	34	740	20F	P9203	$4.25	$4.25
12L1S	1½	4	34	A1300	19G	P168A	4.25	4.25
P24L2	3	1	17	X125	20F2	P9403	6.25	6.25
V30D	45	6	45	—	2308	P5233	3.15	3.15
V30F	45	6	68	—	10308	P5933	4.25	4.40
V30FL	45	3	39	—	21308	P9303	4.80	4.98
H3D	4½	10	7.5	X771	2370P1	P231W	.95	.95
H3BS	4½	10	3	781	5360	531R	.55	.55
V5B	7½	10	6.3	773	5540	551	1.10	1.10
H15B5	22½	10	15.4	768	5156P1	P5151	2.15	2.15
H15B	22½	10	15.4	778	5156SC	—	2.15	2.15
H15A	22½	10	10	763	4156	4151	1.95	1.95

GENERAL PORTABLE A & B PACKS



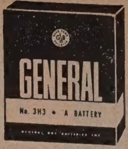
The small size cells used in portable batteries greatly reflect the benefits derived from General's patented construction. General Batteries deliver more service hours per dollar, therefore you will find them used as original equipment in more battery radios than any other brand.

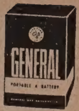
Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price
				Eveready	Burgess	Ray-O-Vac	
40CW2CF	1½-60	6	8.7	—	—	—	$3.25
41A4FL	1½-61½	6	25.5	—	4GMA41	AB419	4.70
60A2L	1½-90	1	5	—	5DMA60	—	5.95
60A4L	1½-90	6	38.5	—	6FMA60	AB84	5.95
42A5G5	7½-63	6	30	—	5GMA42	AB794	5.25
291	7½-9-90	1	6.5	754	G6M60	AB878	5.95
60A4F4	6-90	6	33.5	—	2F4A60	AB694	5.95
60A6F6-5	7½-9-90	1	6	753	F6A60	AB994	5.65
362	7½-9-90	6	24	756	T5Z60	—	5.75
Z50B4H4	6-75	1	7	—	G4B50	AB670	5.65
Z60B6H6	9-90	1	89	752	G6B60	AB677	6.25

See next page for more General Batteries.

GENERAL PORTABLE A BATTERIES

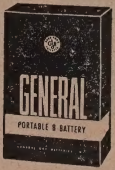
Type	Voltage	Pkge. Std.	Weight Pkg. Lbs.	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
D	1½ Radio A	50	12	—	—	—	$0.125
4FI	1½	6	9	742	4F	P94A	1.05
6FI	1½	6	13	743	6F	P96A	1.50
8FI	1½	6	17.4	741	8F	P98A	1.95
3LI	1½	6	11.4	745	4FL	P94L	1.05
3H3	4½	6	8	746	G3	P83A	.90
4F4	6	6	9	744	F4PI	P694A	1.05
8F4	6	6	17.4	718	2F4	P698A	2.00
5H5	7½	4	8.6	687	G5	P85A	1.50

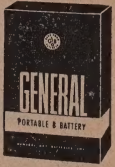

GENERAL
No. 3H3 • A BATTERY


GENERAL
PORTABLE A BATTERY

GENERAL PORTABLE B BATTERIES

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
V30A	45	6	11.4	—	A30	P430	$2.25
F30A	45	6	11.4	—	A30X	BB30P	2.25
V30B	45	6	17	—	B30	P5303	2.25
V30AA	45	6	9	738	Z30	P7R30	2.85
V30AA2	45	6	9	—	Z30N	—	2.85
W30B	45	6	12	482	M30	P7830	2.25

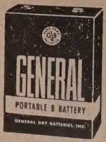

GENERAL
PORTABLE B BATTERY

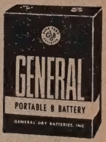

GENERAL
PORTABLE B BATTERY

GENERAL "DuroMite" BATTERIES

New General DuroMite batteries are the finest in battery design and assembly. Thin, well-balanced flat cells are stacked like a roll of wafers. Each stack of cells sealed in its own plastic case, keeping the cells fresh until put in use. Maximum service life can be obtained from minimum of space used.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
W45A	67½	12	10	467	XX45	4367	$2.50
W30A	45	12	7	455	XX30	P3A30	1.95
W60A	90	12	13.5	490	—	—	3.25


GENERAL
PORTABLE B BATTERY
GENERAL DRY BATTERIES, INC.


GENERAL
PORTABLE B BATTERY
GENERAL DRY BATTERIES, INC.

GENERAL "*FlashLite*" & LANTERN BATTERIES

The New General *"Flashlite"* cell comes to the market to fulfill the demand of practically every user. This demand is for extra long service, years of shelf life and protection against corrosion damage. The Industrial cell is recommended when light is needed frequently and for long periods.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
C	1½	72	8	935	1	ILP	$0.125
D	1½	240	57	950	2	—	.125
D Industrial	1½	250	59.5	1050	#2 Ind	2111	.15
AA	1½	180	8	915	Z	7-R	.10
V4F Lantern	6	10	15.8	409	F4H	941	.80
4FB Bicycle	6	10	15.5	—	—	—	.90

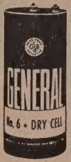
GENERAL
DuroPower

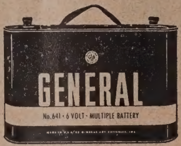
GENERAL
LANTERN BATTERY

GENERAL IGNITION & ELECTRIC FENCE BATTERIES

All General batteries are designed to use the most efficient cells available. The 641 is made with 12 L cells and this construction has proven to produce exceptional performance when used on Electric Fence controls and other ignition applications.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price East	Price Pacific Ct
#6	1½	24	60	#6 Ig	—	#6 Ig	$0.80	$0.85
#6 Tele	1½	24	60	#6 Co.	—	#6 Tele	.80	.85
641 Multiple	6	6	54	1461	—	641	3.50	3.80


GENERAL
No. 6 • DRY CELL


GENERAL
No. 641 • 6 VOLT • MULTIPLE BATTERY

We manufacture all types of Hearing Aid and Model Airplane batteries. Write for particulars.

GENERAL DRY BATTERIES, INC.

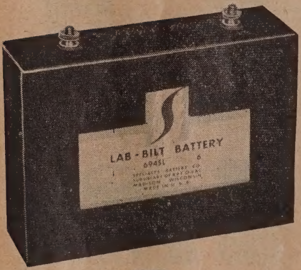
MAIN OFFICES AND FACTORY • 13000 ATHENS AVE., CLEVELAND, OHIO
FACTORIES • DUBUQUE, IA. • MEMPHIS, TENN. • TORONTO, ONT.
BRANCH OFFICES & WAREHOUSES • NEW YORK, CHICAGO, DALLAS, SAN FRANCISCO, LOS ANGELES, PORTLAND, MEMPHIS, MINNEAPOLIS

LAB-BILT
BATTERIES

Custom-built dry cell batteries for every unusual power requirement

FOR INDUSTRY   ARMED SERVICES   LABORATORY

322S



694SL

394S

INDUSTRIAL TYPE "A" BATTERIES

Catalog No.	Volts	Overall Dimensions L	W	H	Terminals	Comparables Burgess	Ray-O-Vac	Prices: List	Dealer
322S	3	2⅝	1 5/16	3⅛	Screw	D2BP	....	$1.10	**$0.76**
392S	3	2⅝	1⅜	4⅞	Screw	F2BP	921	0.80	**0.55**
394SL	3	5⅛	1 5/16	4⅛	Screw	2F2BP	....	1.35	**0.94**
394S	3	2⅝	2⅝	4⅛	Screw	2F2H	....	0.92	**0.64**
694SL	6	5⅛	1 5/16	4⅛	Screw	F4X	....	1.95	**1.34**
192S	1½	2⅝	1 5/16	4 9/16	Screw	2FBP	....	0.80	**0.55**
194PL	1½	3 13/16	1⅜	5⅝	Plug-In	4FL	P94L	1.02	**0.71**
198P	1½	3⅞	2 13/16	5½	Plug-In	8F	P98A	1.95	**1.36**
198PL	1½	3⅞	1 7/16	10¾	Plug-In	8FL	P98L	1.95	**1.34**
698P	6	3 15/16	2¾	5 9/16	Plug-In	2F4	P698A	2.00	**1.40**
785P	7½	3⅞	2⅝	4 9/16	Plug-In	G5	P85A	1.10	**0.76**
755P	7½	4 1/16	1 5/16	3	Plug-In	B5	P551	1.00	**0.75**
7CD5P	7½	2½	2½	3 5/16	Plug-In	T5	P7CD1	1.38	**0.96**
694PL	6	3⅞	1 7/16	5⅝	Plug-In	F4L	P694L	1.55	**1.07**
694S	6	2⅝	2⅝	4⅛	Screw	F4BP	941 Screw	0.80	**0.54**
191(d)	1½	1⅜ diam.	....	3 9/16	....	No. 10	....	0.24	**0.17**
698T	6	3⅞	2 13/16	5½	Flex. Leads	....	....	1.70	**1.28**
698PL	6	3⅞	1 7/16	10¾	Plug-In	2F4L	P698L	2.00	**1.40**
398S	3	3⅞	2¾	5⅜	2 Screws	4F2BP	....	2.00	**1.40**

Complete catalog will be mailed on request.

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

Madison 10, Wisconsin

LAB-BILT
BATTERIES

Catalog No.	Volts	Overall Dimensions			Terminals	Comparables		Prices:	
		L	W	H		Burgess	Ray-O-Vac	List	Dealer

INDUSTRIAL TYPE "B" BATTERIES

103SN69	103½	1 11/32	1 11/32	11 23/32	Contacts Top(+)and Bottom(–)	XX69	Sig. Corps No. BA-38	$4.90	$3.35
57R30S	45	2 15/16	1⅞	4 15/16	Screw	Z30NX	7R30N	2.90	2.00
57R30P	45	2 15/16	2¼	4⅛	Plug-In	Z30	P7R30	2.85	2.00
07R60S	90	3 9/16	2 5/16	6 5/16	Screw	Z60BP	7R60	8.40	5.80
0460P	90	4 7/16	3 7/16	4½	Plug-In	A60	....	5.00	3.45
5530S	45	4⅛	2⅝	5⅜	Screw	5308	5303	2.57	1.79
5230C	45	8 1/16	3 13/16	7 3/16	Spring Clip	2308SC	2303	2.55	2.32
5930C	45	8 1/16	4 5/16	7 3/16	Spring Clip	10308SC	9303	4.50 4.20*	3.35 3.15*
5830C	45	8⅛	4½	7 15/16	Spring Clip	21308SC	8303	4.65 4.39*	3.48 3.28*
5830P	22½, 45	8 1/16	4½	7 7/16	Plug-In	21308PI	P8303	4.65 4.39*	3.48 3.28*
144S7R96S	144	2 9/16	2 9/16	18¼	Screw	Z96P	....	12.40	8.55
07R60SS	45, 90	3 9/16	2 5/16	6 5/16	3 Screws	Z60X	....	8.40	5.80
5530P	45	4⅛	2 9/16	5¼	Plug-In	B30	P5303	2.45	1.70
57R30SS	22½, 45	3⅝	2 9/32	3⅜	3 Screws	Z30BP	....	4.45	3.06

* East Coast price

INDUSTRIAL TYPE "C" BATTERIES

453S	4½	2⅜	13/16	2⅞	Screw	5360	531R	$0.57	$0.39
423P	4½	4 1/16	1 7/16	3 1/16	Plug-In	2370PI	P231W	0.85	0.60
423S	4½	4 1/16	1 7/16	3 7/16	Screw	2370BP	231W	0.85	0.60
755S	7½	3 15/16	⅞	3⅛	Screw	5540	551	0.99	0.69
926S	9	2¾	4 3/32	3 5/16	Screw	D6BP	....	1.90	1.33
2515P	22½	4	2½	3	Plug-In	5156PI	P5151	2.05	1.42
2515C	22½	4	2½	3½	Spring Clip	5156SC	....	2.05	1.42
2415S	22½	3⅜	2⅛	3⅛	Screw	4156	4151	1.97	1.39
7N5S	7½	2¾	⅝	2⅛	3 Screws	W5BP	....	1.40	0.96
13S49S	13½	2 1/16	2 1/16	2¼	2 Screws	A9BP	....	1.80	1.24
152S	1½	1 19/32	29/32	2 11/16	2 Screws	2BBP	....	0.88	0.61
352S	3	1 19/32	29/32	2 11/16	2 Screws	B2BP	....	0.88	0.61
443S	3, 4½	1 31/32	21/32	2½	2 Screws	A3BPX	....	1.04	0.72
2215C	22½	6½	4	3⅛	3 Spring Clips	2156	....	3.20	2.20

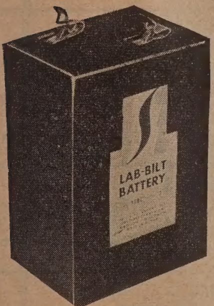
SPECIAL RADIO "AB" AND "ABC" PACKS

AB-100	1½A, 63B	9 1/16	2⅛	4¾	Plug-In	4GMA42	AB944	$4.50	$3.14
AB-101	1½A, 61½B	9¼	2¾	3⅜	Plug-In	4GMA41	AB1944	4.35	2.98
AB-102	6A, 90B	10¾	2 13/16	3 15/16	Plug-In	....	AB694	5.50	3.85
AB-103	7½ or 6A, 67½B	9½	2 11/16	4 7/16	Plug-In	F5M45	AB767	5.00	3.45
AB-104	1½A, 90B	11⅞	1½	6 7/16	Plug-In	6FA60	AB84	5.69	3.96
AB-105	7½A, 63B	8⅝	2⅝	4	Plug-In	G5A42	AB794	4.48	3.15
AB-106	1½A, 90B	5 9/16	2 11/16	7⅛	Plug-In	5DA60	AB24	5.59	3.90
AB-107	6A, 90B	11 15/16	4⅛	2 11/16	Plug-In	2F4A60	AB6984	6.25	4.30
AB-108	6A, 90B	10¾	2¾	5	Plug-In	F4B60	AB695	5.95	4.19
AB-109	1½A, 67½B, 7½C	4¼	3 11/16	6⅝	Screw	4FA50	AB194	6.25	4.30
AB-110	1½A, 90B	9⅞	2 3/16	4 11/16	Plug-In	6TMA60	AB64	5.79	4.00
AB-307	6 or 7½A, 75B	8 9/16	3 11/16	2 7/16	Plug-In	T5Z50	....	5.25	3.68
AB-308	9 or 7½A, 90B	9⅜	2 3/16	3⅜	Plug-In	T5Z60	....	5.80	4.00
AB-310	1½A, 61½B	9½	4⅞	2 1/16	Plug-In	....	AB419	3.30	2.28
AB-314	9A, 90B	9½	2 23/32	4⅜	Male Plug	F6A60P	....	5.90	4.14

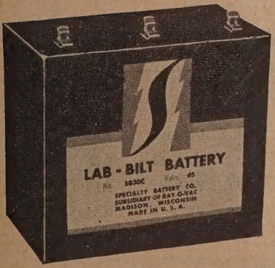
Complete catalog will be mailed on request

LAB-BILT BATTERY

5530S



57R30S



5830C

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

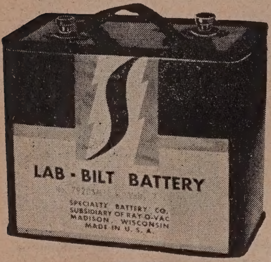
Madison 10, Wisconsin

LAB-BILT
BATTERIES

Catalog No.	Volts	Overall Dimensions			Terminals	Comparables		Prices:	
		L	W	H		Burgess	Ray-O-Vac	List	Dealer
SPECIAL IGNITION BATTERIES									
4912C	4½	3 15/16	3 15/16	5⅞	Spring Clip	4F3H	....	**$3.50**	**$2.40**
194IS	1½	2⅝	2⅝	4⅛	Screw	4FH	94IS	**0.56** **0.79***	**0.44** **0.52***
398C	3	3⅞	2 15/16	5⅞	Spring Clip	4F2H	....	**1.52** **1.45***	**1.08** **1.01***
6916S	6	8¼	2¾	6 3/16	Screw	4F4H	....	**3.70** **3.40***	**2.48** **2.29***
7920SM	7½	7 5/16	4	6 5/16	Screw	4F5H	....	**4.55** **4.05***	**3.16** **2.78***
9924SM	9	8½	4	6 5/16	Screw	4F6H	....	**5.25** **4.65***	**3.68** **3.20***
* East Coast price									
TELEPHONE AND IGNITION BATTERIES									
4912TC	4½	3 15/16	3 15/16	5⅞	Spring Clip	4F3J	....	**$2.45**	**$1.95**
194TS	1½	2⅝	2⅝	4⅛	Screw	4FJ	94TS	**0.90**	**0.57**
4945C	4½	12	4	7⅛	Spring Clip	.....	9451	**5.90**	**4.05**
386C	3	3⅞	2⅝	5⅜	Spring Clip	.....	86T	**1.40**	**0.99**
489C	4½	3⅞	3⅞	5⅜	Spring Clip	.....	89T	**2.15**	**1.49**
SPECIAL LIGHTING BATTERIES									
443	4½	1 31/32	31/32	2½	2 Flat Spring Brass Contacts	432	431	**$0.50**	**$0.33**
453	4½	2 5/16	¾	3	2 Flat Spring Brass Contacts	532	531	**0.50**	**0.33**
1918T	1½	6⅜	5 11/16	3 3/16	2 Pigtails	18FS	....	**2.45**	**1.95**
ELECTRIC SHAVER BATTERIES									
135SN90P	135	3 1/16	1½	7⅝	Std. 120v Socket	.....	....	**$7.95**	**$5.33**
120S480P	120	4¾	2 7/16	8⅛	Std. 120v Socket	.....	....	**5.97**	**4.00**
SHOT FIRING BATTERIES									
392PB	3	2⅝	1 5/16	4½	Recessed	.....	921B	**$0.90**	**$0.60**
453P	4½	2⅜	13/16	3 7/16	Recessed	.....	533	**0.80**	**0.54**
HEARING AID BATTERIES									
*22SN15P	22½	1⅝	1⅜	3	Plug-In	XX15E	PN-15	**$1.60**	**$1.10**
*33SN22P	33	1 9/16	1⅜	3 15/16	Plug-In	XX22E	PN-22	**1.80**	**1.25**
*45SN30P	45	2 1/16	1⅜	3⅞	Plug-In	XX30E	PN-30	**1.98**	**1.36**
416P	4½	3⅜	1 3/16	4¼	Plug-In	T3WE	WE-161	**1.25**	**0.85**
314P	3	3⅜	1 3/16	3 3/16	Plug-In	T2WE	WE-141	**1.10**	**0.76**
*191P	1½	1⅜ diam.	.....	4	Plug-In	TE	PF-1	**0.35**	**0.21**

* Not identical as to size with the comparables listed. Check dimensions before ordering.

Complete catalog will be mailed on request



7920SM

LAB-BILT
BATTERY

194-IS

LAB-BILT
BATTERY

398C

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

Madison 10, Wisconsin

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**

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Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

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Loose-leaf, flexible binder. Contains over 1100 pages.

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DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery information.

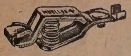
Mueller Electric Co.

CLEVELAND, OHIO

MUELLER BATTERY AND TEST CLIPS

U.S. PATENTS: 1,521,903; 1,686,842; 1,779,442; 1,794,976; 1,965,151; 1,994,251; 1,999,613; 2,074,324; 2,136,814; 2,416,113.

For use in making quick, temporary electrical connections. Packed 10 in a box, half marked + half plain to indicate polarity.
Screw connections



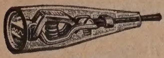
No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1½″ long. Jaw spread ⅜″. Steel, cadmium plated.

EACH NET.....................$0.07 **LOTS OF 10**.....................$0.05

No. 45-C

Solid Copper R.F. Test Clip

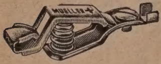


No. 45-C Clip
No. 47 Insulator

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½″ long.

EACH NET.....................$0.11 **LOTS OF 10**.....................$0.08

Use **No. 47** Insulator for clips 45 and 45-C.



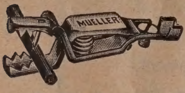
No. 48-B

A small test and battery clip for radio use and general testing purposes. 2″ long. Jaw spread ½″. Steel, cadmium plated.

EACH NET....$0.08 **LOTS OF 10**....$0.055

No. 48C—Solid Copper. Same size as 48-B.

EACH NET.....................$0.13 **LOTS OF 10**.....................$0.09



No. 50-C Needle Clip

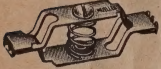
Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼″ long.

EACH NET..$0.23 **LOTS OF 10**..$0.16

No. 51-C—Large crocodile clip. Same as 50-C but without needle.

EACH NET..$0.16 **LOTS OF 10**..$0.11

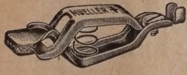
Use No. **49** insulator for Clips 48-B, 48-C, 50-C and 51-C.



No. 22 Twin-Clip

Jaws on both ends. Great time-saver in test work. Used to hold or rack articles for display or processing. 2″ long. Steel cadmium plated.

EACH NET....$0.10 **LOTS OF 10**....$0.07



No. 27

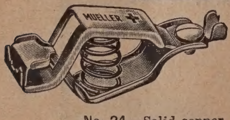
A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2$\frac{7}{16}$″ long. Jaw spread ⅝″. Steel, cadmium plated.

EACH NET.....................$0.11 **LOTS OF 10**.....................$0.08

No. 27-C—Solid copper. Same size as No. 27.

EACH NET.....................$0.19 **LOTS OF 10**.....................$0.13

Use **No. 29** Insulator for clips 27 and 27-C.



No. 24-A

A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring. 2⅞″ long. Jaw spread 1″. Steel, lead plated.

EACH NET $0.15
LOTS OF 10..................... .105

No. 24—Solid copper. Same size as No. 24-A.

EACH NET.....................$0.26 **LOTS OF 10**.....................$0.18

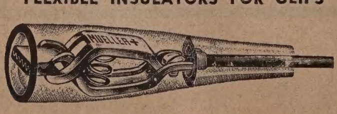
Use **No. 26** Insulator for Clips 24-A and 24.

LARGER SIZES OF CLIPS

	Each Net	Lots of 10
No. 21-A—Heavy Duty Steel, lead plated, 4″ long	$0.24	$0.17
No. 21—100 Amp. Solid Copper, 4½″ long	.65	.46
No. 11A—100 Amp. Steel, lead plated. 6″ long	.84	.59
No. 11—200 Amp. Solid copper. 6″ long	1.28	.90
No. 33—300 Amp. Solid copper. 7¾″ long	2.25	1.58

(Above furnished with lug connections.)

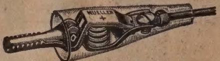
FLEXIBLE INSULATORS FOR CLIPS



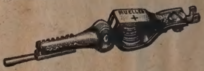
A convenient protection against short circuit and electric shock. Packed 10 in a box, 5 red and 5 black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly.

CROCODILE CLIPS

U.S. Patent No. 1,999,613



No. 85 or 85-C Clip with
No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2⅛″ long.

EACH NET.....................$0.08 **LOTS OF 10**.....................$.055

No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip.

EACH NET.....................$0.13 **LOTS OF 10**.....................$0.09

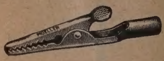
No. 85-T—New Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. 2⅝″ long.

EACH NET.....................$0.18 **LOTS OF 10**.....................$0.13

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protects against short and shock. Helps to distinguish leads.

ALLIGATOR CLIPS

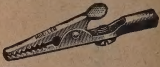
No. 60—CONVENTIONAL TYPE



Accurately made, slim jaws, fine meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2″ long.

EACH NET.....................$0.07 **LOTS OF 10**.....................$0.05

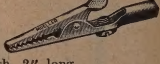
No. 60-S—SCREW CONNECTION



Eliminates necessity for soldering. Otherwise same as No. 60.

EACH NET $0.08 LOTS OF 10 $0.055

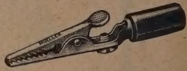
No. 60-CS—COPPER R.F. ALLIGATOR CLIP



Same as No. 60-S except made of solid copper. Has brass screw connection. Ideal for R.F. work. Will not heat up in H.F. circuits. Bright, natural copper finish. 2″ long.

EACH NET.....................$0.11 **LOTS OF 10**.....................$0.08

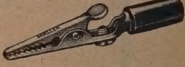
No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE



Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2¼″ long.

EACH NET.....................$0.13 **LOTS OF 10**.....................$0.09

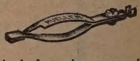
No. 60-CHS—COPPER ALLIGATOR CLIP WITH INSULATED HANDLE



Same as No. 60-CS except equipped with red and black insulating sleeves on end. Brass screw connection, for R.F. work. 2¼″ long.

EACH NET.....................$0.15 **LOTS OF 10**.....................$0.10

WEE-PEE-WEE No. 88



Entirely Non-ferrous. Smaller Than Ever!

An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. **Ideal for close-wound coils.** 1$\frac{11}{16}$″ long; jaw spread ¼″.

EACH NET.....................$0.18 **LOTS OF 10**.....................$0.13

Use No. 93-P R.F.Insulator.

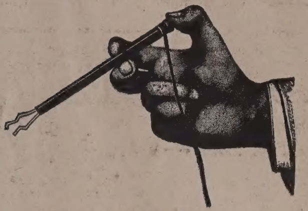
Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13	11, 11-A	$0.63	$0.44
23	21, 21-A	.35	.25
26	24, 24-A	.25	.18
29	27, 27-C	.17	.12
35	33	1.63	1.14
47	45, 45-C	.09	.06
49	48-B, 48-C, 50-C, 51-C	.11	.075
87	85, 85-C, 85-T	.08	.055
93-P	88	.05	.035

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Mueller Electric Co.

THE SNAPPER

A Long Insulated Test Clip and
A "Triple Threat" Radio Tool



U. S. Patent No. 2,074,324

No. 99—7″ Long Insulated

The long tube is of insulating material and is fitted with spring contact jaws on the far end.

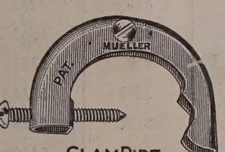
The jaws are operated by a push of the thumb on the near end. Wire is quickly and easily connected in a hole in the insulator knob binding post on the near end.

May be used as (1) A "Deep Sea" Electric Test Clip—test contacts with ease, deep in the recesses of radio chassis with no danger of short circuits; **(2) An Electric Contact Prod**—clip jaws may be used to make quick prod contacts, or clip one Snapper on ground circuit and prod with another; **(3) A Retriever**—start small screws and nuts or pick up odds and ends that may accidentally be dropped into inaccessible places.

PRICE....$1.05 EACH Dealers' Wholesale Price, each....$0.63 Net

Snappers are generally used in pairs—1 red and 1 black.

CLAMPIPE GROUND CLAMP



CLAMPIPE
U.S. PATENT No. 1,794,976

No. 58

The exclusive patented feature of a U-shaped cross section in combination with a U-shaped clamp gives a rigidity and effectiveness to the ClamPipe that cannot be found in any other make.

The ClamPipe will not bend or lop over when applied to a pipe. The point of the large case hardened screw, cuts through rust, paint or corrosion into clean, fresh metal, insuring a good contact. The Clamp may be installed on a pipe lying flush against a wall. Will not spread open.

The best ground clamp value on the market. **Applicable to pipe ⅜″ to 1⅜″ outside diameter.**

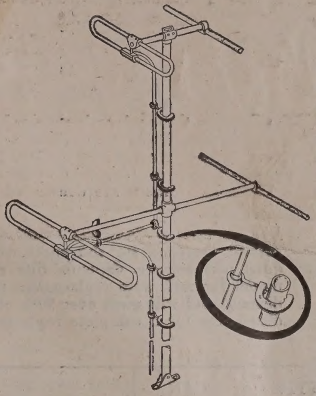
Packed 10 in a box

EACH NET....................$0.15 LOTS OF 10....................$0.10

THE "TENNA-CLAMPIPE"

(ClamPipe Trade-mark Reg. U. S. & Can. Pat. Off.)

A Standoff Insulator that clamps on Quickly—Easily—almost anywhere for Television and FM Antenna Lead-Ins.



Quickly and Permanently Supports Lead-Ins

- **On antenna masts & cross-arms.**
- **On pipes, I-beams, etc., on basement ceilings.**
- **On any rigid object up to 1⅜″ in diameter or thickness.**

SIMPLY TURN THE SCREW-EYE BY HAND FOR A SOLID, PERMANENT GRIP.

A great time-saver — the installation man's third hand.

Consists of an assembly of the famous Mueller ClamPipe Ground Clamp and a steel screw-eye with an insulating grommet. Holds lead-in wire from 1¼″ to 2½″ away from clamp. Can be applied to any antenna mast, pipe or other object up to 1⅜″ in diameter or thickness.

All metal parts are completely weatherproofed.

Insulating grommet is molded of high quality plastic having superior dielectric and non-absorptive properties. Will withstand exposure to weather.

No. 130 for all types of Flat Twin-lead.
No. 131 for all Coax Cables up to ½″ O.D.

Packed 100 in a carton

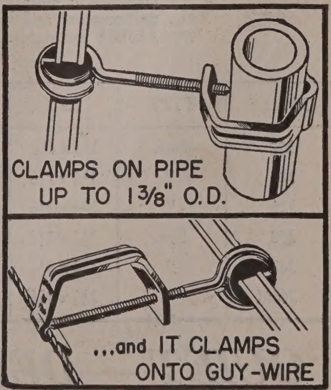
EACH NET............$0.16 LOTS OF 10............$0.11
LOTS OF 100............$0.098

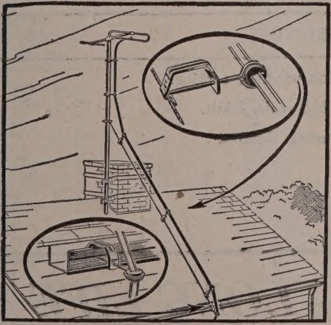
THE "TENNA-CLAMP"

A New 3-in-1 Stand-off Insulator Clamp!

Supports TV and FM Lead-ins on
MASTS, PIPES, GUTTERS AND GUY-WIRES

Has same general features and specifications as Tenna-ClamPipe described above except different type clamp channeled on end to take standard guy-wire in addition to pipes.


CLAMPS ON PIPE UP TO 1⅜" O.D.
...and IT CLAMPS ONTO GUY-WIRE



HAS THESE USEFUL FEATURES —

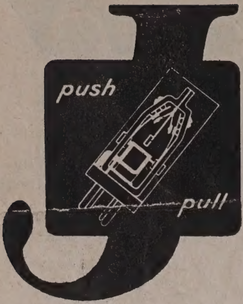
- One standard size solves many lead-in problems — far more useful than straps or wire bands.
- Brings lead-in to edge of roof — right where you want it — no more "draping" of wire across the roof.
- On those high jobs, come right down a guy-wire — and get around the gutter in the clear.

LOW PRICES!

All packed 100 in a carton

No. 135 For all types of Flat Twin-Lead.
No. 136 For Coax Cables up to ½″ O.D.
EACH NET, $0.13 LOTS OF 10, $0.09
LOTS OF 100, $0.078

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



JAMES VIBRATORS

AUTO REPLACEMENT
COMMUNICATION — INDUSTRIAL

JAMES *vibrators*, the engineer's standard, are designed for the more difficult applications. Quality components since 1936, these vibrators will meet the requirements of all auto replacement and communications service. Featuring PUSH-PULL drive, box frame construction, ceramic insulation, dynamic contact wiping and other JAMES exclusive patented designs. These components are demanded by the critical serviceman.

JAMES *auto replacement* vibrators are the complete line. Each model is custom designed for the application. Servicemen depend on JAMES for quiet performance, dependability and adequate capacity. Select the correct model for each auto replacement need. The following types are in general demand and will meet over 90% of service requirements. Ask your JAMES distributor for a complete replacement guide.

JAMES	TYPE	CAN	DESCRIPTION	MALLORY	RADIART
J2S	Intr.	1½ x 3⅛	4 prong std. — Medium height	294	5300
J2SP	"	1½ x 2⅞	4 prong std. — Short height	859	5301
J2SF	"	1½ x 2⅞	4 prong std. — Philco	509P	5326
J2SM	"	1½ x 2⅞	4 prong std. — Motorola	903M	5342
J8S	"	1½ x 3⅛	4 prong std. — special wiring	854	5331
J9	"	1½ x 3⅛	Delco base, large can	852	5303
J9SA	"	1½ x 2⅞	Delco base, small can	870	5335
J21	"	1 5/16 x 2⅜	4 prong std. small can, Ford	1100	5314
J54	Syn.	1¾ x 4½	Large can, Pontiac	273C	5425
J66	"	1 15/16 x 3½	Large can, with handle, Buick	716	5426

JAMES *communications* vibrators are designed for direct replacement in all types of mobile communications equipment. Instant starting, dependable performance and long life are engineered into these components. Insist on JAMES for mobile service where vibrators must not fail.

JAMES	TYPE	CAN	DESCRIPTION
J22	Intr.	1½ x 3⅛	8 contact, heavy duty, Motorola, Link receiver service.
J23	"	1½ x 2⅞	Heavy duty for transmitter service, Motorola, Link.
J24	"	1½ x 2⅞	6 prong, 8 contact, Motorola Unichannel, Bendix.
J58	Syn.	1½ x 3⅛	6 prong, Karr.
J63	"	1½ x 3⅛	Reversible, Link, GE, RCA.
J65M	"	1½ x 3⅛	Reversible, Motorola.

QUIET — DEPENDABLE — LONG LIFE

MALLORY VIBRATORS • VIBRAPACKS*• RECTIFIERS • BATTERY CHARGERS
SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS

*Reg. U. S. Pat. Off.

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 2

VIBRATORS

Mallory Cat. No.	List Price
222	$9.15
245	7.70
245A	7.70
245C	7.70
246	7.70
247	7.70
248	7.70
G248	8.55
249	7.70
270B	9.15
271HD	9.15
273C	9.15
273D	9.15
292	6.35
294	4.90
F294	7.15
298	6.35
505P	4.90
506P	6.35
509P	4.15
514	7.70
716	7.70
725C	8.55
G725C	9.95
742	7.70
743	7.70
748	7.70
G749C	9.95
W759	8.25
825C	6.90
826C	6.35
F826C	7.70
G826C	7.70
839	6.35
852	4.90
853	4.90
854	4.90
859	4.90
W859	5.50
860	4.90
870	4.90
903M	4.15
953W	7.70
954	7.70
1100	4.90
1501	6.35
1502	6.90
T4002	10.70
T4003	9.80
GC7	.45
AR1	1.50
SK1	1.25 Net

Mallory Page 4

VIBRAPACK* POWER SUPPLIES

*Reg. U.S. Pat. Off.

Mallory Cat. No.	List Price
VP-F558	$34.40
VP-G556	31.65
VP-540	33.00
VP-551	24.20
VP-552	28.90
VP-553	26.95
VP-554H	31.65
VP-555H	57.20
VP-557	57.20

AUDIO FILTER

Mallory Cat. No.	List Price
VF223	$8.80

Mallory Page 5

SELENIUM RECTIFIERS

Mallory Cat. No.	List Price
6S35	$1.00
6S65	1.20
6S75	1.45
6S100	1.75
6S100A	1.75
6S150	2.10
6S200	2.50
6S250	2.80
6S300	2.80
6S350	3.10
6S450	3.40

Mallory Page 6

PORTABLE FAST CHARGER

Mallory Cat. No.	List Price
6AC75	$109.50 Net

Mallory Page 7

ACCESSORIES

Mallory Cat. No.	List Price
MMF-12	$9.50 Net
R-652	1.80
R-653	.25
R-655	1.80

BATTERY CHARGERS

Mallory Cat. No.	List Price
6AC4	$16.95
6AC6	22.95
6AC10	30.95
12AC5	37.95

Mallory Page 8

RECTIFIERS

Mallory Cat. No.	List Price
F16C3	$8.15
F20C7	11.75
F16H1P	6.50
F20H1P	8.00
F24H1P	9.50
F28H1P	11.00
F32H1P	12.50
IB4R	2.25
IB8R	2.70
IB12C1J	6.05
IB12C3	6.40
IB12C5	7.00
IB12L5	5.45
IB12R	3.20
IF16CB7M	9.45
IS16B7	10.95
IS16B9	12.40
IS24B9	17.05
IS16CB7	9.40
IS24C7J	11.65
IS28C7J	14.10

Mallory Page 9

ACCESSORY

Mallory Cat. No.	List Price
R654	$7.50 Net

VIBRATOR CHECKER

Mallory Cat. No.	List Price
6VT1	$29.50 Net

BENCH POWER SUPPLIES

Mallory Cat. No.	List Price
6RS10	$36.75 Net
6RS25	74.50 Net

Mallory Page 10

MALLORY SPIRAL INDUCTUNERS*

*Reg. U.S. Pat. Off.

Mallory Cat. No.	List Price
8302	$12.00
8303	15.00
8304	18.00

R. F. COIL

Mallory Cat. No.	List Price
TV300	$3.00

GRID BIAS CELLS

Mallory Cat. No.	List Price
BC-2	$ .45
BC-3	.45
BC-5	.45
GB11A	.15
GB11B	.20
GB12	.25
GB13	.35
GB14	.40
GB15	.15
GB16	.15
GB17	.15

Mallory Page 11

KNOBS

Mallory Cat. No.	List Price
364	$ .15
365-1	.25
366-1	.20
366-R1	.20
367-1	.25
368-1	.20

MOUNTING NUTS

Mallory Cat. No.	List Price
232	.35 per 10
255	.20
A-11260-2	.30
A-11260-12	.25

Mallory Page 11

WASHERS

Mallory Cat. No.	List Price
203	.30 per 10
212	.20 per 10
225	.20 per 10
226	.20 per 10
227	.20 per 10

VIDEOCOUPLER

Mallory Cat. No.	List Price
VC101	$1.75

SOLDERING IRON TIPS

Mallory Cat. No.	List Price
311	$. 85
312	.95

DIAL PLATES

Mallory Cat. No.	List Price
372	$ .20
373	.20
374	.20
375	.20
376	.20
377	.20
378	.20
379	.20
380	.20
381	.20
382	.20
383	.20
384	.20
385	.20
386	.20
387	.20
388	.20
389	.20
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394	.20
453	.20
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456	.20
457	.20
458	.20
459	.20
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461	.20
462	.20
463	.20
464	.20
465	.20
466	.20
467	.20
468	.20
472	.20
473	.20
474	.20
475	.20
476	.20
477	.20
478	.20
479	.20
480	.20
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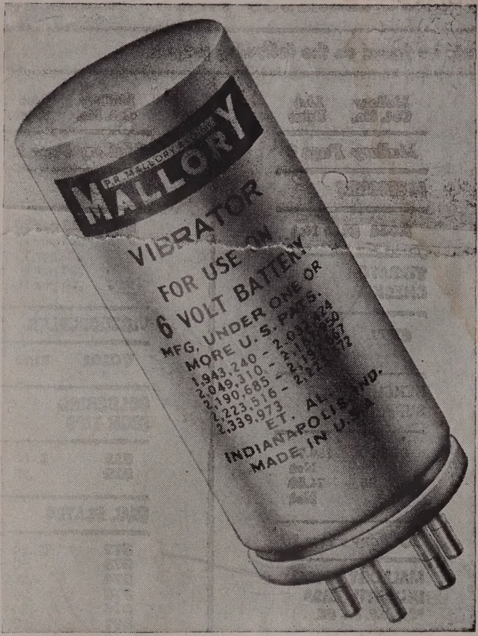
484	.20
485	.20
486	.20
487	.20
488	.20

MALLORY VIBRATORS



Type No.	Volt	Type	Base Dia.	Can Type	Size A	B	C
222	6	Syn.	20	2	4⅛	x 1¹³⁄₁₆	x 1⅛
▲**245**	6	Syn.	21	1	1½	x 3¼	
▲245A	6	Syn.	21	1	1¹⁵⁄₁₆	x 3½	
245C	6	Syn.	28	1	1½	x 3¼	
▲**246**	6	Syn.	38	1	1½	x 3¼	
247	6	Syn.	46	1	1½	x 3¼	
▲**248**	6	Syn.	44	1	1½	x 3¼	
G248	12	Syn.	44	1	1½	x 3¼	
▲**249**	6	Syn.	32	1	1½	x 3¼	
270B	6	Syn.	23	1	2	x 4½	
271HD	6	Syn.	24	1	2	x 4½	
273C	6	Syn.	29	1	2	x 4½	
273D	6	Syn.	31	1	2	x 4½	
292	6	Int.	3	2	1½	x 2⁷⁄₁₆	x 1⅜
294	6	Int.	8	1	1½	x 3¼	
▲F294	32	Int.	8	1	1½	x 3¼	
298	6	Int.	51	1	1½	x 2⅞	
505P	6	Int.	8	1	1¹⁵⁄₁₆	x 3½	
506P	6	Int.	36	1	1¹⁵⁄₁₆	x 3½	
509P	6	Int.	8	1	1½	x 2⅞	
514	6	Syn.	30	6	1¹⁵⁄₁₆	x 3½	
716	6	Syn.	30	7	1¹⁵⁄₁₆	x 3½	
▲725C*	6	Syn.	32	1	1½	x 3¼	
▲G725C*	12	Syn.	32	1	1½	x 3¼	
742	6	Syn.	32	1	1½	x 2⅞	
743	6	Syn.	38	1	1¼	x 3¼	
748	6	Syn.	44	1	1½	x 2⅞	
▲G749C*	12	Syn.	21	1	1½	x 3¼	
W759	4	Syn.	21	1	1½	x 2⅞	
▲825C*	6	Int.	8	1	1½	x 3¼	
▲826C*	6	Int.	8	1	1½	x 3¼	
▲F826C*	32	Int.	8	1	1½	x 3¼	
▲G826C*	12	Int.	8	1	1½	x 3¼	
839	6	Int.	8	1	1½	x 3¼	
852	6	Int.	14	3	1⅝	x 3⅝	
853	6	Int.	10	3	1⅝	x 3⅝	
854	6	Int.	11	1	1½	x 3¼	
▲**859**	6	Int.	8	1	1½	x 2⅞	
W859	4	Int.	8	1	1½	x 2⅞	
860	6	Int.	14	7	1½	x 3¼	
870	6	Int.	14	1	1½	x 2⅞	
903M	6	Int.	8	1	1½	x 2⅞	
953W	6	Syn.	16	1	1½	x 3⁵⁄₁₆	
954	6	Syn.	39	1	1½	x 3	
▲**1100**	6	Int.	8	1	1⁵⁄₁₆	x 2⅜	
▲1501	6	Int.	53	1	1½	x 2⅞	
1502	6	Int.	54	1	1½	x 2⅞	
T4002	2	Syn.	52	8	1½	x 2⅛	x 1½
T4003	2	Syn.	50	1	1⁵⁄₁₆	x 2⅛	
GC7†	Groun	d Cup					
AR-1	Adap	ter					
■SK-1	Socket	Kit					

Int.—Interrupter Syn.—Synchronous

▲Use only these types in design of new equipment. Other types are for replacement purposes only.

*Hermetically Sealed Construction.

†A grounding cup for 1½″ dia. vibrators which makes a low r.f. ground connection between vibrator can and power supply chassis.

■Five special sockets for Practical Vibrator Tester, section four of the Mallory Replacement Vibrator Guide. Supplied as complete kit only.

Always carry in stock those numbers listed in bold face type.

Recommended Substitutions for Discontinued Vibrators

Discontinued Type	Recommended Replacement	Discontinued Type	Recommended Replacement
221	292	299	298
223	222 (See Note 1)	500P	853
224	222 (See Note 1)	501P	853
226	222 (See Note 1)	503	292
245SW	245	504	246 (See Note 1)
G245	G749C	507P	853
G249	G725C	508P	859
F251	F294	510P	859
G253	G826C	722A	246 (See Note 1)
253Y	294	728A	246 (See Note 1)
271	270B	850	859
277S	248 (See Note 1)	G850	G826C
P285Y	246 (See Note 1)	866	859
286S	248	868	870
289Y	249	869	859
294C	852	901M	294
294SW	854	902M	859
296	298	951P	246
297	298	952W	953W
F297	F294 (See Note 2)	T4000	T4003

NOTE 1. To make this substitution certain wiring changes are necessary. See instruction sheet packed with vibrator or installation note in the Mallory Vibrator Guide and the 6th Edition Mallory Radio Service Encyclopedia.

NOTE 2. To make this substitution the six-prong socket must be changed to a 4-prong UX base socket and wired to match base diagram 8, page 3.

● Use the Mallory 6VT1 Vibrator Tester for direct readings on "good-bad" conditions of doubtful vibrators. For complete description and illustration of the 6VT1 see page 9, Mallory Special Components section, of this catalog.

MALLORY VIBRATORS

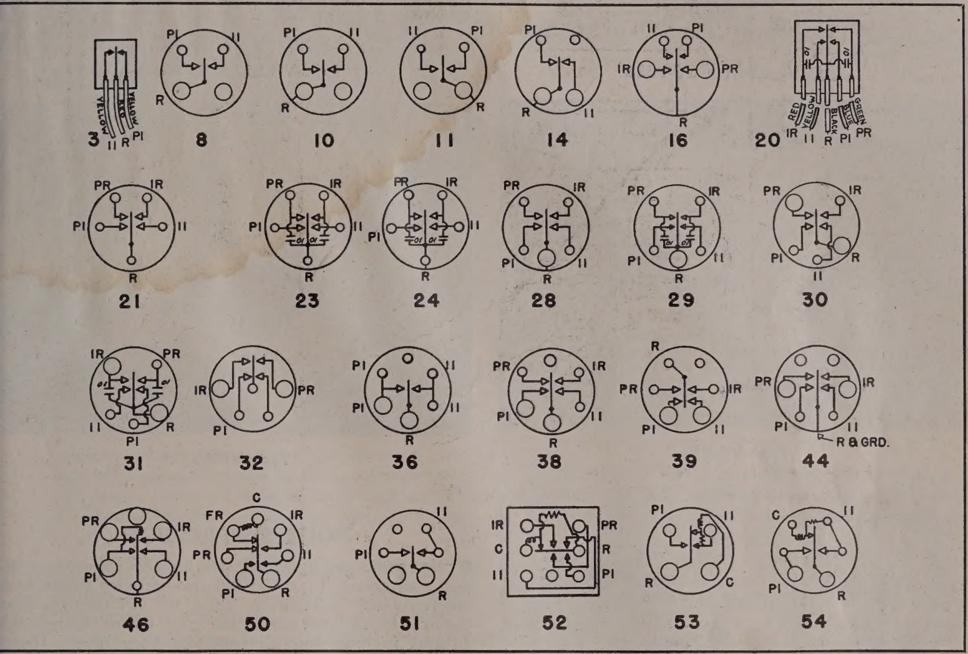
These Mallory Vibrators Meet 90% of Your Replacement Needs

● The 12 basic vibrator types listed at right cover 90% of your replacement needs. The entire line of Mallory Vibrators has been simplified so that replacements can be made easily and quickly. By effecting substitutions, Mallory is materially reducing the number of vibrators needed to meet your requirements.

This Mallory standardization program means that your distributor stocks fewer vibrator types and more units of each—thus delivery is tremendously speeded up.

The vibrator replacement problem is being simplified but Mallory quality remains the same. Mallory precision vibrators, backed by years of outstanding performance, still offer the dependability, the long life and the trouble-free service that you and your customers expect. It pays to insist on Mallory Approved Precision Products.

Type No.	Volt	Type	Base Dia.	Size
245	6	Syn.	21	1½ x 3¼
246	6	Syn.	38	1½ x 3¼
248	6	Syn.	44	1½ x 3¼
249	6	Syn.	32	1½ x 3¼
273C	6	Syn.	29	2 x 4½
716	6	Syn.	30	1¹⁵⁄₁₆ x 3½
852	6	Int.	14	1⅝ x 3⅝
854	6	Int.	11	1½ x 3¼
859	6	Int.	8	1½ x 2⅞
870	6	Int.	14	1½ x 3
1100	6	Int.	8	1⁵⁄₁₆ x 2⅜
1501	6	Int.	53	1½ x 2⅞


YELLOW
BLACK
YELLOW
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II
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10
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11
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IR
PR
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16
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RED
YELLOW
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BLACK
GREEN
20
IR
II
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PI
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R & GRD.
44
PR
IR
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II
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46
C
FR
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50
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II
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52
PI
II
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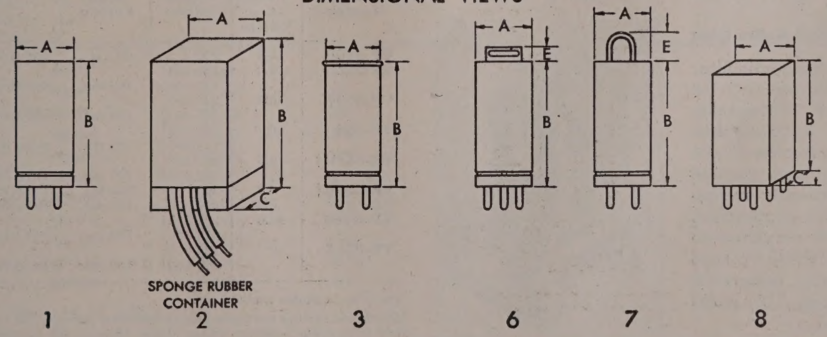
C
53
C
II
PI
R
54

R=Reed
PI=Pull Interrupter
PR=Pull Rectifier
II=Inertia Interrupter
IR=Inertia Rectifier
C=Coil
FR=Frame

DIMENSIONAL VIEWS


A
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A
B
C
SPONGE RUBBER CONTAINER
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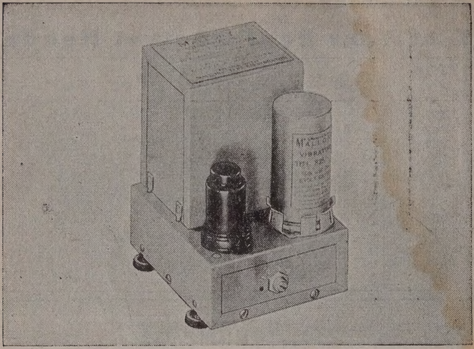
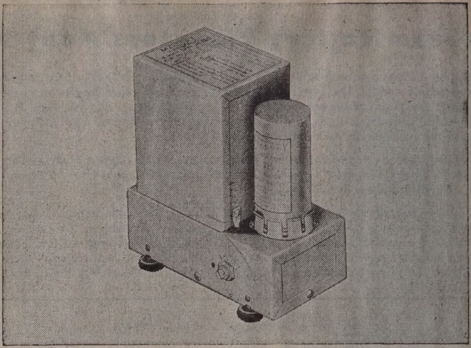
C
8

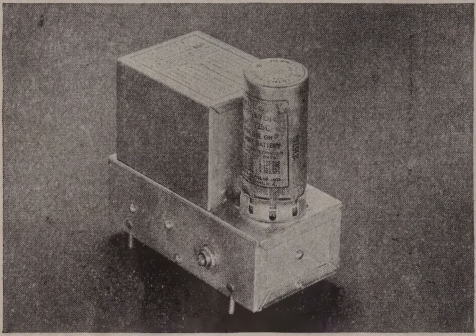
MALLORY VIBRAPACK* POWER SUPPLIES



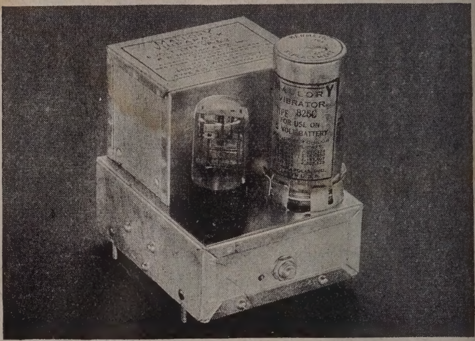
Type VP-554H • VP-F558



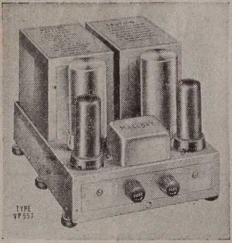
Type VP-552 • VP-G556



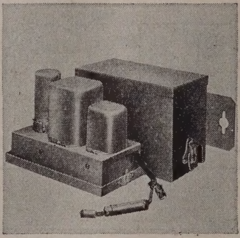
Type VP-551



Type VP-553



Type VP-555H • VP-557

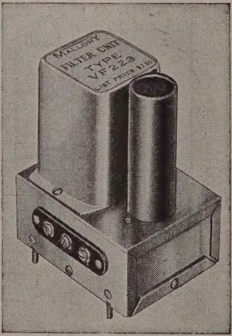


Type VP-540

Type VF-223 Audio Filter

● A complete audio filter system for use with all single-unit Vibrapacks. Designed to give maximum suppression of hum with minimum voltage drop. Especially recommended for applications which are sensitive to hum, or where voltage regulation is important as in Class "B" audio amplifiers.

* REG. U. S. PAT. OFF.



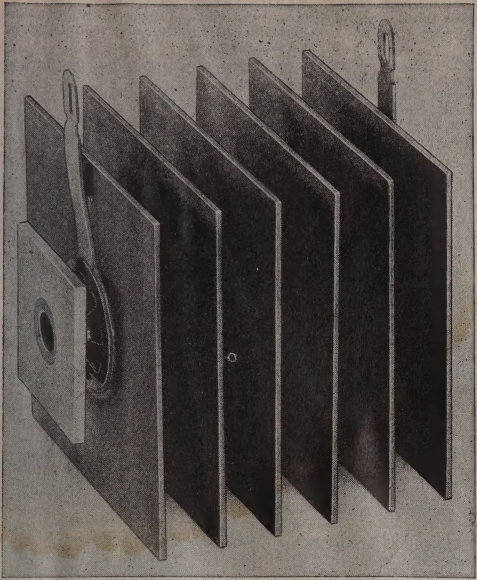
NOISE SUPPRESSION

● Vibrapacks are equipped with built-in noise suppression equipment. Type VP-555 also includes an efficient low-frequency hum filter. Type VP-557 incorporates the first input filter condenser only. Other Vibrapacks do not include the high-voltage hum filter. High-voltage filter requirements are similar to equivalent AC power packs.

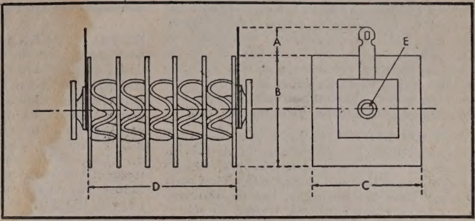
Catalog Number	Nominal Operating Voltage	Nominal Output Voltage	Maximum Output Current	Type
VP-540*	6.3	250	60 ma.	Self-Rectifying
VP-551	6.3	125-150 175-200	100 ma.	Self-Rectifying
VP-552†	6.3	225-250 275-300	100 ma.	Self-Rectifying
VP-553	6.3	125-150 175-200	100 ma.	Tube Rectifier
VP-554H†	6.3	225-250 275-300	100 ma.	Tube Rectifier
VP-555H†	6.3	300	200 ma.	Tube Rectifier
VP-557†	6.3	400	150 ma.	Tube Rectifier
VP-G556	12.6	225-250 275-300	100 ma.	Self-Rectifying
VP-F558	32.	225-250 275-300	100 ma.	Tube-Rectifier

*Includes complete audio filter.

†Maximum ratings are for mobile transmitter service. For continuous duty with radio receivers where longer vibrator life is essential, reduce maximum output watts ratings to 75% of listed values.



DIMENSIONS



SELENIUM RECTIFIERS

APPLICATION—Mallory Selenium dry disc metallic rectifiers were designed for use in radio, TV and electronic power supplies as replacement for original equipment components, as more efficient substitutes for tube rectifiers, or for use when building new apparatus.

DESCRIPTION—Mallory Selenium rectifiers are made carefully to controlled standards of quality and from design specifications of proven reliability. Compactness, rugged metal construction and improved temperature dissipation make them well suited for direct replacement in radio, television, and electronic equipment. A choice of stud or conventional machine screw mounting makes them universally adaptable for practically all replacement requirements.

Each rectifier is equipped with an accessory "positioning plate" which may be employed to prevent random rotation of the rectifier on its mounting screw or stud. This plate is adjusted easily and quickly to permit accurate positioning of the rectifier in 90° steps around its axis.

The rectifier is labelled clearly with a descriptive part number which automatically announces the DC output rating of the rectifier in milliamperes. Plate polarity is identified by colored edges on the phenolic end piece, and also by conventional schematic markings.

The maximum RMS input is 130 volts with a peak inverse voltage of 380 volts. Approximate voltage drop is 5 volts. May be operated up to but not exceeding 85°C. Stack Temperature.

MOUNTING—May be mounted in any position, however, adequate ventilation should be provided and care exercised to avoid plates touching equipment chassis or other conductors. All rectifiers excepting Catalog No. 6S35 may be mounted by means of a No. 8 machine screw or the spiral self-tapping stud provided. Catalog No. 6S35 has phenolic case with mounting bracket and solder lugs.

PACKAGING—Individual display carton.

Catalog No.	DC Current Output (Max.)	Peak Current	Dimensions			
			A	B	C	D
6S35*	35 ma	250				
6S65	65 ma	750	13/32″	1″	1″	1 1/16″
6S75	75 ma	900	13/32″	1″	1″	53/64″
6S100	100 ma	1200	13/32″	1¼″	1¼″	53/64″
6S100A	100 ma	900	13/32″	1″	1″	1″
6S150	150 ma	1200	13/32″	1¼″	1¼″	1 1/64″
6S200	200 ma	2000	13/32″	1.6″	1.6″	1″
6S250	250 ma	2000	13/32″	1.6″	1.6″	1 19/64″
6S300	300 ma	2000	13/32″	1.6″	1.6″	1 27/32″
6S350	350 ma	3500	13/32″	2″	2″	1 19/64″
6S450	450 ma	3500	13/32″	2″	2″	1 27/32″

*Measures ⅝″ x ⅝″ x ¾″

P.R. MALLORY & CO. Inc. MALLORY MAGNESIUM-COPPER SULFIDE RECTIFIERS

●

APPLICATION—Mallory Magnesium-Copper Sulfide Rectifiers are time-tried and proved to be the most rugged, dependable rectifiers for those applications requiring low DC voltages at medium and high currents such as battery chargers and eliminators, electroplating, motion picture projector arcs, welding, engine starting, circuit breaker reclosing, solenoid and relays operation, etc.

DESCRIPTION—Mallory Magnesium-Copper Sulfide Rectifiers are all metal in construction, ruggedly assembled under high pressure to withstand severe vibrations and shock. There are no bulbs, liquids, moving parts or sparking contacts. Unlike all other types of rectifiers, they contain no temperature-sensitive films or layers, and have phenomenal ability to withstand abuse and extremes of temperature (—90° to +265°F.). Constant output without circuit adjustments is assured over many years of useful life. Should an accidental voltage surge occur, the rectifying film will "self-heal."

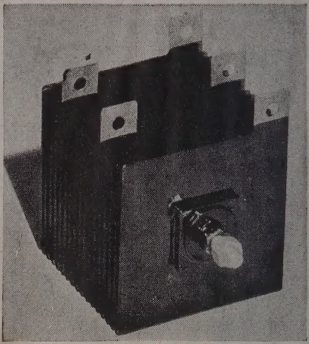
SCOPE AND SIZES—Many sizes are available to supply low DC voltages from watts to kilowatts. A new rectifier engineering data folder is available upon request, covering other sizes for single phase and three phase applications, both convection and fan cooled. In addition to rectifier stacks, P. R. Mallory & Co., Inc. also manufacture a complete line of Rectoplaters (distributed exclusively by the Udylite Corporation, 1651 East Grand Boulevard, Detroit 11, Michigan), Rectotruck Chargers (industrial electric truck chargers available through truck agents).

REPLACEMENT RECTIFIERS—The Mallory Magnesium-Copper Sulfide Rectifiers listed on page 8 are only those popular sizes regularly carried in stock, principally for replacement purposes. These same rectifiers, however, may be used for numerous other applications. For example, the IB8R and IB12R rectifiers are ideal for reversing the direction of HO and O gauge model train locomotives respectively, using wound field motors (as illustrated in the wiring diagram, page 8). IB12C1J, IS16CB7, and IS16B9 rectifiers may be readily used to assemble tapering battery chargers as illustrated in the wiring diagram. The IS24B9 rectifier may be used to make up a battery eliminator to operate and test modern automobile radio receivers. Other applications immediately suggest themselves, such as electroplating, model and toy train DC power sources, radio filament supplies, chatter-free relay and solenoid operation, electric organ, automotive electrodynamic speaker field supplies, generator fields, telephone and telegraph system power supplies, etc.

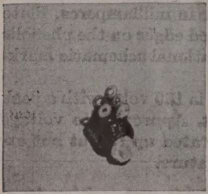
MOUNTING—Rectifiers are available in either foot, bolt, or stud mounting, the latter two insulated from mounting means. Refer to note below table, on page 8, for type of mounting on replacement rectifiers.

HARDWARE—Wherever possible or practical, universal mounting hardware is included to assist in the ready replacement of old rectifier types.

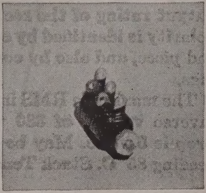
PACKAGING—Rectifiers are packed one per display carton.



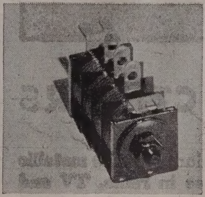
IS16B9



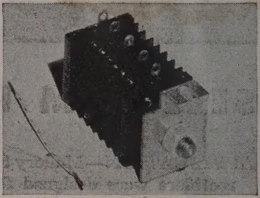
IB4R



IB8R

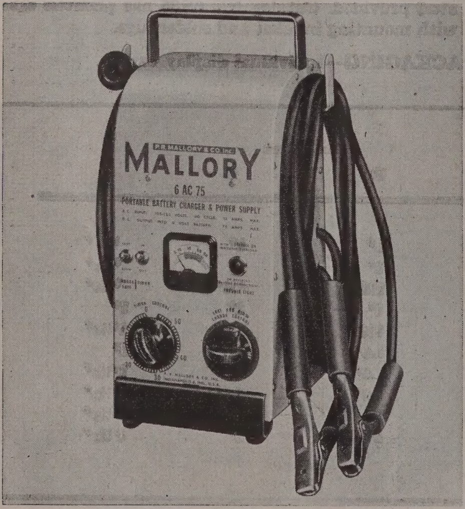


F24H1P



IB12C1J

MALLORY FAST CHARGER AND DC POWER SUPPLY



● The Mallory 6AC75 Fast Charger and DC Power Supply is a portable unit providing a reliable source of 6-volt DC-75 ampere power. The unit may be employed as a continuous power supply, fast charger, or slow charger.

The 6AC75 is ruggedly constructed using full size components. A heavy duty Mallory Magnesium Copper Sulfide metallic rectifier connected in a bridge of full-wave circuit is cooled automatically by means of a built-in electrically operated fan. The unit is protected by a strong sheet steel cabinet finished in rust-resistant and corrosion-free white enamel. Output is indicated by means of an easy-to-read 2¼″ ammeter.

Three rates of fast charge, and three rates of slow charge may be employed by means of a special panel switch. A 57 minute timer is built into the timer control switch to cut the timer in and out of the circuit as required. Two self-reclosing overload circuit breakers are used in the input circuit to prevent overloading. Any overloading is indicated by the flashing of a light bulb connected across the circuit breakers.

The unit is completely packed in one carton.

Catalog No. 6AC75

SPECIFICATIONS—**Cabinet**—7¼″ x 6½″ x 15″. **Weight**—31 lbs. net. **Shipping Weights**—34 lbs. **AC Input**—105-125 V., single phase 60 cycle. **DC Output**—75 amperes maximum at a nominal rating of 6 v. when used as a fast charger in a three-cell battery. Unfiltered output of 60 amperes maximum when used as a continuous power supply. **DC Cables**—Two 12 ft. long, heavy-duty, rubber-covered cables, equipped with large copper battery clamps. **AC Cables**—6′ long abrasion resistant, rubber-covered line cord. **Cable Storage**—Special racks on side provide for storage of cables when not in use.

OVERNIGHT BATTERY CHARGERS

APPLICATIONS—Mallory Automotive and Marine Battery Chargers provide convenient, efficient and economical charging of any storage battery used in automobiles, buses, trucks, tractors, taxicabs, small boats, airplanes, and on the farm. Taper charging (an automatically decreasing charging rate) is designed into all Mallory chargers to prevent damage to battery plates and to insure maximum battery life. These chargers also are ideal for charging any 6 or 12-volt storage battery used in industrial applications, engineering and research laboratories, test equipment, and service benches, etc.

Although designed principally for storage battery charging, Mallory Automotive and Marine Battery Chargers may be used for numerous other applications. They provide an ideal power source for electroplating, model and toy trains, telegraph systems, relays and solenoids, vending machines, electric organs, generator fields, etc. In conjunction with an adequate filter they may be used as a power source for farm and portable radio filaments, auto radio receivers, telephone systems, loud speaker fields, exciter lamps, scientific apparatus, etc.

DESCRIPTION—The heart of these chargers is the Mallory Magnesium-Copper Sulfide all-metal rectifier. Unaffected by temperature and able to withstand phenomenal abuse, they provide stable output without adjustment over long life. With an exclusive self-healing feature, Mallory rectifiers have been time-tested and proved to be the most rugged dependable rectifier for battery-charging applications.

Mallory Automotive and Marine Battery Chargers are made in five models to cover the complete charging field from battery boosters to fast chargers. All chargers are conservatively designed with circuit protection and meters where required, and large capacity battery clips for ready connection to battery posts. All models are designed for operation from 115-volt 60-cycle power lines and are equipped with ample lengths of both AC and DC cables.

MOUNTING—All chargers are readily portable. They may be placed anywhere: in the car, on the garage floor, on a bench, etc. The small models are equipped with two holes for wall mounting where desirable.

ACCESSORIES—Although equipped with battery clips, a readily attachable polarized dashboard plug and receptacle (No. R-652) or cigarette lighter plug (R-655) are available as accessories for simple installation in an automobile. The addition of one of these receptacles makes possible simple plug-in connection of the charger to the car battery. Extra battery clips (No. R-653) are available. Automatic timer control (No. R-654) is offered for use with battery chargers to control the charge. It may also be used with many household appliances.

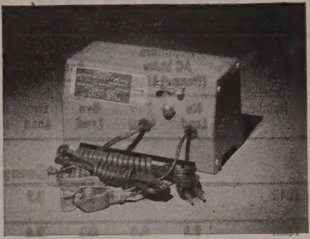
PACKAGING—One charger per cardboard shipping carton.

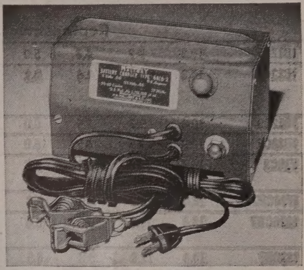
No. R-652—Polarized Dash Receptacle and Plug for use with these chargers.

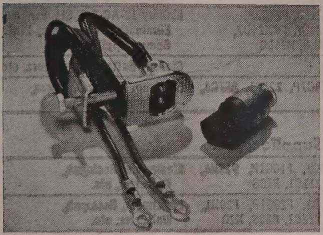
No. R-653—Extra Battery clips.

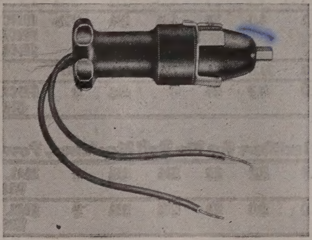
No. R-655—Cigarette lighter plug.

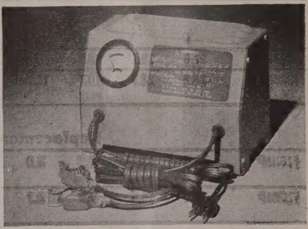
No. MMF-12—Specially designed filter for use in conjunction with 6-AC-4, 6-AC-6, 6-AC-10 chargers. Efficiently reduces AC ripple when these chargers are used as a DC power supply. May also be used with 6-AC-75 where max. current does not exceed 20 amps. 12,000 mfds capacity @ 12 volts. Dimensions—4⅛" x 4⅝" x 2 1/16".


6-AC-4


6-AC-6


R-652

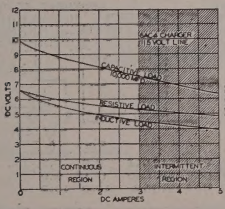

R-655

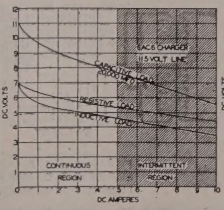

6-AC-10 • 12-AC-5

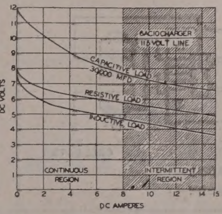
Mallory Charger Catalog Number	Nominal Battery DC Volts	Maximum Charging Rate DC Amps.	Tapered Rate DC Amps.	Approx. 10 Hr. Charge in Amp. Hrs.	Charging Indicator	Approx. Overall Dimensions in Inches			Approx. Shipping Weight in Pounds
						Height	Width	Depth	
6AC4	6	4	2	30	No	4 7/16	7⅜	3 5/16	4¾
6AC6	6	6	4	50	Light Bulb	4 7/16	7⅜	3 5/16	7
6AC10	6	10	7	85	Meter	6	8	4¼	12¼
12AC5	12	5	3	40	Meter	6	8	4¼	10¾

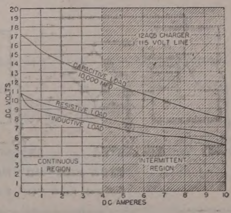
These chargers come with 6 feet of AC and DC cord.

The graphs below show typical charger characteristics when operating into various types of loads.









MALLORY CHART OF REPLACEMENT
MAGNESIUM-COPPER SULFIDE RECTIFIER STACKS

New Catalog Number	Maximum AC Volts (Normal Line)		Approx. DC Volts			Max. DC† Amperes		Approximate Overall Dimensions in Inches			Replacement for Old Catalog Number	Replacement in Equipment
	No Load	Full Load	Inductive Load	Resistive Load	Capacitive-Battery Load	Continuous Duty§	Intermittent Duty	Length	Width	Height		
Ultra-Compact Replacement Rectifiers for Battery Eliminators, etc.												
IB4R	3.6	3.2	1.5	1.7	2.5	1.5	5.0	1	9/16	⅞		G.T.C. Porta-Power Electro Battery Eliminator
IB8R	7.2	6.4	3.1	3.4	5.1	1.5	5.0	1⅜	9/16	⅞		G.T.C. Porta-Power Electro Battery Eliminator
IB12R	10.8	9.7	4.8	5.2	7.8	1.3	5.0	1¾	9/16	⅞		All Power Supplies for Electric Fence
Replacement Rectifiers for Automotive Chargers and Eliminators, etc.												
IB12L5	10.8	9.7	4.5	5.0	7.6	4.5	15.0	2½	2⅛	2⅝		6AC4-2
IB12C1J	10.8	9.8	4.6	5.1	7.7	3.2	24	2¾	1¼	1⅝	12C1, F12C1, IF12C1B, 12C1F, F12G1K, IB12C1, IB12C1M, X12, X112, U12	4-2 Amp. Boosters Mallory E, 3C, 6AC4
IB12C3	10.8	9.7	4.5	5.0	7.6	4.5	24	2¾	1¾	2⅛		Mallory 6-AC-6-2
IB12C5	10.8	9.7	4.5	5.0	7.6	5.3	24.0	3	2⅛	2⅝		6AC6-3
F16C3	14.4	13.0	6.1	6.8	10.2	3.9	24	3	1¾	2⅛	16C3, F16CB3, 16CB3, 16C3B*, XB16*, M16*, X16, X116, ME16	5-3 Amp. Old Chargers Mallory 5535, 250, 320, 310
IF16CB7M	14.4	12.8	5.9	6.6	9.9	6.0	24	3	2½	3 3/16		6-3 Amp. Charger, Mallory 5535A
IS16CB7	14.4	12.8	5.9	6.6	9.9	6.0	24	3¾	2½	3	IS16CB7M	6-3 Amp. Charger Mallory 5535B, 6AC6
IS16B7	14.4	12.8	5.8	6.5	9.8	8.3	24	5½	2½	3	IS16B7M, IB16B7	10-7 Amp. Charger, Mallory 107, 6-AC-10-2
IS16B9	14.4	12.7	5.7	6.4	9.7	11.6	24	5½	3½	4¼		10-7 Amp. Charger, Mallory 6AC10
F20C7	18.0	16.2	7.6	8.4	12.6	4.8	24	4⅜	2½	3 3/16	F20C7P	A.T.R. Battery Eliminators, etc.
IS24C7J	21.6	19.4	9.0	10.1	15.1	4.0	24	4¾	2½	3 3/16	IB24C7, F24C3, F24C3P, F24C7P, F24C7, FCX24D7, 201C1, R24LR, R24LS	Mallory 12-AC-5-2, Stancor Eliminators, Univerters, Pin Game Supplies, etc.
IS24B9	21.6	19.1	8.5	9.6	14.4	11.0	24	7½	3½	4¼		Stancor Battery Eliminators, etc.
IS28C7J	25.2	22.7	10.7	11.7	17.8	4.3	24	6	2½	3	F28C7, F28C7P, 228C1, 267C1, R28LS	5-3 Amp. 12-volt Chargers, Mallory 125, 12AC5
Replacement Rectifiers for Pin Ball Machines, Power Supplies, etc.												
F16HIP	14.4	13.1	6.3	7.0	10.4	2.2	24	2¼	1¼	2	16A1, F16G1, F16G1P, F16HI, W16A1, 211C1, R16S	Electropak, Rectopak, Univerter, etc.
F20HIP	18.0	16.4	7.9	8.7	13.0	2.0	24	2¾	1¼	2	20A1, F20G1, F20G1P, F20H1, W20A1, 212C1, R20S, X20	Electropak, Rectopak, Univerter, etc.
F24HIP	21.6	19.7	9.6	10.4	15.7	1.9	24	3	1¼	2	F24G1, F24G1P, F24H1, W24A1, 203C1, R24S	Electropak, Rectopak, Univerter, etc.
F28HIPM	25.2	23.0	11.2	12.2	18.4	1.7	24	3¼	1¼	2	F28G1, F28G1P, F28H1, F28HIP, W28A1, F28H1MP, 210C1, R28S	Electropak, Rectopak, Univerter, etc.
F32HIPM	28.8	26.2	12.8	14.0	21.0	1.6	24	3¾	1¼	2	F32G1, F32G1P, F32H1, F32H1P	Electropak, Rectopak, Univerter, etc.

NOTE: All rectifiers are single phase, full wave, bridge type.

Mounting Prefix: IB=Insulated Bolt; F=Grounded Foot; IF=Insulated Foot; IS=Insulated Stud.

P suffix designates reverse polarity stacking. Center terminal is DC positive.

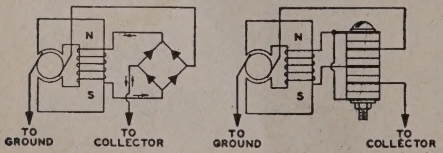
J suffix designates universal construction with loose mounting feet for foot, bolt or stud mounting replacement.

†To determine AC Amps: Multiply the DC amps by the following factors: Inductive load by 1.1; resistive load by 1.2; capacitive load by 1.4.

*Use base from old rectifier.

§Ratings given are for resistive and inductive loads. To determine the Max. continuous DC amp. rating for capacitive and battery loads multiply these ratings by 0.82.

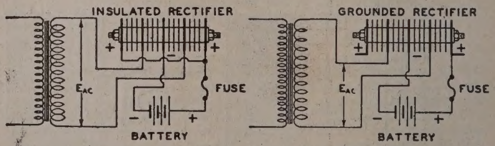
MODEL TRAIN LOCOMOTIVE REVERSING CIRCUITS



IB8R FOR "HO" GAUGE

IB12R FOR "O" GAUGE

TYPICAL BATTERY CHARGING CIRCUITS



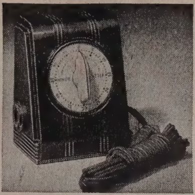
	E_{AC}	I_{AC}
FOR 4-2 D.C. AMPS. USE IB12C1J	9.8	5.7
FOR 6-3 D.C. AMPS. USE IS16CB7	11.1	8.0
FOR 10-7 D.C. AMPS. USE IS16B9	12.0	13.5

MALLORY SPECIAL COMPONENTS AND POWER SUPPLIES

Automatic Timer Control

● The Automatic Timer Control has variable time setting up to 60 minutes. Contacts rated 20 amperes, 115 volts AC or 10 amperes, 230 volts, (suitable for DC loads). Also ideally suited to control lights, sunlamps, radios, fans, heating devices and numerous other electrical household appliances.

Catalog No. R-654



Mallory Vibrator Checker

● The Mallory 6VT1 vibrator tester has been designed as a companion unit to the famous Mallory 6RS10 filter rectifier power supply to test directly, without adaptors, most of the popular vibrators and all of the passenger car radio vibrators used since 1940. As either 6X5 or 0Z4 rectifier tube plugs into the front panel, interrupter vibrators can be tested in conjunction with the rectifier tube with which they normally work in the equipment. Defective vibrators or rectifiers can readily be determined by the substitution method. Self rectifying vibrators are tested by removing the rectifier tube. Either shunt or separate drive vibrators can be tested of any frequency from 100 to 250 cycles. The condition of the vibrator being tested may be read directly from the "good-bad" meter scale.

Catalog No. 6VT1

MALLORY VIBRATOR DATA BOOK

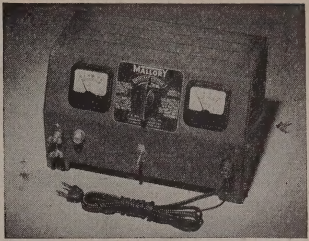
Complete . . . original . . . easy to read. Answers all your questions about vibrator power supplies. It's packed with information that cannot be duplicated anywhere else; information gained by Mallory in sixteen years of specialized power supply experience. The demand for this book is large—so order your copy now through your Mallory Distributor.

MALLORY

2nd EDITION
TV SERVICE ENCYCLOPEDIA

Page after page of replacement information
for all pre-war and post-war receivers.

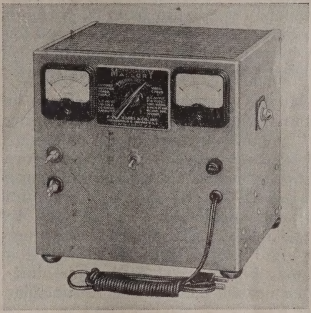
Mallory 6RS10 Bench Power Supply



● The Mallory 6RS10 6 volt power supply has been designed as a convenient source of DC current wherever 110-115 volt AC current is available. It is particularly suited for testing of automobile radio sets and has ample power to operate those with electrical tuning mechanisms. DC voltage is continuously variable from 0 to 8 volts. The unit may be safely operated continuously at 10 amperes and intermittently at 20 amperes with 10,000 mfds. of filter capacitance.

The power supply is fully equipped with a 0-20 ampere DC ammeter, a 0-10 volt DC voltmeter, a self resetting circuit breaker in the DC line, a switch and fuse in the AC line, and a six foot AC cord. Overall dimensions: 6¾″ high, 10⅜″ wide, and 5½″ deep. Shipping weight approx. 13 lbs.

Catalog No. 6RS10



Mallory 6RS25 Heavy Duty Six Volt DC Power Supply

● The Mallory 6RS25 6-volt 25 ampere rectifier type power supply is designed to replace storage battery charger combinations for bench testing medium power 2-way mobile-phone equipment. It may also be utilized for non-radio uses requiring well-filtered low voltage DC in the 25 ampere range. Heavy sheet-steel housing makes it adaptable for use in garages as mobile radio bench equipment.

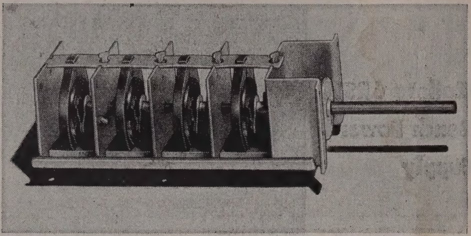
The 6RS25 operates from a standard 115 volt 60 cycle source to supply DC voltage from 0 to 8 volts at continuous or variable loads of 0 to 25 amperes. Intermittently, it will supply a maximum of 40 amperes at 6 volts.

An adjustable variable control allows quick selection of any voltage from 0 to 8 at 0 to 25 amperes. Thirty-thousand mfds. of filter capacitance free the unit from RF and 60 cycle line interference. A 0-10 volt DC voltmeter and a 0-20 ampere DC ammeter are included.

Conduction cooling of the full-wave metallic rectifier, automatic overloading protection, and a self resetting circuit breaker insure long life. A voltage stabilizer for no-load to full-load conditions gives additional protection.

Overall dimensions—11″ high, 10½″ wide, 8¾″ deep overall. Shipping weight—26 lbs.

MAKE SURE!
MAKE IT MALLORY!



Type 8304 Illustrated

Mallory Spiral Inductuner*

APPLICATION—The two, three, and four (illustrated above) gang Spiral Inductuners* are variable inductance tuning devices designed to provide efficient front end tuning in deluxe television and FM receivers and boosters. In addition, amateurs, experimenters, and industrials have found the Inductuner* particularly satisfactory for the tuning requirements of VHF communication receivers and general purpose test equipment. When used in conjunction with suitable tubes and a minimum of circuit wiring these Inductuners assure accurate, noise-free, and continuous tuning of the entire frequency spectrum from 52 through 216 megacycles. The Inductuner eliminates the need for band switches, plug-in coils, turret coil assemblies or complicated circuit wiring when used for this purpose.

DESCRIPTION—Models with either two, three, or four separate variable inductors are available. Tuning is accomplished in all models by means of a single ¼″ shaft to vary the inductance of each of the inductors simultaneously from the front of the equipment using the Inductuner. Automatic stops at the maximum and minimum inductance positions are provided to prevent damage to the inductors, and each Inductuner is equipped with a rigid metal bracket to which a suitable tuning dial may be attached. Suitable mounting holes are provided on the base of the Inductuner for chassis mounting.

The individual coils have a maximum inductance of .985 uh and a minimum inductance of .025 uh. Total shaft turns are 5.925+.060—.000.

SHAFT DESCRIPTION—Each Inductuner has a 2½″ shaft—¼″ diameter.

ACCESSORIES—None.

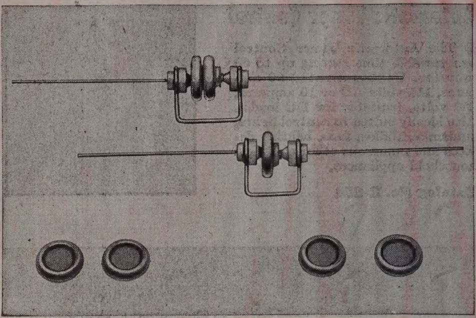
PACKAGING—One Inductuner per display carton.

Catalog Numbers	Number of Gangs	Dimensions†
8302	2	3⁹⁄₁₆″ x 2″ x 2⅛″
8303	3	4¹¹⁄₁₆″ x 2″ x 2⅛″
8304	4	5⅞″ x 2″ x 2⅛″

†Excluding lugs and shaft

Inductuner*—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163644, 2,163645, 2,163646, 2,163647, 2,260877, 2,377789, 2,377790, 2,399060, 2,405890, 2,443020, 2,443822. Other patents applied for.

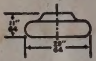
Mallory R. F. Coil—for use with Inductuners, boosters, and TV front ends. Catalog No. TV-300.



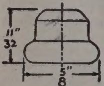
Grid Bias Cells

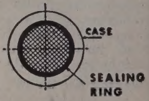
● Mallory Grid Bias Cells are small acorn-shaped, self-contained devices. The metal container or cup is the negative electrode. The black disc is the positive electrode.

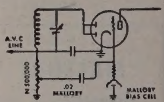
BC-3, BC-5



BC-2







TP423

Application

The principal use of Mallory Grid Bias Cells is in the biasing of the first audio amplifier tube in modern high-gain receivers. Diagram of a typical circuit is shown at right. The bias cell does not need to be by passed to ground.

Correspondence is invited regarding the application of Mallory Grid Bias Cells.

Characteristics

The no-current potential of Mallory Grid Bias Cells is within plus or minus 10% of their rated voltage.

Current—The cells are strictly potential or voltage cells for biasing class "A" amplifier tubes and should not be used for biasing power tubes or oscillators; or for any circuit where direct current may flow through, or be drawn from, the cells.

Temperature—The cells may be used at temperatures from 0°F to 140°F. The voltage of the cells remains reasonably constant throughout this wide temperature range. It is recommended, however, that wherever possible the bias cells be placed in the coolest location.

Humidity—The cells exhibit no change in characteristics when exposed to a relative humidity of 90% at 120°F.

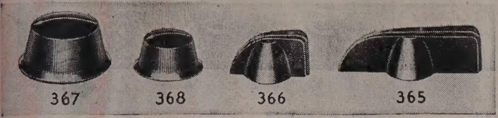
Impedance—Mallory Grid Bias Cells are non-reactive at audio frequencies. The DC resistance of the cell ranges between 10,000 and 40,000 ohms.

Noise—The cells do not cause noise.

Cat. No.	Description
BC-2*	1¼-volt Grid Bias Cell (packed 10 to box)
BC-3	1½-volt Grid Bias Cell (packed 10 to box)
BC-5	1¾-volt Grid Bias Cell (packed 10 to box)
GB11A*	Cell Holder, 1-cell capacity
GB11B*	Cell Holder, 1-cell capacity
GB12*	Cell Holder, 2-cell capacity
GB13*	Cell Holder, 3-cell capacity
GB14*	Cell Holder, 4-cell capacity
GB15	Cell Clip, 1-cell capacity for BC-2 or 2-cell holding capacity for BC-3 or BC-5
GB16	Cell Clip, 2-cell capacity for BC-2 or 4-cell holding capacity for BC-3 or BC-5
GB17	Cell Clip, 1-cell capacity for BC-3

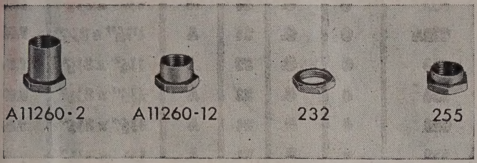
*Will be discontinued when present stocks are exhausted.

MALLORY SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS



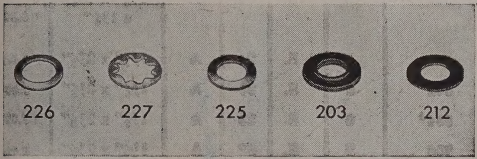
Knobs

Cat. No.	Description
364	1¹⁄₁₆″ Dia. Similar to 368, but with pointer at base. Black
365-1	2¼″ Bar Type Knob, Black
366-1	1¼″ Bar Type Knob, Black
366-R-1	1¼″ Bar Type Knob, Red
367-1	1½″ Dia. Round Knob, Black
368-1	1⅛″ Dia. Round Knob, Black



Mounting Nuts

Cat. No.	Description	Thread	Dimension
232	Flat Hex Mounting Nut.	⅜-32	½ x ³⁄₃₂
255	Hex Mounting Nut.....	⅜-32	½ x ⁷⁄₆₄ x ⁷⁄₆₄ shoulder nut
A-11260-2	Hex Mounting Nut.....	⅜-32	½ x ⁷⁄₆₄ x ¹⁵⁄₃₂ shoulder nut
A-11260-12	Hex Mounting Nut.....	⅜-32	½ x ⁷⁄₆₄ x ⁷⁄₃₂ shoulder nut

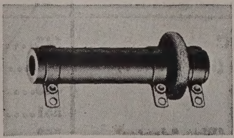


Washers

Catalog No.	Description and Dimensions
203	Extruded Washer—Fiber—¾″ O.D. x ⅜″ I.D. x ⅟₁₆″; Extruded ½″ x ⅟₃₂″ For Set See No. 212 Flat Washer.
212	Flat Washer—¾″ O.D. x ⅜″ I.D. x ⅟₃₂″; Bakelite
225	Metal Washer—Nickel Finish—⅝″ O.D. x ⅜″ I.D. .040 Brass
226	Metal Washer—Nickel Finish—⅝″ O.D. x ⁷⁄₁₆″ I.D. .040 Brass
227	Lock Washer—Cadmium Plated Steel—¹¹⁄₁₆″ O.D. x ²⁵⁄₆₄ I.D.

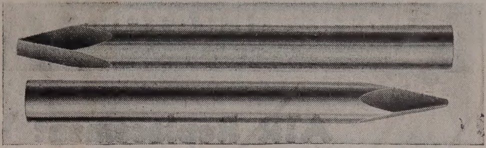
TYPE VC-101

Videocoupler



● The Mallory VC-101 Videocoupler is a compact inter-stage coupling unit for use in the wide-band amplifiers commonly found in television, radar and oscilloscope equipment. It consists of peaking inductances and a load resistance which provide an essentially flat frequency response to 4 mc. per second. It is designed to work into a terminating capacity of 22.5 mmfd. When used with a 6AC7 tube in a proper circuit, a stage gain of approximately 25 may be realized.

Mounting space required: 1¾″ long x ¾″ in diameter; max. dissipation 2 watts; finish, high-temperature enamel. Use a No. 6 bolt through the core for mounting.



Soldering Iron Tips

No. 311—Replacement tip for soldering irons that are turned on for short periods only. Heats quicker than No. 312, but is not as long wearing. Made of a special Mallory copper alloy long in use as a welding tip material. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style with "screw driver" point.

No. 312—Replacement tip for soldering irons that are used continuously for long periods of time. Made of a special Mallory copper alloy of great hardness and high electrical conductivity. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style, with "screw driver" point.

Dial Plates

For Mallory Circuit Selector, Tap and All-Wave Switches. (Plates to match Mallory Adjustable Resistors are on page 10, Mallory Controls section, of this catalog.

OFF
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MALLORY
INDIANAPOLIS
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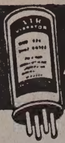
17
MALLORY
INDIANAPOLIS

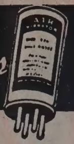
Neat-appearing Dial plates with easy-to-read aluminum figures clearly etched on solid black background. Dimensions are 1¹³⁄₁₆″ in diameter with ⁷⁄₁₆″ hole, with figures ⁷⁄₆₄″ high. .020″ aluminum stock.

For all types 3100J, 3200J Switches with 1¹¹⁄₁₆″ base. 20 degree spacing between numerals. Cat. No.	For all Switch types 1200L, 1300L and 1¼″ base 3100J, 3200J. 30 degree spacing between numerals. Cat. No.	Marking
	372	1 to 2
453	373	1 to 3
454	374	1 to 4
455	375	1 to 5
456	376	1 to 6
457	377	1 to 7
458	378	1 to 8
459	379	1 to 9
460	380	1 to 10
461	381	1 to 11
462	382	1 to 12
463		1 to 13
464		1 to 14
465		1 to 15
466		1 to 16
467		1 to 17
468		1 to 18
472		Off 1 to 2
473	383	Off 1 to 3
474	384	Off 1 to 4
475	385	Off 1 to 5
476	386	Off 1 to 6
477	387	Off 1 to 7
478	388	Off 1 to 8
479	389	Off 1 to 9
480	390	Off 1 to 10
481		Off 1 to 11
482		Off 1 to 12
483		Off 1 to 13
484		Off 1 to 14
485		Off 1 to 15
486		Off 1 to 16
	*394 Special	1 to 24
	†487 Special	1 to 5
	‡488 Special	1 to 4

*15° Spacing Between Numerals
†60° Spacing Between Numerals
‡90° Spacing Between Numerals



ATR VIBRATORS *have Ceramic Stack Spacers*



ATR Replacement Vibrator Specifications

N.S.—Non Synchronous S.—Synchronous Frequency: 115 Cycles except as noted.

Type No.	Voltage	Type	Base Dia.	Can Style	Dimensions	List Price
303	6	N.S.	17	J	1½" x 1⅜" x 2½"	$5.75
324	6	N.S.	1	A	1½" x 3⅛"	4.45
324A	6	N.S.	2	A	1⅝" x 3⅝"	4.45
324B	6	N.S.	1	A	1^15/16" x 3½"	4.45
324C	6	N.S.	2	A	1⅝" x 4¾"	4.45
325	6	N.S.	51	A	1½" x 2⅞"	5.75
328	6	N.S.	4	A	1½" x 3⅛"	4.45
335	6	N.S.	9	A	1⅝" x 3⅝"	4.45
337	6	N.S.	14	A	1^15/16" x 3½"	5.75
338	6	N.S.	9	C	1½" x 3⅛"	4.45
340	6	N.S.	1	A	1½" x 2⅞"	4.45
345	6	N.S.	9	A	1½" x 2⅞"	4.45
347†	6	N.S.	1	A	1½" x 3⅛"	5.75
350	6	N.S.	1	A	1¼" x 2⅜"	4.45
503	6	S.	43	A	1^15/16" x 4½"	8.30
ADAPTER	....	......	......	......	....	1.35
506	6	S.	40	A	1^15/16" x 4½"	8.30
507	6	S.	44	A	1^15/16" x 4½"	8.30
508	6	S.	42	A	1^15/16" x 4½"	8.30
520	6	S.	19	A	1½" x 3⅛"	7.00
520A	6	S.	19	A	1^15/16" x 3½"	7.00

Type No.	Voltage	Type	Base Dia.	Can Style	Dimensions	List Price
521	6	S.	20	A	1½" x 3⅛"	$7.00
522	6	S.	21	A	1½" x 3⅛"	7.00
522A	6	S.	21	A	1^15/16" x 3½"	7.00
523	6	S.	22	A	1½" x 3⅛"	7.00
524	6	S.	23	A	1½" x 3⅛"	7.00
525	6	S.	24	A	1½" x 3⅛"	7.00
529	4	S.	21	A	1½" x 3⅛"	7.00
540	6	S.	27	A	1½" x 3⅛"	7.00
541	4	S.	19	A	1½" x 3⅛"	7.00
541A	4	S.	19	A	1^15/16" x 3½"	7.00
544‡	6	S.	28	A	1⅜" x 2⅞"	7.00
545‡	6	S.	28	A	1½" x 3⅛"	7.00
547	6	S.	29	C	1^15/16" x 3½"	7.00
550	6	S.	32	K	4⅞" x 1¾" x 1¾"	8.30
561	6	S.	24	A	1½" x 2⅞"	7.00
562	6	S.	21	A	1¼" x 3⅛"	7.00
564*	6	S.	23	A	1½" x 2⅞"	7.00
900	2	S.	52	A	1½" x 2⅞"	8.90
2324	32	N.S.	1	A	1½" x 3⅛"	6.50
2401	32	S.	22	A	1½" x 3⅛"	7.75

Recommended Substitutions for Discontinued Vibrators

Discontinued Type	Recommended Replacement
305	303
307	303 (Refer Note 1)
314	324
316	324
317	324
323	340
326	325
327	325

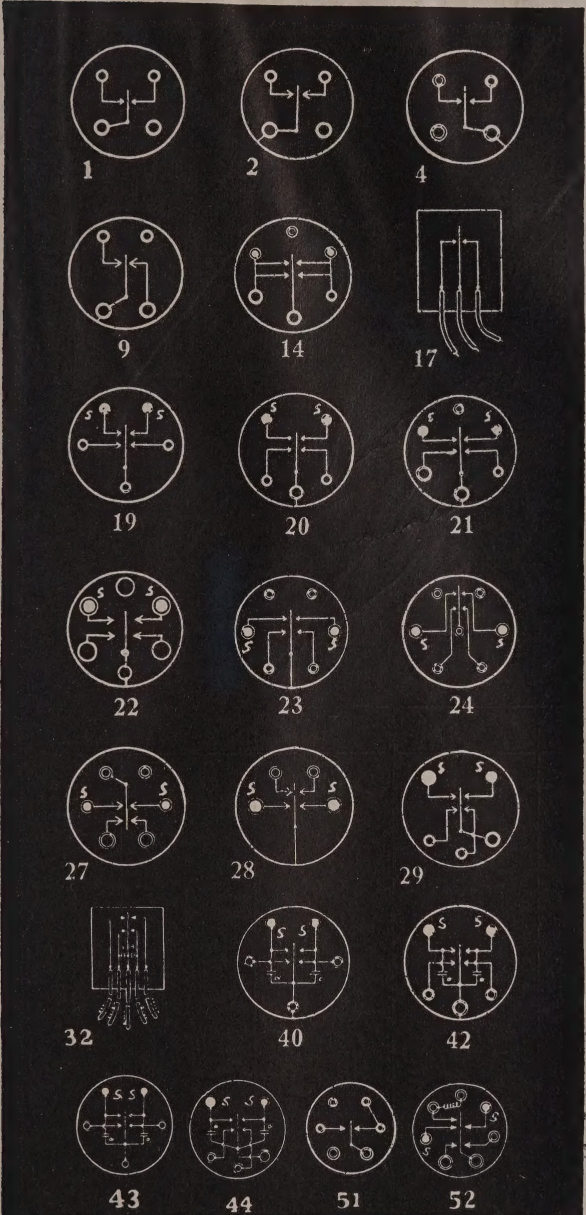
Discontinued Type	Recommended Replacement
330	324C
332	522 (Refer Note 8)
342	325
504	503
505	503 (Plus Adapter)
531	550 (Refer Note 13)
536	524 (Refer Note 10)
537	525

Discontinued Type	Recommended Replacement
543	522A (Refer Note 3)
543A	522A (Refer Note 3)
546	522 (Refer Note 6)
551	550 (Refer Note 14)
553	550 (Refer Note 11)
591	524 (Refer Note 9)
2327	2324 (Refer Note 12)
2403	2324

The Installation Notes listed above are shown in Section G of the ATR Vibrator Manual.

ATR Replacement Vibrator Specifications

Base Diagrams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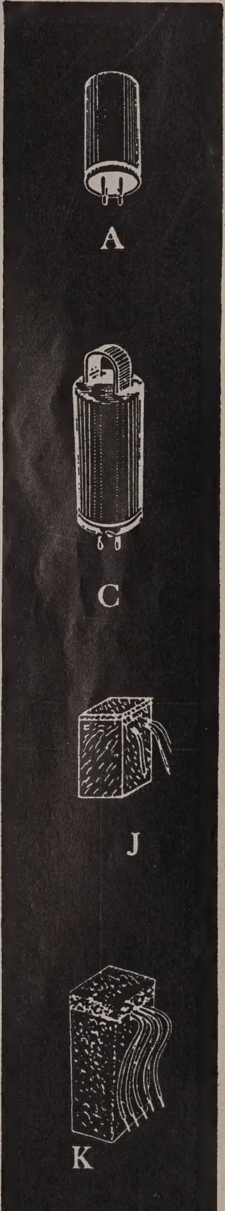
External Views



ATR · VIBRATORS · ATR

AMERICAN TELEVISION & RADIO CO.

ATR *AUTO RADIO* VIBRATORS

ATR
VIBRATOR
TYPE 524
Serial 44705
For use only as recommended on approved Volt D.C. Circuits. See directions.
PATENTS PENDING
ATR
VIBRATOR
REPLACEMENT
TYPE 524
ATR
REPLACEMENT
A QUALITY PRODUCT
ATR VIBRATORS
FULLY GUARANTEED
THE BEST BY TEST

ATR Manufactures a Complete Line of Auto Radio Replacement Vibrators

Ask your ATR Distributor for your Free Copy of the Latest ATR Vibrator Guide

ATR VIBRATORS

feature Ceramic Stack Spacers, and are proven units of the highest quality, engineered to perfection. They are backed by more than 17 years of vibrator design and research, development and manufacturing — *ATR Pioneered in the Vibrator Field.*

ATR VIBRATOR EQUIVALENT CHART

ATR	TYPE	SIZE	ATR LIST PRICE	E-L	MALLORY	RADIART
324	Int.	1½″ x 3⅛″	$4.45	1703	294	5300
328	Int.	1½″ x 3⅛″	4.45	2090	854	5331
335	Int.	1½″ x 3⅛″	4.45	2088	852	5303
340	Int.	1½″ x 2⅞″	4.45	2605	859	5301
508	Syn.	1 15/16″ x 4½″	8.30	2682	273C	5425
520	Syn.	1½″ x 3⅛″	7.00	2688	245	5409
522	Syn.	1½″ x 3⅛″	7.00	2089	246	5411
524	Syn.	1½″ x 3⅛″	7.00	2107	248	5400
525	Syn.	1½″ x 3⅛″	7.00	2687	249	5406
547	Syn.	1 15/16″ x 3½″	7.00	2092	716	5426

THESE 10 POPULAR ATR VIBRATORS MEET 90% OF YOUR SERVICE NEEDS

ATR • ELIMINATORS • ATR
AMERICAN TELEVISION & RADIO CO.

ATR RECTIFIER POWER SUPPLY
ON
OFF
FUSE
VOLTAGE CONTROL
OUTPUT

Illustrates Heavy Duty "A" Battery Eliminator, Type 620C-ELIP, Equipped with Voltmeter, Ammeter and Voltage Control.

ATR "A" BATTERY ELIMINATORS

Specially Designed for Testing and Operating Auto Radios and D. C. Electrical Apparatus on Regular A. C. Lines, 105-125 Volts 50-60 Cycles.

- Fully Automatic and Fool-Proof.
- Eliminates Storage Batteries and Battery Chargers.
- Operates the Equipment at Maximum Efficiency at all Times.
- Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.

SUGGESTED USES:

As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D. C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

Equipped with Full-Wave Dry Disc Type Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610 ELIB—Rated output 6 volts at 10 amperes. Size 6½" x 9⅛" x 8½"; shipping weight, 22 lbs. Code word, "SELIB".

Net Price **$35.64**

TYPE 620C ELIP—Uses dual rectifiers. Size 6½" x 12⅞" x 8½". Shipping weight, 33 lbs. Code word, "HELIN".

Rated Output: 6 volts at 18 amperes or 12 volts at 9 amperes. Either output obtainable by means of simple output terminal switching arrangement.

Net Price **$54.78**

All ATR Eliminators have as standard equipment: On-Off Switch, Voltage Control, Meter(s), Fuse Protection, Rubber Mounting Feet, 6-Ft. All-Rubber Cord Set, and Cabinet of heavy gauge metal having attractive grey-wrinkled finish.

ATR RECTIFIER POWER SUPPLY

Illustrating Standard "A" Battery Eliminator, Type 610 ELIB, Equipped with Voltmeter and Voltage Control.

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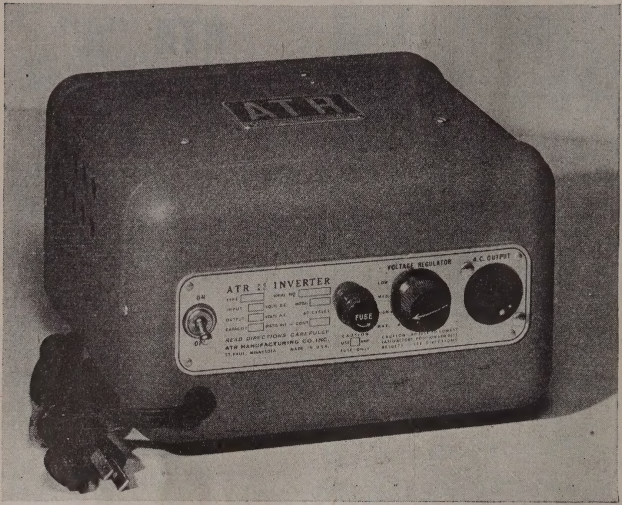
AMERICAN TELEVISION & RADIO CO.



Illustrates all Standard ATR Radio Inverters except types 6 and 12 RSC.

ATR STANDARD AND HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating A. C. Radios, Public Address Systems, Television Sets, Amplifiers, Intercall Systems, and Radio Test Equipment from D. C. Voltages in Vehicles, Ships, Trains, Planes, and in D. C. Districts.

This group of ATR Inverters is specially recommended for use with A. C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free radio reception. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life radio operation. All models indicated are equipped with an ATR ten-contact plug-in Inverter Vibrator of new design and construction having dual arms and utilizing eight 1/4″ diameter tungsten power contacts and two silver alloy driver contacts, insuring increased long life and reliable service. These Inverters also come equipped with four point voltage regulators, which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal; the operating efficiency is in excess of 85%.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Intermittent	Continuous		
6 RSC	6	110 volts	85	75	ARSCD	$54.95
12 RSC	12	110	125	100	BRSCE	54.95
24 RSC	24	110	125	100	NRSCQ	62.70
32 RSC	32	110	150	100	CRSCF	54.95
32B-RHC	32	110	200	180	DRHCG	87.45
50 RSC	50	110	150	100	ERSCH	71.50
110 RSC	110	110	250	150	GRSCJ	54.95
110A-RHC	110	110	325	225	HRHCK	79.75
110B-RHD	110	110	500	350	IRHCL	99.50
110C-RSC	110	110/220	250	150	JRSCM	71.50
220 RSC	220	110	250	150	LRSCO	62.70
220A-RSC	220	110/220	250	150	MRSCP	71.50

Radio frequency interference completely suppressed.

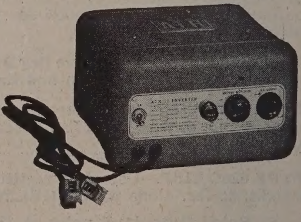
Any of the above type Inverters are available with 220 volt A.C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "GRSCT".

ATR Standard and Heavy Duty Radio Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard Model Radio Inverters, 8⅜″ x 9″ x 5¼″; Shipping weight, 19 lbs.

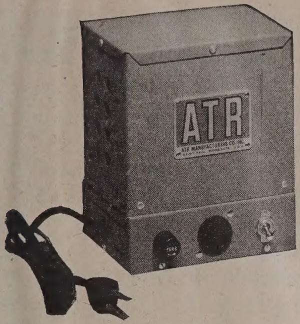
Dimensions of Heavy Duty Model Radio Inverters, 6½″ x 11⅛″ x 8½″; Shipping weight, 30 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.



Illustrates Types 6 and 12 RSC Standard Radio and Industrial Inverters only.

ATR • INVERTERS • ATR
AMERICAN TELEVISION & RADIO CO.



Illustrating all Types LID Inverters except Types 6 and 12.

ATR Low Power INVERTERS

For Operating Small A. C. Motors, Electric Razors, Radios, and Devices of Approximately 35 watts Consumption from 6, 12, 24, 32, 110, and 220 volt D. C. Lines.

This line of ATR Low Power Inverters was specially brought out to meet the insistent demand for a good, low power, inexpensive portable Inverter for operating phonograph and other A. C. motors and a host of small A. C. devices from D. C. voltage sources. These Inverters operate at an efficiency in excess of 90% and are designed for operation of loads having a power factor as low as 60%. They are ruggedly built and powered by a special ATR six-contact plug-in Inverter Vibrator utilizing four ¼″ diameter tungsten power contacts and two silver alloy driver contacts.

Type	Input D. C. volts	A.C. Output 60 cycles	Wattage		Code Word	List Price
			Intermittent	Continuous		
6 LID	6	110 volts	40	35	ALIDM	$35.75
12 LID	12	110	50	35	BLIDN	35.75
24 LID	24	110	50	35	FLIDR	40.15
32 LID	32	110	50	35	CLIDO	40.15
110 LID	110	110	75	50	DLIDP	35.75
220 LID	220	110	75	50	ELIDQ	40.15

Radio frequency interference suppressed.

Any of the above type Low Power Inverters are available with 220 volt A. C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Low Power Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "DLIDT".

Dimensions, 5⅜″ x 4″ x 6⅝″; shipping weight, 7 lbs.

Replacement Vibrators for any of the above Low Power Inverters are available. Be sure to mention the type number as well as model number when ordering. Consult Inverter Vibrator Guide.

ATR STANDARD AND HEAVY DUTY INDUSTRIAL INVERTERS

For Operating A. C. Motors, Electronic Apparatus, Electrical Testing Equipment, and A. C. Electrical Appliances from D. C. Lines.

These units are specially designed for applications as indicated, permitting the use of standard A. C. equipment on D. C. lines. These Inverters operate at an efficiency in excess of 80% and are carefully built and equipped to give the longest possible life and operating satisfaction. All Inverters indicated utilize ATR ten contact plug-in vibrators, and are also equipped with four point voltage regulators as fully described above. These Industrial Inverters are recommended for use with loads having power factors as low as 60%, and as low as 50% for the "P" Inverters indicated. These Inverters should not be used with Neon signs.

Type	Input D.C. volts	A.C. Output 60 cycles	Output Wattage		Code Word	List Price
			Intermittent	Continuous		
6 ISP	6	110 volts	85	75	AISPD	$54.95
12 ISP	12	110	125	100	BISPE	54.95
24 ISP	24	110	125	100	LISPN	62.70
32 ISP	32	110	150	100	CISPE	54.95
32P*-ISP	32	110	150	125	DISPF	71.50
32B-IHP	32	110	200	180	EIHPG	87.45
110 ISP	110	110	250	150	FISPH	54.95
110P*-ISP	110	110	250	150	GISPI	71.50
110A-IHP	110	110	325	225	HIHPJ	79.75
110B-IHP	110	110	500	350	IIHPK	70.75
220 ISP	220	110	250	150	JISPL	62.70
220P*-ISP	220	110	300	150	KISPM	71.50

Illustrating Heavy Duty Models Radio and Industrial Inverters except types 6 and 12. Types 6 and 12 Industrial Inverters are illustrated by small cut on page M-32.

Radio frequency interference not suppressed.

Any of the above type Inverters are available with 220 volt A. C. output at slightly higher prices. In ordering, follow similar directions given above.

ATR Standard and Heavy Duty Industrial Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard Model Industrial Inverters, 8⅜″ x 9″ x 5¼″. Shipping weight, 19 lbs.

Dimensions of Heavy Duty Industrial Inverters, 6½″ x 11⅛″ x 8½″; shipping weight, 30 lbs.

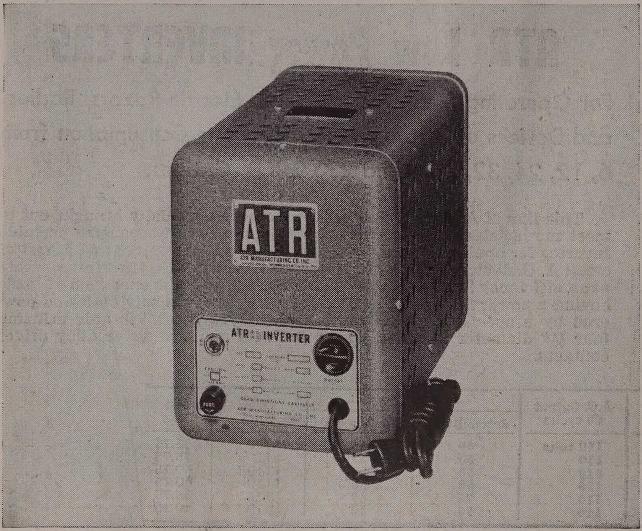
For correct replacement vibrator, consult Inverter Vibrator Guide.

*"P" Inverters are corrected for loads having power factors as low as 50%.

Built-in filter, $13.75 additional.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrates all ATR SUPER HEAVY DUTY Types except Types 6, 12, 32B, and 110B-HSF.

ATR SUPER HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating Large A.C. Radios, Public Address Systems, Tape Recorders, Amplifiers, Intercall Systems, and Radio Transmitters from D.C. Voltages in Vehicles, Ships, Trains, Planes, and in D.C. Districts.

This group of ATR Inverters is especially recommended for use with large A.C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free operation. With ATR Inverters, the need for special equipment is eliminated. They are designed for long-life operation. All models indicated are equipped with ATR twenty-contact plug-in Inverter Vibrators and also with four-point voltage regulators which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. High operating efficiency is provided. These Radio Inverters are recommended for use with loads having power factors in excess of 80%.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter-mittent	Con-tinuous		
6-HSF	6	110 Volts	175	150	AHSFD	$125.00
12-HSF	12	110	250	200	BHSFE	125.00
24-HSF	24	110	250	200	NHSFQ	145.00
32-HSF	32	110	325	225	CHSFF	125.00
32B-HSF	32	110	450	350	DHSFG	240.00
110-HSF	110	110	600	400	GHSFJ	125.00
110B-HSF	110	110	1000	750	IHSFL	249.50
220-HSF	220	110	500	300	LHSFO	145.00

Radio frequency interference completely suppressed.

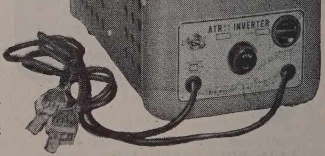
Any of the above type Inverters are available with 220 volt A.C. output at prices slightly higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D.C. Inverter having a 220 volt A.C. output is desired, this would be ordered as Type 110S-HSF covered by code word, "GHSFT."

ATR Super Heavy Duty Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of all Super Heavy Duty Inverters except Types 32B and 110B, 6½" x 12⅞" x 8½"; Shipping weight, 36 lbs.

Dimensions for Types 32B and 110B-HSF Inverters, 14¼" x 8⅝" x 11"; Shipping weight, 60 lbs.

For correct replacement vibrator consult Inverter Vibrator Guide.



Illustrates Types 6 and 12 HSF SUPER HEAVY DUTY INVERTERS only.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.

ATR
ATR INVERTER

Illustrates Model 110AT-RHC. See other pages for other Inverter illustrations.

ATR STANDARD AND HEAVY DUTY

TELEVISION INVERTERS

Specially Designed and Carefully Adjusted for Operating Television Receivers from D.C. Voltages in Vehicles, Ships, Trains, Planes, and D.C. Districts. Automatic Start Unit Optional. Suitable for Use with All Types of Electronic Equipment where Precise Output Frequency is Required.

This group of ATR Inverters has been selected from the ATR line of Standard and Heavy Duty Radio Inverters and Super Heavy Duty Inverters and have specially adjusted ATR Vibrators installed in them to provide the precisely adjusted output power frequency required for the operation of Television Sets. They are exceptionally well filtered to insure interference-free reception. They are equipped with four-point voltage regulators. The operating efficiency is in excess of 85%. They are recommended for use with loads having power factors in excess of 80%.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter-mittent	Con-tinuous		
6T-HSF	6	110 Volts	175	150	THSFD	$135.00
12T-HSF	12	110	250	200	THSFE	135.00
24T-HSF	24	110	250	200	THSFQ	155.00
32BT-RHC	32*	110	200	180	TRHCG	92.95
32T-HSF	32*	110	325	225	THSFF	135.00
110T-RSC	110*	110	250	150	TRSCJ	60.45
110AT-RHC	110*	110	325	225	TRHCK	85.25
110BT-RHC	110*	110	500	350	TRHCL	96.25
110T-HSF	110*	110	600	400	THSFJ	135.00
220T-RSC	220	110	250	150	TRSCO	68.20
220T-HSF	220	110	500	300	THSFO	155.00

*Optional Auxiliary Automatic Plug-in Type Switching Unit having wave form corrector may be ordered if desired for these Inverters at additional cost.

ATR Standard (RSC), Heavy Duty (RHC), and Super-Heavy Duty (HSF) Television Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard (RSC) Model Television Inverters, 8⅜″ x 9″ x 5¼″; Shipping weight, 19 lbs.

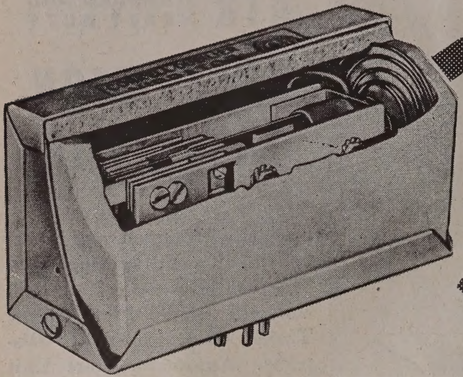
Dimensions of Heavy Duty (RHC) Model Television Inverters, 6½″ x 11⅛″ x 8½″; Shipping weight, 30 lbs.

Dimensions of Super Heavy Duty (HSF) Model Television Inverters, 6½″ x 12⅞″ x 8½″; Shipping weight, 36 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

CORNELL DUBILIER

CAPACITORS — ROTATORS — VIBRATORS — AUTO ANTENNAS — TV ANTENNAS — POWER SUPPLIES



C-D *Heavy Duty* REPLACEMENT VIBRATORS

Catalog No.	Voltage	Frequency in Cycles	Dimensions L. W. H.	List Price
6VB6	6	60	5 9/16 x 2 5/32 x 2 9/16	$12.25
110VB6	110	60	5 9/16 x 2 5/32 x 2 9/16	12 25
330**	12	60	5 9/16 x 2 5/32 x 2 9/16	12.25
390**	12	60	5 5/16 x 2 23/32 x 3⅜	17 10
425**	6	90	4 11/16 x 2 3/16 Diam.	12.25
426**	6	60	5 9/16 x 2 5/32 x 2 9/16	12.25
427	6	60	4 11/16 x 2 3/16 Diam.	12.25
431	6	60	5 9/16 x 2 5/32 x 2 9/16	12.25
490	6.	60	5 15/16 x 2 23/32 x 3⅜	17.10
491	6	60	5⅜ x 2 5/32 x 2 9/16	17.10
1057**	6	120	5 9/16 x 2 5/32 x 2 9/16	12.25
1083**	110	60	5 5/16 x 2 23/32 x 3⅜	17.10
1315	110	60	5 9/16 x 2 5/32 x 2 9/16	12.25
1315H	110	60	5 15/16 x 2 5/32 x 2 9/16	14.10
1339**	110	60	2 23/32 x 5 7/32 x 3 5/16	17 10
1506	32	60	5 5/16 x 2 23/32 x 3⅜	17 10
1640***	110	60	5 9/16 x 2 5/32 x 2 9/16	14.55
1684**	6	120	5 9/16 x 2 5/32 x 2 9/16	21.35
1823**	6	180	3⅛ x 1½ Diam.	9.70
2117	12	100	5 15/16 x 2 23/32 x 3⅜	21.35
2507	45*	60	2⅞ x 1½ Diam.	8 65
2522	45*	60	2⅞ x 1½ Diam.	8.65
2639	6	60	5 15/16 x 2 23/32 x 3⅜	17.10
2641	24	60	5 1/16 x 2⅛ x 2 1/16	15.35
2989	32	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3047	12	60	5 15/16 x 2 23/32 x 3⅜	17.10
3077*	110	60	5 9/16 x 2 5/32 x 2 9/16	14.55
3077V	Use 1315H			
3079	110	60	5 5/16 x 2 23/32 x 3⅜	19.40
3087	12	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3103	6	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3217**	32	90	2 5/32 x 5 9/16 x 2 9/16	15.35
4123	6	60	5 15/16 x 2 23/32 x 3⅜	17 10
11028	110	60	5 9/16 x 2 5/32 x 2 9/16	12 25
11030**	110	60	5 9/16 x 2 5/32 x 2 9/16	1 35
11032**	115	60	2 23/32 x 5 15/16 x 3⅜	.35
32171	32	60	5 9/16 x 2 5/32 x 2 9/16	12.25

C-D "POWERSON" - REPLACEMENT VIBRATORS	
For Model No.	Use Vibrator No.
6R5	3103
6R10	4123
12R8	3087
12RU15	3047
32R8	2989
32RU15	2989
110PA5	2522
110PB5	2522
110R10	1315
110R15	1315
110RT15	1315H
110RT25	1315H
110RT35	3079
110WR15A	1315
110WR15B	1315

*For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
**Available only on Special Order.
***Denotes adjustable frequency vibrator. Use 1000 ohm variable resistor in coil circuit.
- Refer to C-D Catalogs No. 410 & VB for detailed applications and specifications.

RAILROAD Converter VIBRATORS

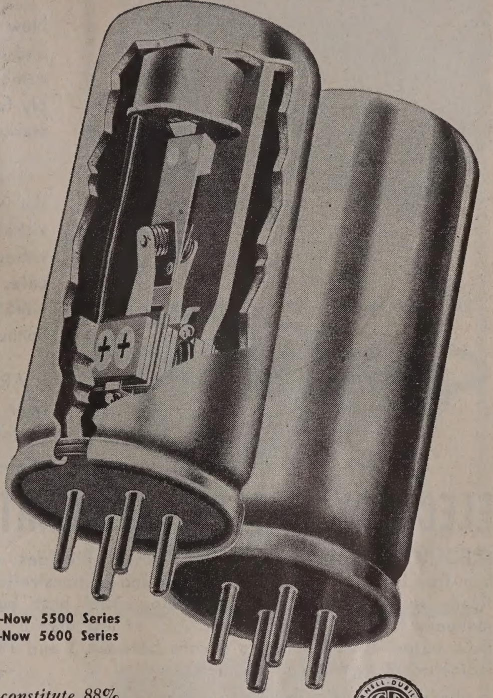
Catalog No.	Voltage	Frequency in Cycles	Dimensions L. W. H.	Net Price	Use in C-D Railroad Converter Model No.
12VG6H	12	60	5 15/16 x 2 23/32 x 3⅜	$9.00	3212A
32VF6H	32	60	5 15/16 x 2 23/32 x 3⅜	9.00	3232 and 3248
64VF6H	64	60	5 15/16 x 2 23/32 x 3⅜	9.00	3264
64VG6H	64	60	5 15/16 x 2 23/32 x 3⅜	9.00	3128
110VF6H	110	60	5 15/16 x 2 23/32 x 3⅜	9.00	3210

WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement.
Prices Subject to Change Without Notice.

For CD Converters see page P-45

CORNELL DUBILIER

*CORNELL-DUBILIER
AUTO RADIO
VIBRATORS



FEATURES

- **C-D designed electronic micrometric equipment removes guesswork in contact point setting and assures consistent high quality.**
- **Exclusive C-D pole piece design and armature weight results in a perfectly-balanced unit with greater efficiency.**
- **Exclusive C-D base mounting results in a full floating unit. That's why C-D vibrators last longer.**
- **Unit completely enclosed in new floating sock—an exclusive with C-D vibrators. Eliminates usual difficulties found in other vibrators.**
- **New stack design will take peak voltages of even 4,200 volts with no damage to vibrator.**

NOTE: ALL CORNELL DUBILIER VIBRATORS HAVE NEW TYPE NUMBERS AS FOLLOWS:

Former C 00 Series—Now 5300 Series
Former D 00 Series—Now 5400 Series
Former CS 00 Series—Now 5500 Series
Former DS 00 Series—Now 5600 Series

EX.—DS04 is now 5604, etc.

Mr. Serviceman: Always have these types on hand. They constitute 88% of all your demand in the ratio shown.

5300	22%	5323P	4%	5400	3%
5301	5%	5326P	11%	5425	3%
5303	5%	5335	9%	5426	7%
5314	4%	5342	10%	5406	2%
5320P	3%				

®

SUBSIDIARY

* Refer to C-D Cat.-VB for detailed applications and specifications.

5300 SERIES Standard Automotive and Household **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5300	$4.90	5314	$4 90	5333	$4.90
5300-32	7.15	5320	4.90	5335	4.90
5301	4.90	5321	4.90	5342	4.15
5303	4.90	5323	4.15	5343	6 35
5304	6.35	5326	4.15	5363	6.35
5307	4.90	5328-32	9.15	5366	6.35
5308	6.35	5331	4.90	5367-32	7.70
5309	4.90				

5400 SERIES Standard Automotive and Household **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5400	$7.70	5411	$7.70	5429	$9.15	5440	$8.55
5404	7.70	5413	7.70	5431-4	8 55	5443	7.70
5406	7.70	5413-4	7.70	5434	7.70	5443-32	8.55
5407	7.70	5416	9.15	5435	7.70	5454	7.70
5408	7.70	5421	7.70	5435-4	7.70	5463	9.15
5409	7.70	5422	8.55	5436	7.70	5464	9.15
5409-4	7.70	5425	9.15	5437	7.70	5468-2	10.70
5410	7.70	5426	7.70	5438	7.70	5469-2	9.80

5500 SERIES Special Application **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5503-12	$7.70	5511-12	$7.70	5516	$6.90
5504	6.35	5513-12	7.70	5517-12	7.70
5506	7.15	5514-4	7.70	5518	6.90
5510	7.15	5515	6.90	5519	4.90
				5560	8.55

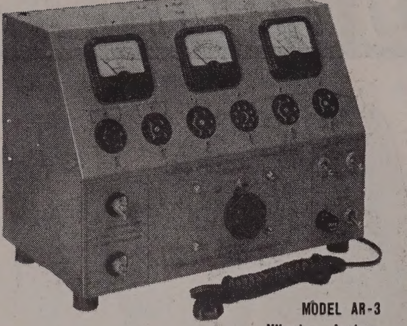
5600 SERIES Special Application **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5604	$9.15	5607-12	$9 95	5610-12	$8.55	5616-12	$ .95
5605	8.55	5607-32	9.95	5614-12	8.55	5620	7 70
5605-12	9.95	5609-12	9.95	5615-12	8.55	5621	6 90
5605-32	9.95	5610	7.70	5615-24	8.55	5622	8.55
5607	8.55			5616	8.55	5623	7 70

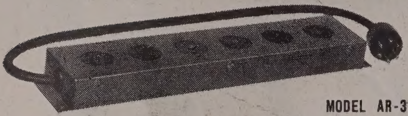
WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement.

Prices Subject to Change Without Notice.

For CD "POWERCON" Battery Charger see page S-89



MODEL AR-3
Vibrator Analyzer
and Power Supply



MODEL AR-3
Adapter Strip

NEW ! ! !

ELECTROX VIBRATOR ANALYZER

New Electrox Vibrator Analyzer provides a *thorough* and *practical* method of vibrator testing. This equipment combines a reliable, heavy-duty, adjustable power supply for operating automobile radios, with an analyzer for making a *complete* auto radio vibrator test.

The Electrox Vibrator Analyzer accurately determines shorted and otherwise defective vibrators and predicts vibrator failures before they occur. It measures starting voltage, current consumption, output voltage and indicates irregular or intermittent operation. It subjects the vibrator to voltage conditions encountered when normally connected to the electrical system of the automobile.

AR-3 ADAPTER STRIP—Plugs into the Vibrator Analyzer and accommodates most vibrators requiring special sockets.

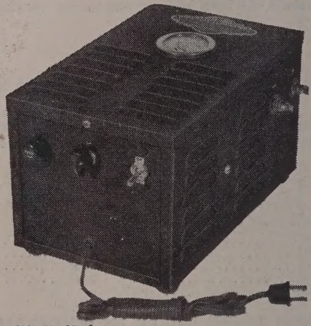
ELECTROX BATTERY ELIMINATORS

ELECTROX "MASTER" MODEL AR-2: Provides smooth, hum-free Direct Current for servicing and demonstrating practically any type and size auto radio, either push button or manually tuned. Delivers 6 volts D.C. at less than 3% ripple. D.C. output is adjustable to 6 volts between 3 and 15 amps., indicated by easily read voltmeter.

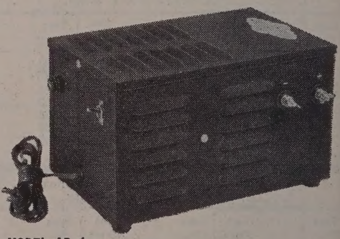
ELECTROX "STANDARD" MODEL AR-1: Practical, low-cost D.C. power supply unit constructed to same standards as Model AR-2 except D.C. output is not adjustable. Delivers 6 volts D.C. at approx. 15 amps. with a low ripple component.

Specifications: Models AR-1 and AR-2

Dimensions—11½" long, 5¼" wide, 6⅝" high.
A.C. Input—115 volts, 1 phase, 60 cycle. Weight—20 lbs.
Equipment—Condenser; transformer; filter choke; Selenium rectifier; cartridge-type fuse, easily accessible from outside of case; rubber feet; 6 ft. A.C. cord and plug. Mounted in sturdy, well-ventilated steel case.

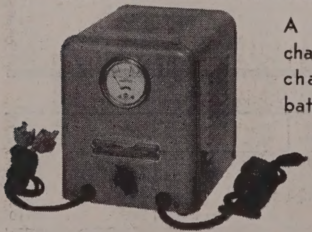


MODEL AR-2



MODEL AR-1

SCHAUER BATTERY CHARGERS



A complete line of battery chargers designed for safe recharging of single storage batteries. Four to 20 ampere capacities. Approved by Underwriters' Laboratories, Inc.

RECTIFIER DIVISION

SCHAUER MANUFACTURING CORP. • Cincinnati, Ohio

ELECTRO BATTERY ELIMINATORS

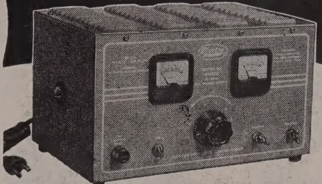
Unmatched in Performance • Quality • Price

Model "B" Power Supply Services DC Equipment from AC Lines. Tests, operates auto radios, relays, 'phone circuits, other low voltage devices. New conduction cooling method increases rectifier power rating 1½ times, lowest cost per ampere output. Ample power to operate two auto radios at once. Peak instantaneous current rating of 35 amps (from 50/60 cycle 115 volt source). Supplies 3 to 9 volts at other ratings. Size: 12" x 7" x 8½". Weight packed: 32 lbs.

New Model "BJ" Junior same except for: lower cost; operates 1 auto radio; 1—12.5 amps. at 6 v. cont. rating; 25 amps. intermittent; AC ripple less than 0.4 v. at 6v. DC 8 amps.; voltmeter 0-10 v.; ammeter 0-20 amps. 5% accuracy; 2000 mfd. filter condenser; 21 lbs. UL

SUPPLIES 1 to 20 AMPS

6 Volts D C, Continuous Duty



Patent Pending

MODEL "B"

Less than 3% AC ripple or hum. Damped volt and ammeters (no wiggling). 8 Heavy-duty power tap adjustments. Voltmeter 0-10 volts 3% accuracy. Heavy-duty selenium rectifiers, switch, transformer, choke. 6000 mfd. filter condenser.

Electro ELECTRONIC EQUIPMENT

Model "S" Compact Converts Battery Radio to AC All-Electric. Operates any 1.4 volt 4 to 6 tube battery radio from 115 volt 50/60 cycle source. Complete filtering insures hum-free silent operation. Easily fits into battery compartment of most radios. Eliminates batteries, saves money. Low operating cost, uses only 11 watts. Has on-off switch, standard plug and sockets.

Cabinet: Blue Hammerloid finished steel. Size: 2⅜" x 3¾" x 6¾". Weight Packed: 3½ lbs.

MODEL "S"

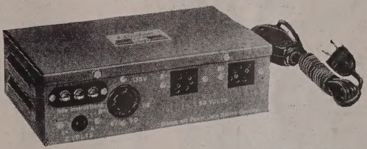
"A" Supply Output: 5-6 tubes (average) 1.4 V at 320 ma.; 4 tubes 1.4 V at 250 ma.; 4 tubes 1.4 V at 200 ma. **"B" Supply Output:** 90 volts DC at 12 ma. **Primary:** 115 volts AC at 60 cycles. Also for 220 volt operation.

Electro ELECTRONIC EQUIPMENT

Model "F" Compact Converts Battery Radio to AC All-Electric. Operates any 2 volt 4 to 6 tube battery radio from 115 volt 50/60 cycle source. Assures continuous, dependable hum-free performance without fading. Eliminates battery replacement costs. Fits most radio battery compartments. Costs only a few cents per hundred hours of operation, uses 11 watts. Has on-off switch, standard plug and sockets.

Cabinet: Blue Hammerloid finished steel. Size: 2⅜" x 4½" x 8". Weight Packed: 5½ lbs.

Model "FH" Compact . . . **with larger filament choke supplying 650 ma. filament current.**



MODEL "F"

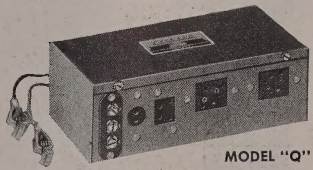
"A" Supply Output: 6 tubes 2 V at 480 ma. — 500 ma. max.; 6 tubes 2 V at 420 ma.; 4-5 tubes (average) 2 V at 325 ma. **"B" Supply Output:** 67, 90, 112, 135 volts DC at 18 ma. **Primary:** 115 volts AC at 60 cycles. Also 220 v. operation.

Electro ELECTRONIC EQUIPMENT

Model "Q" Syncro Power for Areas without 115 V Power Lines. Operates any 1.4 volt 4 to 6 tube battery radio from 6 volt storage or dry battery or Wincharger. Provides "A" and "B" power for over 3 weeks on one storage battery (100 A.H.) charge. Entirely eliminates fading and static. Low storage battery drain, only 1.2 amperes per hour. Eliminates battery replacement costs. Has on-off switch, standard battery clips, plug and sockets.

Cabinet: Blue Hammerloid finished steel. Size: 2⅜" x 3¾" x 6¾". Weight Packed: 3 lbs.

Many Other Models Available



MODEL "Q"

"A" Supply Output: 5-6 tubes (average) 1.4 V at 320 ma.; 4 tubes 1.4 V at 250 ma.; 4 tubes 1.4 V at 200 ma. **"B" Supply Output:** 90 volts DC at 12 ma. Operates from 6 V. DC source.

ELECTRO PRODUCTS LABORATORIES, INC. • ***Pioneer Manufacturers of Battery Eliminators***

A Complete Line of POWERSTAT

VARIABLE TRANSFORMERS

AT YOUR SERVICE

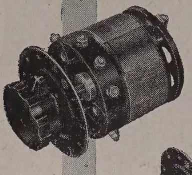
POWERSTAT variable transformers are autotransformers of toroidal core design with a movable brush tap which rotates to deliver a continuously adjustable output voltage from a-c power lines. Features of every POWERSTAT are excellent regulation, high efficiency, conservative ratings, zero waveform distortion, rugged mechanical construction, smooth control and standard mountings. Numerous types are available for 115, 230 and 460 volts, single and three phase operation in ratings from 405 VA to 100 KVA. Most models are offered for either manual or motor-driven operation. In the chart are listed some of the standard types. In addition, oil-cooled and explosion-proof types are available. Therefore, if one of the units listed does not suit your particular need, consult us. There's a POWERSTAT for every variable a-c voltage control requirement.

Line Volt.	Output Volt.	Max. Output Amp.	Output KVA	Frequency	Type	Approximate Net Wt. (Lbs.)	Approximate Shipp. Wt. (Lbs.)	**Standard Motor Speeds
115	0-135	3.0	0.4	‡60	*20	4	6	....
	0-135	7.5	1.0	50/60	*116U	10	11	....
	0-135	7.5	1.0	50/60	116	11	12	T
	0-135	7.5	1.0	50/60	3PF116	11	12	....
	0-135	7.5	1.0	50/60	3TF116	11	12	....
	0-135	15.0	2.0	50/60	1126	21	25	W,X,Y,Z
	0-135	15.0	2.0	50/60	F1126	21	25	W,X,Y,Z
	0-135	30.0	4.0	50/60	1126-2P	48	55	W,X,Y,Z
	0-135	45.0	6.1	50/60	1156	73	80	W,X,Y,Z
	0-135	45.0	6.1	50/60	F1156	74	81	W,X,Y,Z
	0-135	90.0	12.1	50/60	1156-2P	150	170	W,X,Y,Z
	0-135	135.0	18.2	50/60	1156-3P	225	295	W,X,Y,Z
	0-135	180.0	24.3	50/60	1156-4P	330	420	W,X,Y
	0-135	270.0	36.4	50/60	1156-6P	500	600	W,X,Y
230	0-270	3.0	0.81	50/60	*216U	10	11	....
	0-270	3.0	0.81	50/60	216	11	12	T
	0-270	3.0	0.81	50/60	3PF216	11	12	....
	0-270	3.0	0.81	50/60	3TF216	11	12	....
	0-270	7.5	2.0	50/60	*116U-2S	17	22	....
	0-270	7.5	2.0	50/60	*116-2S	18	23	T
	0-270	9.0	2.4	50/60	1226	25	29	W,X,Y,Z
	0-270	9.0	2.4	50/60	F1226	25	29	W,X,Y,Z
	0-270	15.0	4.0	50/60	1126-2S	45	52	W,X,Y,Z
	0-270	28.0	7.5	50/60	1256	73	80	W,X,Y,Z
	0-270	28.0	7.5	50/60	F1256	74	80	W,X,Y,Z
	0-270	45.0	12.1	50/60	1156-2S	144	164	W,X,Y,Z
	0-270	56.0	15.1	50/60	1256-2P	150	170	W,X,Y,Z
	0-270	84.0	22.7	50/60	1256-3P	225	295	W,X,Y,Z
	0-270	112.0	30.2	50/60	1256-4P	330	420	W,X,Y
	0-270	168.0	45.3	50/60	1256-6P	500	600	W,X,Y
460	0-540	3.0	1.6	50/60	216U-2S	17	22	....
	0-540	3.0	1.6	50/60	216-2S	18	23	T
	0-540	9.0	4.9	50/60	1226-2S	53	60	W,X,Y,Z
	0-540	28.0	15.1	50/60	1256-2S	144	164	W,X,Y,Z
	0-540	56.0	30.2	50/60	1256-4PS	330	420	W,X,Y
	0-540	84.0	45.3	50/60	1256-6PS	500	600	W,X,Y
Three Phase								
115	0-135	3.0	0.7	‡60	*20-2D	9	15	....
	0-135	7.5	1.8	50/60	*116U-2D	17	22	....
	0-135	7.5	1.8	50/60	*116-2D	18	23	T
	0-135	15.0	3.5	50/60	1126-2D	45	52	W,X,Y,Z
	0-135	45.0	10.5	50/60	1156-2D	144	164	W,X,Y,Z
	0-135	90.0	21.0	50/60	1156-4D	320	410	W,X,Y
	0-135	135.0	31.6	50/60	1156-6D	490	590	W,X,Y
230	0-230	3.0	1.2	60	20L-3Y	15	24	....
	0-270	3.0	1.4	50/60	*216U-2D	17	22	....
	0-270	3.0	1.4	50/60	*216-2D	18	23	T
	0-270	7.5	3.5	‡60	*116U-3Y	26	36	....
	0-270	7.5	3.5	‡60	*116-3Y	27	37	T
	0-270	9.0	4.2	50/60	1226-2D	53	60	W,X,Y,Z
	0-270	15.0	7.0	‡60	1126-3Y	65	75	W,X,Y,Z
	0-270	28.0	13.1	50/60	1256-2D	144	164	W,X,Y,Z
	0-230	45.0	17.9	50/60	1156L-3Y	215	280	W,X,Y,Z
	0-270	56.0	26.2	50/60	1256-4D	320	410	W,X,Y
	0-270	84.0	39.3	50/60	1256-6D	490	590	W,X,Y
	0-230	90.0	35.8	50/60	1156L-6Y	500	600	W,X,Y
460	0-540	3.0	2.8	‡60	*216U-3Y	26	36	....
	0-540	3.0	2.8	‡60	216-3Y	27	37	T
	0-540	9.0	8.4	‡60	1226-3Y	76	86	W,X,Y,Z
	0-540	28.0	26.2	‡60	1256-3Y	215	280	W,X,Y,Z
	0-540	56.0	52.5	‡60	1256-6Y	500	600	W,X,Y

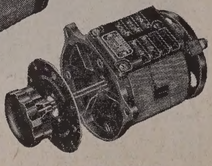
* These units are supplied with an "L" terminal which allows connecting in the field to limit the output voltage to the applied voltage. If "L" type connection is required on other models, the "L" must be included in the type number when ordering.

‡ When these POWERSTATS are "L" connected so that the output voltage does not exceed the applied voltage, the frequency range is 50/60 cycles.

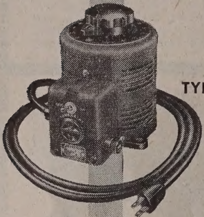
** When a motor-drive is required, prefix the letter "M" together with the speed designation letter to the type number. T — 5 seconds, Z — 6 seconds, Y — 14 seconds, X — 19 seconds and W — 45 seconds for full range travel. Since the driving motors are frequency sensitive, be sure to specify whether 50 or 60 cycles is required. Only manually-operated unit weights are listed. For motor-drives add 10, 11 and 14 pounds to the 116-216, 1126-1226 and 1156-1256 types, respectively.



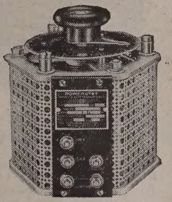
TYPE 20



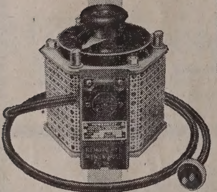
TYPE 116U



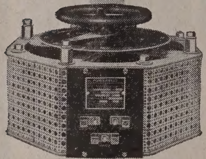
TYPE 116



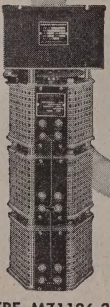
TYPE 1226



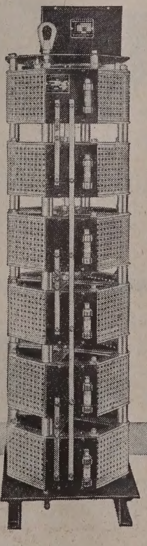
TYPE 2PF1126



TYPE 1156



TYPE MZ1126-3Y



TYPE MW1156-6

WRITE FOR POWERSTAT BULLETIN P 550

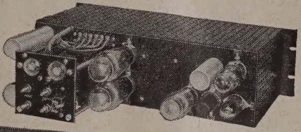
STABILINE *Automatic* VOLTAGE REGULATORS

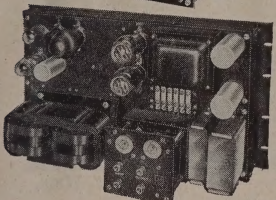
Two types of STABILINE automatic voltage regulators are built by The Superior Electric Company to meet the requirements of maintaining constant voltage to electrical equipment.

TYPE IE INSTANTANEOUS ELECTRONIC

Completely electronic, instantaneous in action, with no moving parts. Waveform distortion never exceeds 3%. Output voltage is held to within ±0.1 per cent of nominal for wide line variations; to within ±0.15 per cent of nominal for any load current change or load power factor change from lagging .5 to leading .9. Standard types listed below.

TYPE IE51002R

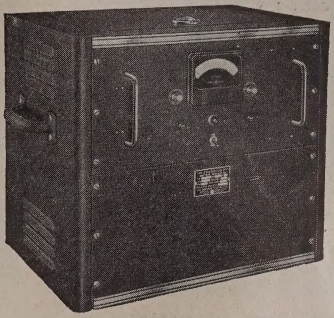




TYPE IE5101R

TYPE EM ELECTRO MECHANICAL

Consists of an electronic detector circuit controlling a motor-driven POWERSTAT variable transformer which feeds a buck-boost auxiliary transformer. Features zero waveform distortion together with insensitivity to magnitude and power factor of load. Has no effect on system power factor. Constant output voltage is maintained regardless of variations in input voltage or load current.



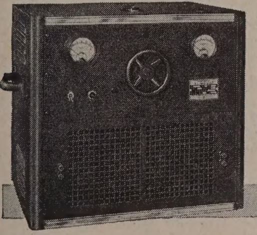
TYPE EM4115

RATINGS TYPE IE

Input Voltage Range	Output Voltage Range	Frequency In Cycles	Load Range In Amperes	Load Power Factor Range	Rated Output KVA	Type
95-135	110-120	60 ± 10%	0 - 2.2		0.25	IE51002
95-135	110-120	60 ± 10%	0 - 2.2		0.25	IE51002R
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005R
95-135	110-120	50 ± 10%	0 - 4.5	.5 lagging	0.5	IEL51005
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005R
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005
195-255	220-240	50 ± 10%	0 - 2.2	to	0.5	IEL52005R
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101R
95-135	110-120	50 ± 10%	0 - 8.5	.9 leading	1.0	IEL5101
95-135	110-120	50 ± 10%	0 - 8.5		1.0	IEL5101R
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201R
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102R
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202R
195-255	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202
195-255	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202R
95-135	110-120	60 ± 10%	0 - 43.5		5.0	IE5105
195-255	220-240	60 ± 10%	0 - 22.0		5.0	IE5205

RATINGS TYPE EM

Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Type
Single Phase					
115	95-135	110-120	17.5	2.0	EM4102
			52.0	6.0	EM4106
			130.0	15.0	EM4115
230	195-255	220-240	32.5	7.5	EM4207
			120.00	27.5	EM4228
460	400-520	420-460	15.0	6.6	EM4407
			40.0	17.6	EM4418
Three Phase					
230	195-255	220-240	25.0	10.0	EM6210Y
			38.0	15.0	EM6215Y
			50.0	20.0	EM6220Y
			113.0	45.0	EM6245Y
			175.0	70.0	EM6270D
460	400-520	420-460	16.0	12.5	EM6412Y
			22.0	17.5	EM6417Y
			33.0	25.0	EM6425Y
			66.0	50.0	EM6450Y
			100.0	75.0	EM6475Y
	420-500	420-460	131.0	100.0	EM64100Y

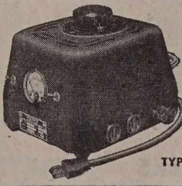


VARICELL

D-C POWER SUPPLIES

provide a stabilized and regulated variable d-c output voltage from a-c power lines. Not affected by line or load changes.

TYPE 13015



TYPE UC1M

VOLTBOX

A-C POWER SUPPLIES

are a compact portable source of variable a-c voltage. Type UC1M operates from 115 volts, 50/60 cycles, single phase lines and delivers 0-135 volts, 7.5 amps. output; Type UC2M from 230 volts, 50 60 cycles, single phase lines to deliver 0-270 volts, 3.0 amps.

5-WAY BINDING POSTS

available in black and red for permanent clamping, spade lug, clip-lead, banana plug, or looping and clamping.

5-WAY BINDING POST

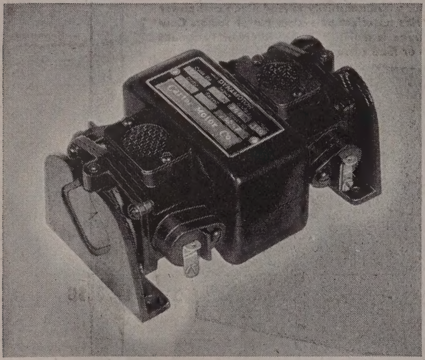
Write 51 Church Street for Product Literature.

THE SUPERIOR ELECTRIC CO.
BRISTOL, CONNECTICUT

WRITE FOR STABILINE BULLETIN S 351

Magmotor Carter *Genemotor*

THE CARTER MAGMOTOR FOR POLICE - TAXICAB - MARINE AND AIRCRAFT RADIO RECEIVERS GEOPHYSICAL AND RESEARCH ELECTRONIC EQUIPMENT



CARTER MAGMOTOR—5⅝" LONG, 3-11/16" WIDE, 2½" HIGH, WEIGHT 4¾ LBS.

Furnished with Rigid Mounting.
Shock Mounting Illustrated, $1.00 List Extra.

Code No.	*DC Input Volts*	*DC Input Amps*	*Dc Output Volts*	*Dc Output MA*	*Duty*	*List Price*
MV1865	5.5	5	180	65	Con.	$48.30
MA250	6	4.3	250	50	Con.	$50.93
MV280	5.5	5.8	200	80	Con.	$50.40
MA265	6	5.4	250	65	Con.	$51.45
MA251	6	8	250	100	Con.	$53.03
MB251	12	3.8	250	100	Con.	$55.65
MA301	6	9.5	300	100	Con.	$53.55
MB301	12	4.6	300	100	Con.	$56.18
MA351	6	10.3	350	100	Con.	$54.60
MAS3515	6	15	350	150	Int.	$55.65
MAS320	6	19	300	200	Int.	$57.75
MVS415	5.5	19	400	150	Int.	$60.38
MBS415	12	8.5	400	150	Int.	$60.38

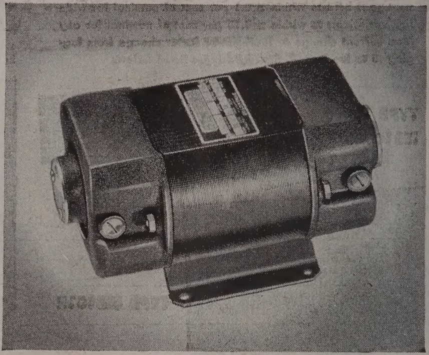
AC AND DC GENERATORS—

The Magmotor is available on special order for AC output up to 220 volts at 120 cycles. DC output up to 400 volts 30 watts continuous, 50 intermittent, depending upon armature speed.

EXTENDED SHAFTS—

Available on all Magmotor models add "S" to end of code number and $5.00 to list.

THE ORIGINAL CARTER GENEMOTOR FOR POLICE - TAXICAB - MARINE AND SMALL AIRCRAFT MOBILE COMMUNICATIONS



3" FRAME GENEMOTOR—7⅛" LONG, 4⅛" WIDE, 3½" HIGH, WEIGHT 10 LBS.

Code No.	*DC Input Volts*	*DC Input Amps*	*DC Output Volts*	*DC Output MA*	*Duty*	*List Price*
420A	6.0	23.4	400	200	Con.	$60.38
420V	5.5	25	400	200	Con.	$63.00
425BS	12.0	12.8	400	225	Int.	$62.35
450AS	6.0	28	400	250	Int.	$60.90
4037AS	6.0	41	400	375	Int.	$71.40
4228VS	5.5	35	420	280	Int.	$67.73
4228VSC	5.8	33	420	280	Int.	$69.30
520AS	6.0	28	500	200	Int.	$61.95
520VS	5.5	31	500	200	Int.	$64.58
5925AS	6.0	42	590	250	Int.	$73.50
617V	5.5	30	600	170	Int.	$63.00
620AS	6.0	29.5	600	200	Int.	$67.73
624VS	5.5	46	600	240	Int.	$71.19
650AS	6.0	39.0	600	250	Int.	$71.19
2" Frame Genemotor— 6⅛" long, 4⅛" wide, 3½" high, weight 8 lbs.						
3515V	5.5	18.0	350	150	Con.	$57.23
3515A	6.0	16.4	350	150	Con.	$54.60
415V	5.5	20.0	400	150	Con.	$59.33
415A	6.0	18.2	400	150	Con.	$56.70
1½" Frame Genemotor— 5-9/16" long, 4⅛" wide, 3½" high, weight 7 lbs.						
210A	6	6	200	100	Con.	$46.20
251A	6	7.9	250	100	Con.	$49.35
351A	6	10.9	350	100	Con.	$51.45

FILTERS — STARTING RELAYS

FILTERS—

Any of the above Carter Genemotors or Magmotors can be furnished with complete filter mounted in metal box mounted below unit. Add "X" to end of code number and following prices. 1½" and 2" Frame Genemotor models and Magmotors, $24.00 list, 3" Frame Genemotor models, $25.00 list.

STARTING RELAYS—

Heavy Duty solenoid contactor starting relays are available for 5.5, 6, 12, 24, 28, 32 and 115 volt DC input. Add "R" to end of code number and $8.00 to list price (Relay draws 1.3 amps at 6 volts). Seldom required on low power Magmotors.

DUTY RATINGS—

Intermittent duty shall be considered 10 seconds on 20 seconds off. Continuous duty is considered 24 hours per day.

INPUT VOLTAGES—

Any Carter Genemotor or Magmotor can be supplied for special input voltages other than 6 volts. For 5.5, 12, 24, 28, 32 or 64 volt input add $2.50 to list. For 115 volt DC input add $3.50 to list.

LINE-O-LIFE* BRUSHES—

All Carter products equipped with exclusive "LINE-O-LIFE" Brushes. Takes guess work out of brush replacements.

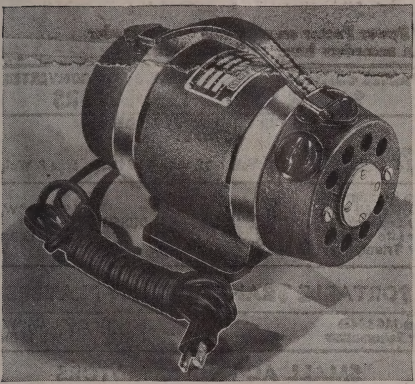
* PATENTED.

See replacement parts reference chart page for other special models, parts and prices.

Carter *Super Converter*

The oldest name in Rotary Power Supplies for Mobile Radio

CARTER SUPER CONVERTER—Changes DC to AC for Amplifiers - Radios - High Power Factor equipment



Carter Super Converter, Less Filter, 8¼″ Long, 4½″ Wide, 5″ High, Weight 13 lbs.

Wherever DC to AC Conversion is necessary, the Carter Super Converter provides an efficient and reliable source of AC power. Standard models are designed for high power factor, non-inductive AC loads such as amplifiers, radio receivers, (requires filtered converter), etc. Ball bearing equipped, 3600 RPM. CAUTION: Standard Super Converters will not satisfactorily operate inductive loads such as AC motors, low power factor transformers, etc.

Manually operated frequency controlled Converters available on special order. Maintain 60 cycle output with a + or — 10% input voltage fluctuation.

Special custom-matched Converters are also available for Wire and Tape Recorders, Sound Projectors, Television Receivers, etc. See Carter Selector Chart on next page.

Overall efficiency 60% AC voltage regulation 15%.

HEAVY DUTY SUPER CONVERTER

10¼″ long, 4½″ wide, 5″ high, weight 19 lbs.

Code No.	DC Input Volts	Amps	AC Output 60 cy. Volts	(Watts)	Type Duty	List Price
K1020C	230	1.3	115	200	Con.	$92.40
K1025C	230	1.6	115	250	Con.	$97.90
D1020C	115	2.6	115	200	Con.	$81.40
D1025C	115	3.2	115	250	Con.	$86.90
H1020C	64	4.8	115	200	Con.	$84.15
H1025C	64	5.3	115	250	Con.	$89.65
C1020C	32	10	115	200	Con.	$84.15
C1025C	32	12	115	250	Con.	$89.65
J1020C	28	12	115	200	Con.	$84.15
J1025C	28	14	115	250	Con.	$89.65
E1020C	24	15	115	200	Con.	$84.15
E1025C	24	19	115	250	Con.	$89.65
B1020C	12	30	115	200	Con.	$84.15
B1025C	12	34	115	250	Con.	$89.65

OUTSTANDING FEATURES

SMALL SIZE—Smallest Rotary Converter. Lightweight.

CARRYING HANDLE

Easier to carry, no more "juggling" with a hot unit.

OUTPUT RECEPTACLE—Convenient plug in AC outlet.

ARMATURE

Double wound, insulated ungrounded winding. Built-in cooling fan.

BALL BEARINGS

Sealed ball bearings require no lubrication or attention.

SPECIFICATIONS

Carter Super Converter, 40 to 150 watts models
8¼″ long, 4½″ wide, 5″ high, weight 13 lbs.
High power factor, 85 to 100%. Less filter.

Code No.	DC Input Volts	Amps.	AC Output 60 cy. Volts	Volt-Amps (Watts)	Type Duty	List Price
K1040C	230	.36	115	40	Con.	$74.80
K1060C	230	.5	115	60	Con.	75.35
K1080C	230	.6	115	80	Con.	75.90
K1010C	230	.8	115	100	Con.	77.00
K1015C	230	1.	115	150	Con.	82.50
D1040C	115	.7	115	40	Con.	63.80
D1060C	115	1	115	60	Con.	64.35
D1080C	115	1.1	115	80	Con.	64.90
D1010C	115	1.7	115	100	Con.	66.00
D1015C	115	2.0	115	150	Con.	71.50
H1040C	64	1.5	115	40	Con.	66.55
H1060C	64	2	115	60	Con.	67.10
H1080C	64	2.2	115	80	Con.	67.65
H1010C	64	2.5	115	100	Con.	68.75
H1015C	64	3.4	115	150	Con.	74.25
C1040C	32	3	115	40	Con.	66.55
C1060C	32	4	115	60	Con.	67.10
C1080C	32	5	115	80	Con.	67.65
C1010C	32	5.5	115	100	Con.	68.75
C1015C	32	7.4	115	150	Con.	74.25
J1040C	28	3	115	40	Con.	66.55
J1060C	28	4	115	60	Con.	67.10
J1080C	28	5.2	115	80	Con.	67.65
J1010C	28	7	115	100	Con.	68.75
J1015C	28	9	115	150	Con.	74.25
E1040C	24	3.5	115	40	Con.	66.55
E1060C	24	4.3	115	60	Con.	67.10
E1080C	24	6	115	80	Con.	67.65
E1010C	24	8.3	115	100	Con.	68.75
E1015C	24	10	115	150	Con.	74.25
B1040C	12	8	115	40	Con.	66.55
B1060C	12	10	115	60	Con.	67.10
B1080C	12	14	115	80	Con.	67.65
B1010C	12	15	115	100	Con.	68.75
B1015C	12	23	115	150	Con.	74.25
A1040C	6	15	115	40	Con.	66.55
A1060C	6	19	115	60	Con.	67.10
A1080C	6	25	115	80	Con.	67.65
A1010C	6	27	115	100	Con.	68.75
A1015C	6	40	115	150	Con.	74.25

FILTERS—Available on all Super Converters. Eliminates Converter noise on most frequencies from 560 KC to 54 MC. Filter mounted in cast aluminum housing below Converter. Add "X" to Code Number and $25.00 to list.

FREQUENCY CONTROL—Manually operated frequency control available on all models. Complete with vibrating reed meter, and rheostat control in aluminum housing. Add $60.00 to list.

VOLTAGE-FREQUENCY—Add $5.00 to list for 50 cycle output. Add $10.00 to list for 230 volt D.C. input.

See Carter Selector Chart for Wire and Tape recorder, Television receivers, etc., custom-matched Converters.

Carter Selector Chart

The oldest name in Rotary Power Supplies for Mobile Radio

Whenever DC to AC Rotary Converters are used to power wire or tape recorders and other similar recording equipment, output frequency must be perfectly matched to assure proper playback performance. All of the equipment listed has been laboratory-tested and Carter Converters custom-designed for each model. Use this Chart to select the Converter designed for each model. Prices of Selector Chart Converters are the same as standard models of similar code number.

Code letter "W" indicates a recorder type Converter.

Average efficiency 60%. Voltage regulation 15%. 70% Power Factor on wire and tape recorder models. Converters require NO FILTER, except when recorders have radio receivers.

CARTER CUSTOM MATCHED 70% P.F. SUPER CONVERTERS

WIRE and TAPE RECORDERS

CARTER CONVERTER MODEL AND DC INPUT

EQUIPMENT MAKE & MODEL	6 Volt	12 Volt	115 Volt	Size & Weight
Air King #750 **Ampro #730-731** **Crescent C-1000A** **Harrison** **Knight Wire** **Webster 7-78-80** **Webster 178-180** **Wilcox-Gay** **Recordio #8U-12** **WireWay**	A1060CW (29 amps drain)	B1060CW (14 amps drain)	D1060CW (1 amp drain)	8¼" L, 4½" W, 5" H Wt. 13 lbs.
Pentron **Astrasonic #748-C2** **Wiretone MR-6**	A1060CWX	B1060CWX	D1060CWX	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
(These Converters equipped with filter to operate radio section also)				
Bell Record-O-Fone RT-50 **Crestwood CP201—** **Dukane** **Eicor #1000, #15** **Knight Tape** **Peirce 55B-** **Pentron #T-3** **RCA** **Revere T-100** **Sound Inc. Model 9T3**	A1080CW (31 amps drain)	B1080CW (15 amps drain)	D1080CW 1.5 amps drain)	8¼" L, 4½" W, 5" H Wt. 13 lbs.
Bell RT-50R **Ultratone PT-9**	A1080CWX	B1080CWX	D1080CWX	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
Brush BK411-414	A1090CW4 (35 amps drain)	B1090CW4 (17 amps drain)	D1010CW (2 amps drain)	6 & 12 Volt 10¼" L, 4½" W, 5" H Wt. 18 lbs.
Brush BK401-403 **Magnecord** **PT6-P-PS and PT6-JA** **Masco R-3** **MCA Dictascriber** **Peirce** **260-265-270** **Sonograph BW100** **Webster Racine**	A1010CW4 (35 amps drain)	B1010CW4 (17 amps drain)	D1010CW (2 amps drain)	115 Volt 8¼" L, 4½" W, 5" H Wt. 13 lbs.
Ekotape #101	A1010CW4	B1010CW4	D1012CW	
Magnecord PT-7 **Presto PT-900**		B1016CW4	D1016CW4	

CARTER CUSTOM MATCHED 90% P.F. SUPER CONVERTERS

16 MM SOUND PROJECTORS

CARTER CONVERTER MODELS DC INPUT

EQUIPMENT MAKE & MODEL	6 Volt	12 Volt	115 Volt	Size & Weight
Ampro Premier #20 **Bell & Howell #179** **DeVry Super #16** **Victor Lite Weight** **Victor Triumph #60**	**Operate Amplifier Circuit Only**		D1015C	8¼" L, 4½" W, 5" H Wt. 13 lbs.

PORTABLE TRANSCRIPTION PLAYERS

Optron MC364D			D1060C	8¼" L, 4½" W, 5" H
Victor Sonomaster			D1015C	Wt. 13 lbs.

SMALL AC PHONO MOTORS

General Ind. RM4 **G.I. Green Flyer** **Dual Speed**			D1060CW	8¼" L, 4½" W, 5" H Wt. 13 lbs.

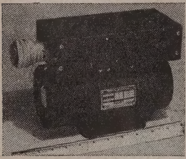
(These motors are of medium Power Factor design)

7"-10"-12" TELEVISION RECEIVERS

CARTER CONVERTER MODELS DC INPUT

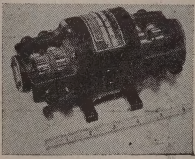
TELEVISION RECEIVER MAKE & MODEL	6 Volt	12 Volt	115 Volt	Size & Weight
Admiral **Hallicrafters T-54-505-T65-507** **Motorola VT71-Portable** **National TV-7, TV-7W**	A1010CT (27 amps)	B1010CT (13 amps)	D1010CT (1.7 amps)	Wt. 13 lbs. 8¼" L, 4½" W, 5" H
Motorola 10" & 12" and other sets of 130 watt power	A1013CT (30 amps drain)	B1013CT (15 amps drain)	D1013CT (1.8 amps drain)	

★ Other Carter Products ★



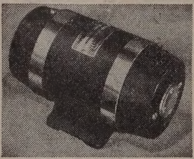
INDUCTOR ALTERNATOR

Provides mobile high frequency AC power (400 to 800 cycles), up to 100 watts, from DC source. Perfect for aircraft, geophysical, Government and laboratory research. Can also supply up to 400 v. DC plate voltage if necessary. Write for Bulletin No. 350.



MULTI-MAGMOTOR

Ideal power for geophysical instruments, government and laboratory research, aircraft and mobile communications. Two, three and four commutator models with permag field, provide up to 3 output voltages from single input; 2 outputs from 1 or 2 inputs; or vice-versa, over wide range. Ask for Bulletin No. 450.



SUPER-DYNAMOTOR

For aircraft, marine, police and railroad communications. Input voltages range from 5.5 v. DC to 115 v. DC . . . outputs from 400 v. to 1000 v. DC. Specified by leading airlines, marine, and mobile radio manufacturers. Size 8¼" x 4½". Weight 11¾ lbs. Described in Catalog No. 649.

Carter
C CONVERTERS
Carter
DYNAMOTOR
POWER SUPPLIES
Motor Co
Carter Motor Co

WRITE FOR CATALOGS

Catalog No. 850 shows complete line Carter DC to AC Converters. Catalog No. 649 covers Dynamotor power supplies, magmotors, Genemotors. Both fully illustrated, contain full specifications, performance charts, etc. Write on your letterhead please.

Carter Replacement Parts Reference Chart

The oldest name in Rotary Power Supplies for Mobile Radio

REPLACEMENT PARTS REFERENCE CHART

Use this handy chart for ordering the correct CARTER Replacement Dynamotor or Replacement parts. All parts guaranteed to conform to original manufacturer's specifications.

Mfg. Model No.	*Frequency*	*Carter Model No.*	*List Price*	*Carter Armature No.*	*Armature List Price*	*Input Brushes & List Per Set*	*Output Brushes & List Per Set*	*Ball Bearings & List Per Each*
Doolittle PFY-2 PFY-2A PFY-3 PFY-3A	30-40 MC-FM	4726VS	$65.63	233-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
PFY-12	152-162 MC-FM	4726VS	$65.63	233-2	$30.00	No. 7 $1.20	No. 2 80c	
Federal FT-125-B-25AZ	152-162 MC-FM	4037AS	$71.40	179-2	$30.00	No. 7 $1.20	No. 2 80c	
FT-110-25AZ	30-44 MC-FM	5915AS	$63.00	252-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
FT-110-50AZ	30-44 MC-FM	5925AS	$73.50	261-2	$30.00	No. 7 $1.20	No. 2 80c	
General Electric MC202	152-162 MC-FM	MVS415 Transmitter	$60.38	360-4	$27.25	No. 18 $1.20	No. 9 80c	
		MA251 Receiver	$53.03	300-6	$26.00	No. 23 $1.20	No. 9 80c	37KVL $2.50
MC-1 MC-2	30-44 MC-FM	617V	$63.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	
MC-3	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
Harvey 505 506	30-44 MC-FM	620VS	$70.35	307-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
542	152-162 MC-FM	620VS	$70.35	307-2	$30.00	No. 7 $1.20	No. 2 80c	
Kaar FM50X	30-44 MC-FM	6175VS early model	$65.10	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
		530VS late model	$68.25					
FM100X	1600-6000 KC	VSF820	$94.50	360-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
PTL-46X		VSF820	$94.50	360-2	$40.00	No. 30 $1.20	No. 14 80c	
FM-175X	152-162 MC-FM	4232VS	$69.83	231-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
Mobile Communi-cations (Taxi-Talkie) MFM-25-150	150-170 MC-FM	450AS	$60.90	175-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
MFM-25-150B	150-170 MC-FM	520AS	$61.95	208-2	$30.00	No. 7 $1.20	No. 2 80c	
Motorola P8050	30-44 MC-FM	617V	$63.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
P8051	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
P8051	30-44	VSF630	$90.83	276-2	$40.00	No. 30—$1.20	No. 14	38KVL
P8661	MC-FM	VSF6237M	$92.93	301-2	$40.00	No. 25—$1.20	80c	$2.50
P8317	152-162	4228VS	$67.73	207-2	$30.00	No. 7	No. 2	37KVL
P8431	MC-FM	4228VSC	$69.30	195-2	$30.00	$1.20	80c	$2.50
RCA M1-7771A	30-44 MC-FM	6175VS	$65.10	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
M1-31514	152-162 MC-FM	3732VS	$69.30	176-2	$30.00	No. 7 $1.20	No. 2 80c	
M1-7772A	30-44 MC-FM	VSF627	$88.20	274-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
Radio Specialties Mfg. Co. 1096-1-1		520AS	$61.95	208-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
Wilcox Electric 358A	152-162 MC-FM	4228VS	$67.73	207-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50

Above Prices Subject to Distributor's Discount.

DYNAMOTORS Gothard CONVERTERS

Springfield, Illinois

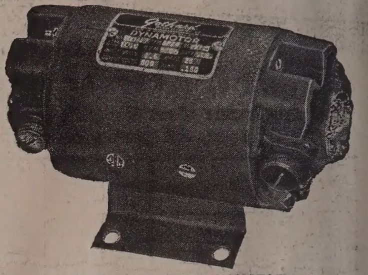
GOTHARD DYNAMOTORS

The GOTHARD Model "GP-26" is especially designed and built for Mobile Transmitter applications, intermittent duty. Length 7¼", Diam. 3½", Height 4", Weight 8¼ lbs.

INPUT		OUTPUT			Approx.	App.
Volts	Amps.	Volts	MA	Watts	Effic.	Reg.
5.6	24	400	200	80	60%	17%
5.6	26	600	150	90	61%	18%
5.6	29	400	250	100	61%	19%
5.6	31	620	170	105	61%	20%
5.6	33	500	225	112	61%	21%
5.6	34	420	280	118	62%	22%
6.0	40	400	375	150	63%	25%

Prices upon request. Submit your special requirements to our engineers.

Also supplied for 12, 14, 24, 28, or 32 Volt input
For continuous duty applications, Models GP-12, GP-17 and GP-26 cover wattage ratings from 20 to 80 Watts. Input voltages 6, 12, 24, or 32.
GP-12: Length 5¾", Diam. 3½", Height 4", Weight 5¼ lbs.
GP-17: Length 6¼", Diam. 3½", Height 4", Weight 6 lbs.
GP Models have steel mounting bases; width 4$\frac{5}{16}$".



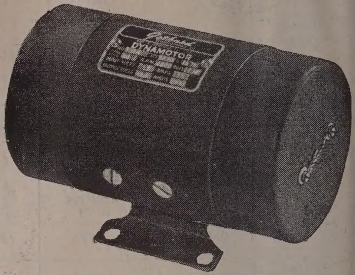
MODEL "GP-26" DYNAMOTOR

GOTHARD AIRCRAFT DYNAMOTORS

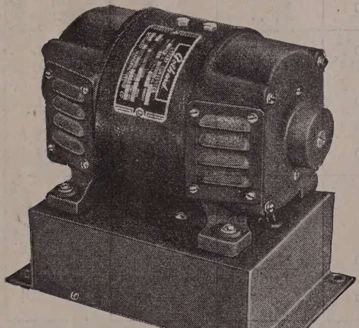
Frame	INPUT		OUTPUT				
Size	Volts	Amps.	Volts	MA	Length	Diam.	Weight
DS-12	12	2.6	250	60	4¾"	2¾"	2⅞"
DS-17	12	3.6	250	90	5¼"	2¾"	3⅞"
SP-12	12	4.0	250	100	6"	3½"	4¾"
SP-17	12	5.2	300	125	6½"	3½"	5⅝"
SP-22	12	6.4	400	125	7"	3½"	6½"
SF-20	12	8.4	400	150	6¾"	4"	8½"
SF-25	12	10.	500	150	7¼"	4"	9¾"

Prices upon request. Submit your special requirements to our engineers.

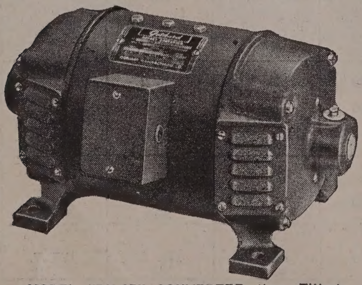
Above ratings are continuous duty with temperature of 40°C.
Also supplied for 6, 14, 24, 28, or 32 Volt input. "SP" and "SF" dynamotors may be supplied in fan-ventilated construction as types "SPF" and "SFF". Prices upon request.



MODEL "SF-20" DYNAMOTOR



MODEL "AK-15" CONVERTER (With Filter)



MODEL "BK-35" CONVERTER (Less Filter)

GOTHARD ROTARY CONVERTERS

TYPE "K" 3600 RPM (60 Cycle) • 3000 RPM (50 Cycle)

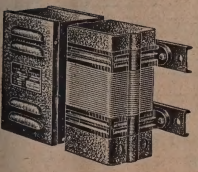
Model No.	Frame Size	INPUT Volts	INPUT Amps.	OUTPUT at 90% P.F. A.C. Volts	VA at 60 cy.	VA at 50 cy.	App. Net Wt. Conv. only	Add for Filter	List Price Less Filter	List Price With Filter
6K11	AK-15	6	36	110	110	90	24#	6#	$88.55	$112.60
12K11	AK-15	12	18	110	110	90	24#	6#	88.55	112.60
12K16	AK-25	12	24	110	160	125	29#	6#	108.80	141.70
24K11	AK-15	24	9	110	110	90	24#	6#	88.55	112.60
24K20	AK-25	24	14	110	200	160	29#	6#	108.80	141.70
24K30	BK-22	24	19.4	110	300	250	38#	6#	151.25	169.95
24K50	BK-35	24	30.4	110	500	400	45#	6#	175.45	201.15
3K11	AK-15	32	6.2	110	110	90	24#	6#	81.00	105.00
3K20	AK-25	32	10.4	110	200	160	29#	6#	101.20	134.10
3K30	BK-22	32	14.5	110	300	250	38#	6#	127.80	161.95
3K50	BK-35	32	22.0	110	500	400	45#	6#	158.15	193.55
3K75	CK-35	32	34	110	750	600	68#	7#	231.50	288.45
4K11	AK-15	48	4.4	110	110	90	24#	6#	88.55	112.60
4K20	AK-25	48	7.0	110	200	160	29#	6#	108.80	141.70
4K30	BK-22	48	9.7	110	300	250	38#	6#	151.25	169.95
4K50	BK-35	48	15.2	110	500	400	45#	6#	175.45	201.15
4K75	CK-35	48	22.7	110	750	600	68#	7#	231.50	288.45
1K11	AK-15	115	1.8	110	110	90	24#	6#	81.00	105.00
1K20	AK-25	115	3.0	110	200	160	29#	6#	101.20	134.10
1K30	BK-22	115	4.2	110	300	250	38#	6#	127.80	161.95
1K50	BK-35	115	6.6	110	500	400	45#	6#	158.15	193.55
1K75	CK-35	115	9.4	110	750	600	68#	7#	231.50	288.45
1K100	CK-45	115	12.4	110	1000	800	80#	7#	283.40	358.00
2K11	AK-15	230	.9	110	110	90	24#	6#	84.75	108.80
2K20	AK-25	230	1.5	110	200	160	29#	6#	105.00	137.90
2K30	BK-22	230	2.1	110	300	250	38#	6#	131.60	165.75
2K50	BK-35	230	3.3	110	500	400	45#	6#	161.95	197.35
2K75	CK-35	230	4.7	110	750	600	68#	7#	235.30	292.25
2K100	CK-45	230	6.2	110	1000	800	80#	7#	287.15	361.80

Also supplied for Marine Type Filter, 220 Volt A.C. Output, and automatic frequency control. Prices upon request.

Ball Bearings are standard on all models.

SOLA *Constant Voltage* TRANSFORMERS

CONSTANT VOLTAGE TRANSFORMER WITH HARMONIC FILTER



TYPE CVH

Incorporates harmonic neutralizer circuit . . . ±1% regulated . . . less than 3% harmonic distortion.

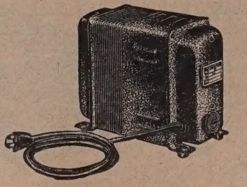
ELECTRICAL AND MECHANICAL SPECIFICATIONS:

All models—Input 95-125 v, output 115v

CAT. NO.	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	E	F	SHIP'G WGHT.	PRICE EACH
5002	30	4 3/16	11⅜	4½	2 5/16	10⅜	27	$ 30.00
5003	60	4 3/16	11¾	4½	2 5/16	10¾	35	38.00
5004	120	7⅛	11	5⅞	6½	8¾	45	51.00
5005	250	8½	16⅞	6¼	3½	15⅜	60	80.00
5006	500	10¼	16⅞	6¼	5¼	15⅜	70	110.00
5008	1000	14⅛	21¼	8¾	6¾	20	160	180.00
5010	2000	20 1/16	26¼	11¼	12¼	24¼	320	310.00

Transformers of catalog numbers 5002, 5003 and 5004 are now equipped with a primary cord and a secondary receptacle output for convenience in the laboratory. All other transformers are manufactured with knockout boxes.

CONSTANT VOLTAGE TRANSFORMER FOR TELEVISION RECEIVERS



TYPE CVA

Voltage regulation for home TV Receivers eliminates flicker and distortion due to line voltage variations. Moderate price . . . plug-in type . . . regulation ±3% or less.

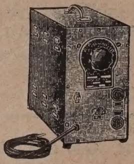
ELECTRICAL AND MECHANICAL SPECIFICATIONS:

Input 95-130 v, Nominal Output Value in 115-120 v range.

CATALOG NUMBER	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	SHIP. WEIGHT	PRICE EACH
7201	180	7¼	8⅛	4½	19	$34.50
7202	300	7¼	9⅛	4½	26	37.50

ADJUSTABLE . . . REGULATED . . . A.C. VOLTAGE SUPPLY . . . WITH HARMONIC FILTER

TYPE CVL

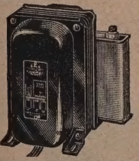


One outlet regulated ±1% and adjustable from 0 to 130 volts. One outlet for fixed value 115 volts regulated ±1%. Total harmonic distortion less than 3%. Regulating response 1.5 cycles or less. Self-protecting against short circuit. Portable for use in shop or laboratory.

ELECTRICAL AND MECHANICAL SPECIFICATIONS:

Input 95-125 v; Ouput No. 1, 115 v; Output No. 2, 0-130 v

CATALOG NUMBER	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	SHIP. WEIGHT	PRICE EACH
50105	250	12⅝	7½	12⅝	50	$ 98.00
50106	500	13⅝	7½	14⅜	70	138.00



CONSTANT VOLTAGE TRANSFORMER FOR PLATE AND FILAMENT SUPPLY

TYPE CVE

A single, compact source of filament and plate supply voltages . . . regulated to within ±3% or less with line voltage variations of 100-130 volts.

ELECTRICAL AND MECHANICAL SPECIFICATIONS: Input 100-130 v.

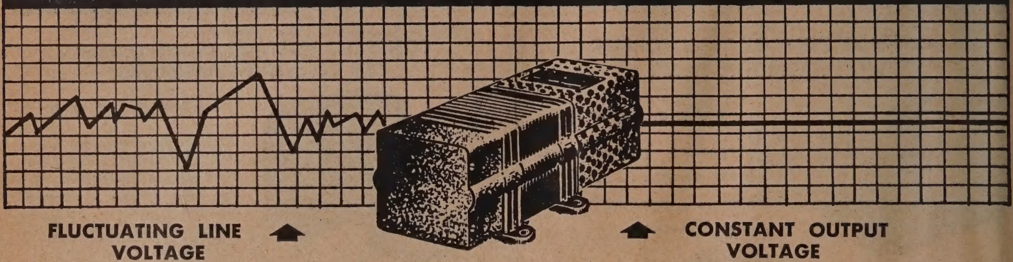
CATALOG NUMBER	CAP. V.A.	D.C. INPUT VOLTS TO FILTER	FILAMENT WINDINGS 6.3v	5.0v	DIMENSIONS IN INCHES A	B	C	SHIP. WEIGHT	PRICE EACH
7105	42	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	4 13/16	3⅛	3 3/16	5½	$14.50
7106	75	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	4 13/16	3⅛	3 15/16	8¾	18.00
7107	210	380v D.C. @ 250 M.A.	#1: 4.0 amps #2: 8.0 amps unregulated	3.0 amps	7	4½	4⅞	19	28.00

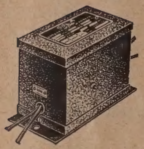
DIMENSIONS—
A: OVERALL LENGTH
B: OVERALL WIDTH
C: OVERALL HEIGHT
E & F: MOUNTING DIMENSIONS

PRICES F.O.B. CHICAGO, ILL. SUBJECT TO CHANGE WITHOUT NOTICE

SOLA ELECTRIC COMPANY • 4633 WEST 16th STREET, CHICAGO 50, ILLINOIS

SOLA *Constant Voltage* TRANSFORMERS

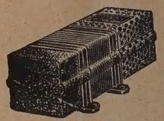




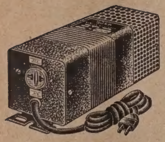
TYPE 1

SOLA Constant Voltage Transformers are designed to provide a constant output voltage which is unaffected by changes in input voltage. Stabilization is instantaneous and automatic and there are no moving parts.

SOLA Constant Voltage Transformers also provide isolation between input and output circuits. Low output voltage wave distortion and small size make these transformers especially attractive for use with all types of electronic equipment.



TYPE 3



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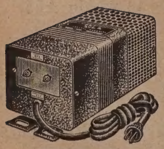
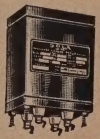
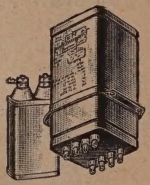


TYPE 21

FOR CHASSIS MOUNTING

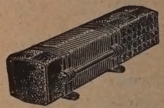


TYPE 11

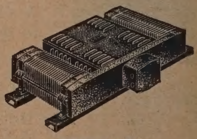


TYPE 12

Output capacities up to 15 VA, with output at either 6.3 volts or 115 volts. Both types are immersion proof and capable of tropical service. Type 12 furnished with separate condenser. Prices include condenser.



TYPE 4



TYPE 5

FOR COMPLETE CATALOG INFORMATION SEE OPPOSITE PAGE

For complete operational data write for Bulletin 13CV-102

SOLA ELECTRIC COMPANY • 4633 WEST 16th STREET, CHICAGO 50, ILLINOIS

SOLA *Constant Voltage* TRANSFORMERS

ELECTRICAL AND MECHANICAL SPECIFICATIONS **60 CYCLE**

Catalog Number	Output Capacity in VA	Input Volts	Output Volts	Dimensions in Inches A	B	C	E	F	Approx. Shipping Weight	Price Each
TYPE 1										
30488	15	95-125	6.0	5 11/16	2 5/8	3 7/16	5 1/16	....	6	$ 16.00
30492	15	95-125	6.3	5 11/16	2 5/8	3 7/16	5 1/16	....	6	16.00
30498	15	95-125	115.0	5 11/16	2 5/8	3 7/16	5 1/16	....	6	16.00
TYPE 11										
30785	17	95-125	6.3	5 13/16	3 21/32	2 19/32	3	2	5 1/2	22.00
30955	17	95-125	115.0	5 13/16	3 21/32	2 19/32	3	2	5 1/2	22.00
TYPE 12										
301002	15	95-125	6.3	5 5/16	3 1/2	2 1/4	3	1 1/2	2 1/2	20.00
301003	15	95-125	115.0	5 5/16	3 1/2	2 1/4	3	1 1/2	2 1/2	20.00
TYPE 2										
30804	30	95-125	115.0	8 9/16	4 3/16	4 3/8	7 13/16	2 3/8	12	18.00
30805	60	95-125	115.0	8 13/16	4 3/16	4 3/8	8 1/16	2 3/8	13	25.00
30806	120	95-125	115.0	9 11/16	4 3/16	4 3/8	8 15/16	2 3/8	17	34.00
30888	150	95-125	115.0	10 3/16	4 3/16	4 3/8	9 7/16	2 3/8	19	43.00
TYPE 21										
30801	25	95-125	6.0	8 7/16	4 3/16	4 3/8	7 1/16	2 3/8	12	17.00
30881	25	95-125	6.3	8 7/16	4 3/16	4 3/8	7 1/16	2 3/8	12	17.00
30802	50	95-125	6.0	8 13/16	4 3/16	4 3/8	8 1/16	2 3/8	13	24.00
30882	50	95-125	6.3	8 13/16	4 3/16	4 3/8	8 1/16	2 3/8	13	24.00
TYPE 22										
30885	60	95-125	115.0	10 5/16	4 3/16	4 3/8	9 9/16	2 3/8	13	25.00
30886	120	95-125	115.0	11 3/16	4 3/16	4 3/8	10 7/16	2 3/8	19	34.00
TYPE 3										
30807	250	95-125	115.0	11 5/8	6 15/16	5 5/8	3 1/4	6 1/8	30	56.00
30M807	250	190-250	115.0	11 5/8	6 15/16	5 5/8	3 1/4	6 1/8	30	56.00
30808	500	95-125	115.0	14 1/2	6 15/16	5 5/8	5	6 1/8	40	81.00
30M808	500	190-250	115.0	14 1/2	6 15/16	5 5/8	5	6 1/8	40	81.00
TYPE 4										
30809	1000	95-125	115.0	19 1/8	9 1/2	7 7/8	6 3/4	8 1/2	115	135.00
30M809	1000	190-250	115.0	19 1/8	9 1/2	7 7/8	6 3/4	8 1/2	115	135.00
30811	2000	95-125	115.0	31 1/8	9 1/2	7 7/8	12 1/4	8 1/2	205	245.00
30M811	2000	190-250	115.0	31 1/8	9 1/2	7 7/8	12 1/4	8 1/2	205	245.00
TYPE 41										
30M813	3000	95/190-125/250	115.0	44 11/16	10	9 3/8	42 5/8	8 1/2	325	325.00
TYPE 5										
30M814	4000	95/190-125/250	115.0	21 5/8	42 3/4	9 7/16	12 1/4	40 1/4	520	410.00
30M815	5000	95/190-125/250	115.0	24 1/8	42 3/4	9 7/16	14 3/4	40 1/4	570	515.00
30M816	5000	95/190-125/250	230.0	24 1/8	42 3/4	9 7/16	14 3/4	40 1/4	570	515.00
TYPE 6										
301700	10,000	190/380-250/500	115.0	48	35 1/4	9 5/8	38 7/8	33 1/4	1025	990.00
301701	10,000	190/380-250/500	230.0	48	35 1/4	9 5/8	38 7/8	33 1/4	1025	990.00

DIMENSIONS—
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PRICES F.O.B. CHICAGO, ILL. SUBJECT TO CHANGE WITHOUT NOTICE

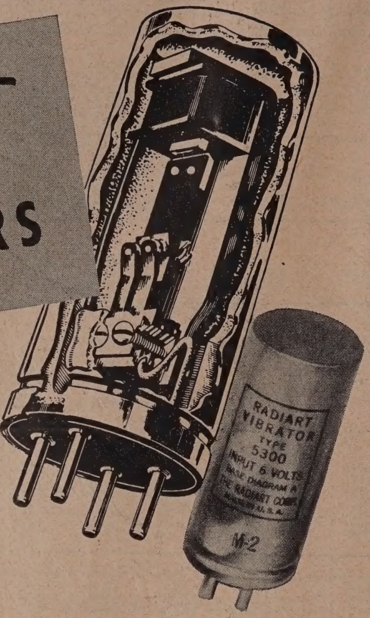
SOLA ELECTRIC COMPANY • 4633 WEST 16th STREET, CHICAGO 50, ILLINOIS

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO

STANDARD OF COMPARISON — RADIART

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

Radiart VIBRATORS



The Radiart Vibrator Guide is the Standard of the Industry — Ask your jobber for your copy today!

There are many reasons for the nation-wide preference for Radiart Vibrators! One is the absolutely complete selection of types manufactured . . . there is a CORRECT Radiart replacement vibrator for most every need, to original specifications. In addition, the precision engineering behind the design of each type is backed up by highest standards of manufacture that assure peak performance . . . always!

5300 SERIES vibrator types are Standard Automotive and Household Non-Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price
5300	$4.90	5314	$4.90	5335	$4.90
5300-32	7.15	5320	4.90	5342	4.15
5301	4.90	5321	4.90	5343	6.35
5303	4.90	5323	4.15	5363	6.35
5304	6.35	5326	4.15	5366	6.35
5307	4.90	5328-32	9.15	5367-32	7.70
5308	6.35	5331	4.90		
5309	4.90	5333	4.90		

5400 SERIES vibrator types are Standard Automotive and Household Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price
5400	$7.70	5411	$7.70	5429	$9.15	5440	$8.55
5404	7.70	5413	7.70	5431-4	8.55	5443	7.70
5406	7.70	5413-4	7.70	5434	7.70	5443-32	8.55
5407	7.70	5416	9.15	5435	7.70	5454	7.70
5408	7.70	5421	7.70	5435-4	7.70	5463	9.15
5409	7.70	5422	8.55	5436	7.70	5464	9.15
5409-4	7.70	5425	9.15	5437	7.70	5468-2	10.70
5410	7.70	5426	7.70	5438	7.70	5469-2	9.80

5500 SERIES vibrator types are Special Application Non-Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5503-12	$7.70	5513-12	$7.70	5518	$6.90
5504	6.35	5514-4	7.70	5519	4.90
5506	7.15	5515	6.90	5560	8.55
5510	7.15	5516	6.90		
5511-12	7.70	5517-12	7.70		

5600 SERIES vibrator types are Special Application Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5604	$9.15	5607-12	$9.95	5614-12	$8.55	5620	$7.70
5605	8.55	5607-32	9.95	5615-12	8.55	5621	6.90
5605-12	9.95	5609-12	9.95	5615-24	8.55	5622	8.55
5605-32	9.95	5610	7.70	5616	8.55	5623	7.70
5607	8.55	5610-12	8.55	5616-12	9.95		

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

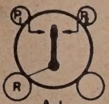
VIBRATOR BASE DIAGRAM CROSS INDEX

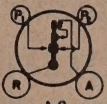
A—A hot line into vibrator.
B—By-pass for driving point.
C—External coil lead in shunt vibrator.
P_1—Primary contact, usually, but not necessarily connected to the magnet coil in shunt vibrators.
PP_1—Dual primary contact, closed when P_1 is closed.

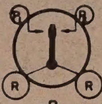
Radiart Type No.	Base Diagram	Voltage	Frequency	Max. Load	Dia.*	Height
5300	A-1	6	115	6	1½	3⅛
5300-32	A-1	32	115	1.4	1½	3⅛
5301	A-1	6	115	6	1½	2⅞
5303	F-1	6	115	6	1⅝	$3\frac{9}{16}$
5304	I	6	115	6	1¼	3⅛
5307	A-1	6	150	6	1½	3⅛
5308	E	6	115	6	1½	3⅛
5309	C-1	6	115	6	1½	2½
5314	A-1	6	115	6	1¼	2⅜
5320	A-1	6	115	6	$1\frac{15}{16}$	3½
5321	A-1	6	115	6	1⅝	$3\frac{9}{16}$
5323	A-1	6	115	6	1⅝	4¾
5326	A-1	6	115	6	1½	2⅞
5328-32	H-1	32	115	1.4	1⅝	3½
5331	C-1	6	115	6	1½	3⅛
5333	F-1	6	115	6	1½	3⅛
5335	F-1	6	115	6	1½	2⅞
5342	A-1	6	115	6	1½	2⅞
5343	B	6	115	6	$1\frac{15}{16}$	4½
5363	LEADS	6	115	4	—	—
5366	R-1	6	115	6	1½	2⅞
5367-32	T	32	115	1.4	1½	3⅛
5400	AB-1	6	115	6	1½	3⅛
5404	AH-1	6	130	6	1½	3⅛
5406	AD-1	6	115	6	1½	3⅛
5407	AB-1	6	180	5	1½	3⅛
5408	AB-1	6	140	6	1½	2⅞
5409	K-1	6	115	6	1½	3⅛
5409-4	K-1	4	115	6	1½	3⅛
5410	O-1	6	115	6	1½	3⅛
5411	V-1	6	115	6	1½	3⅛
5413	K-1	6	115	6	$1\frac{15}{16}$	3¼
5413-4	K-1	4	115	6	$1\frac{15}{16}$	3½
5416	K-2	6	115	6	$1\frac{15}{16}$	4½
5421	V-1	6	115	6	$1\frac{15}{16}$	3½
5422	AE-1	6	115	5	1½	3⅛
5425	O-2	6	115	6	$1\frac{15}{16}$	4½
5426	P-1	6	115	6	$1\frac{15}{16}$	3½
5429	P-3	6	115	6	$1\frac{15}{16}$	4½
5431-4	AG	4	115	5	1½	3⅛
5434	W-1	6	115	6	$1\frac{15}{16}$	3½
5435	V-1	6	115	6	1⅜	3⅛
5435-4	V-1	4	115	6	1⅜	3⅛
5436	V-1	6	180	5	1½	2⅞
5437	AB-1	6	180	5	1⅜	2⅞
5438	AB-1	6	140	6	1½	3⅛
5440	AB-1	6	115	6.	$1\frac{15}{16}$	4½
5443	AA-1	6	115	6	1½	3⅛
5443-32	AA-1	32	115	1.4	1½	3⅛
5454	AD-1	6	115	6	1½	2⅞
5463	LEADS	6	115	6	—	—
5464	AI-1	6	115	6	$1\frac{15}{16}$	4½
5468-2	AM	2	115	2	1½ sq.	2⅛
5469-2	AN	2	115	2	$1\frac{5}{16}$	2⅛
5503-12	A-1	12	115	6	1½	3⅛
5504	V-1	6	115	6	$1\frac{15}{16}$	3½
5506	D	6	115	10	1½	3⅛
5510	OA-1	6	115	10	1½	3⅛
5511-12	OB-1	12	115	6	1½	3⅛
5513-12	AK	12	180	3	1½	3⅛
5514-4	A-1	4	180	5	1½	2⅞
5515	A-1	6	115	10	1½	3⅛
5516	A-1	6	115	10	1½	3⅛
5517-12	V-1	12	180	3	1½	3⅛
5518	V-1	6	115	10	1½	2⅞
5519	A-1	6	115	6	1½	2⅞
5560	A-2	6	60	6	1½	3⅛
5604	K-2	6	115	6	$1\frac{15}{16}$	4½
5605	AD-1	6	115	10	1½	3⅛
5605-12	AD-1	12	115	6	1½	3⅛
5605-32	AD-1	32	115	2.5	1½	3⅛
5607	AJ	6	180	5	1⅜	2¾
5607-12	AJ	12	180	3	1⅜	2¾
5607-32	AJ	32	180	1.4	1⅜	2¾
5609-12	K-1	12	115	3	1½	3⅛
5610	V-1	6	115	6	1¼	3⅛
5610-12	V-1	12	115	3	1¼	3⅛
5614-12	AD-1	12	115	4	1½	2⅞
5615-12	V-1	12	180	3	1½	2⅝
5615-24	V-1	24	180	1.4	1½	2⅝
5616	AJ	6	180	5	1½	2⅞
5616-12	AJ	12	180	3	1½	2⅞
5620	AB-1	6	115	6	1½	2⅞
5621	V-1	6	115	10	1½	2⅞
5622	AE-1	6	100	5	1½	2⅞
5623	AD-1	6	115	6	1½	2⅞

Symbols Used in Vibrator Base Diagrams

P_2—Primary contact, may be the magnet coil connection instead of P_1.
PP_2—Dual primary contact, closed when P_2 is closed.
R—Vibrating reed in single-reed vibrators.
RP—Primary vibrating reed in split-reed vibrators.
RS—Secondary vibrating reed in split-reed vibrators.
S_1—Secondary contact, closed when P_1 is closed.
S_2—Secondary contact, closed when P_2 is closed.
* All dimensions given are in inches.
† For further information see Vibrator type in Radiart Replacement Guide.


A-1


A-2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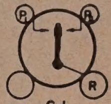
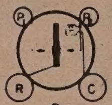

C-1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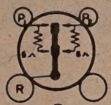
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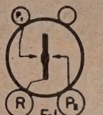
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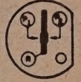
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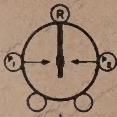
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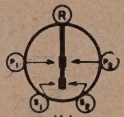
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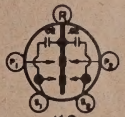
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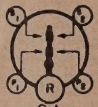
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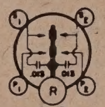
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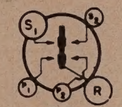
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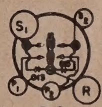
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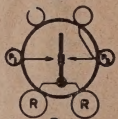
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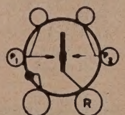
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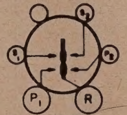
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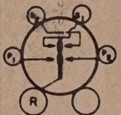
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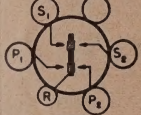
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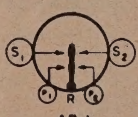
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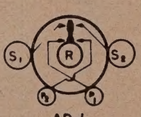
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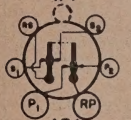
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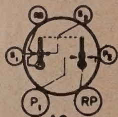
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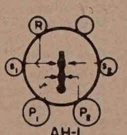
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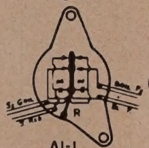
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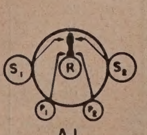
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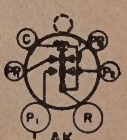
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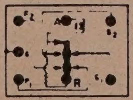
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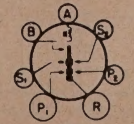
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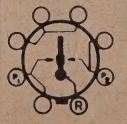
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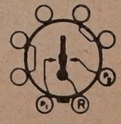

OB-1

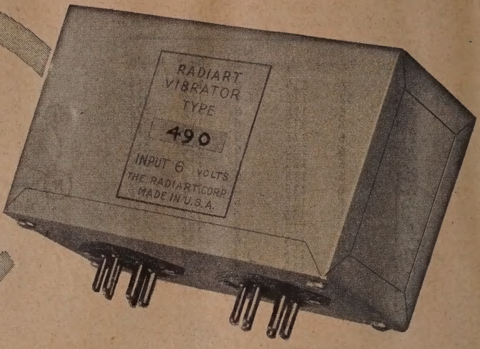
Dotted pin on AE-1 and AK units furnished at our option

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO

STANDARD OF COMPARISON — RADIART

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

RADIART *Heavy Duty* REPLACEMENT VIBRATORS



As in the standard "RED SEAL" line of replacement vibrators, the RADIART HEAVY DUTY Replacement Vibrators offer a complete selection for every standard need. Quality construction, superb performance featuring long life make this heavy duty line the most asked for in the nation.

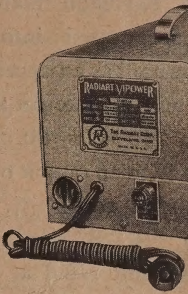
MODEL NO.	VOLTAGE	FREQ. CYCLES	TYPE	CONTAINER	USED IN
6VB6	6	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
110VB6	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
330**	12	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
390**	12	60	H-D Tandem	$5\frac{5}{16}$ x $2\frac{23}{32}$ x 3⅜	
425**	6	90	H-D Single	$2\frac{3}{16}$ x $4\frac{11}{16}$	
426	6	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
427	6	60	H-D Single	$2\frac{3}{16}$ x $4\frac{11}{16}$	
431	6	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
490	6	60	H-D Tandem	$5\frac{5}{16}$ x $2\frac{23}{32}$ x 3⅜	
491	6	60	H-D Tandem	5⅜ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
1057	6	120	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
1083	110	60	H-D Tandem	$5\frac{5}{16}$ x $2\frac{23}{32}$ x 3⅜	110WR15A 110WR15B 110R10 110R15
1315	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
1315H	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	110RT25
1506	32	60	H-D Tandem	$5\frac{15}{16}$ x $2\frac{23}{32}$ x 3⅜	
1640	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
1684**	6	120	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
1823**	6	180	H-D Single	1½ x 3⅛	
2117**	12	100	H-D Tandem	$5\frac{15}{16}$ x $2\frac{23}{32}$ x 3⅜	
2507	45*	60	Polarity Changer	1½ x 2⅞	
2522	45*	60	Polarity Changer	1½ x 2⅞	110PA5 110PB5
2639	6	60	H-D Tandem	$5\frac{15}{16}$ x $2\frac{23}{32}$ x 3⅜	
2641**	24	60	H-D Single	$5\frac{1}{16}$ x 2⅛ x $2\frac{1}{16}$	
2989	32	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	32R8 32RU15
3047	12	60	H-D Tandem	$5\frac{15}{16}$ x $2\frac{23}{32}$ x 3⅜	12RU15
3077	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	110RT15
3079	110	60	H-D Tandem	$5\frac{5}{16}$ x $2\frac{23}{32}$ x 3⅜	110RT35
3087	12	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	12R8
3103	6	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	6R5
3217**	32	90	H-D Single	$2\frac{5}{32}$ x $5\frac{9}{16}$ x $2\frac{9}{16}$	
4123	6	60	H-D Tandem	$5\frac{15}{16}$ x $2\frac{23}{32}$ x 3⅜	6R10
11028	110	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	
11032**	115	60	Special Tandem	$2\frac{23}{32}$ x $5\frac{15}{16}$ x 3⅜	
32171	32	60	H-D Single	$5\frac{9}{16}$ x $2\frac{5}{32}$ x $2\frac{9}{16}$	

* For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
** Available only on Special Order.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO

DC TO AC CONVERTERS



The RADIART line of converters is complete and furnishes 110 volt 60 cycle AC current from 6, 12, 32, or 110 volt direct current sources. Vibrator powered, they are completely dependable . . . easily installed and fit most any requirement. The RADIART name plate on each converter is your assurance of long life and outstanding performance.

110 VOLT 60 CYCLE OUTPUT:

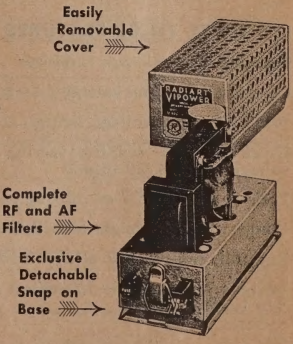
Model No.	Application	DC Input Volts	Output Watts	Size	Weight Lbs.
6R5	Automotive	6	50	6¾ x 7¾ x 5⅞	12
6R10		6	100	7 x 12⅝ x 7½	19
12R8	Marine-Craft, Busses and Trailers	12	80	6¾ x 7¾ x 5⅞	12
12RU15		12	150	7 x 12⅝ x 12½	22
32R8	Farm and Marine	32	80	6¼ x 7⅝ x 5⅞	13¼
32RU15		32	150	6⅜ x 12⅜ x 7½	22¼
110PA5	Phonograph Motors	110	50VA	3¾ x 6¼ x 2¾	2
110PB5		110	50VA	3¾ x 6¼ x 2¾	2
110R10	Radio and Business Machines	110	100	6⅜ x 7¾ x 5¼	10½
110RA15		110	150	6¾ x 7¾ x 5⅞	14
110RT15	Especially Designed for Television-with Frequency Control	110	150	6⅞ x 12¼ x 7½	16¾
110RT25		110	250	6½ x 12⅞ x 8½	22½
110RT35		110	350	7½ x 14 x 8⅝	40½
110WR15A	Wire Recorders	110	150	6⅞ x 12¼ x 7½	16¾
110WR15B		110	150	6⅞ x 12¼ x 7½	16¾

Super RADIART VIPOWERS

Vipower Model	DC Input Volts (Nominal)	DC Output Volts (Nominal)	Output Mills.	Type
451A	6	250	60	Self-rectifying
452	6	300*	100	Self-rectifying
453	6	300*	100	OZ4A Rectifier
454	6	300	200	Two OZ4A Rectifiers
455	6	400	150	Two 6X5GT Rectifiers
456	6 V DC or 110 V 60 Cy. AC	300*	100	OZ4A Rectifier
457	6	150	40	Self-rectifying

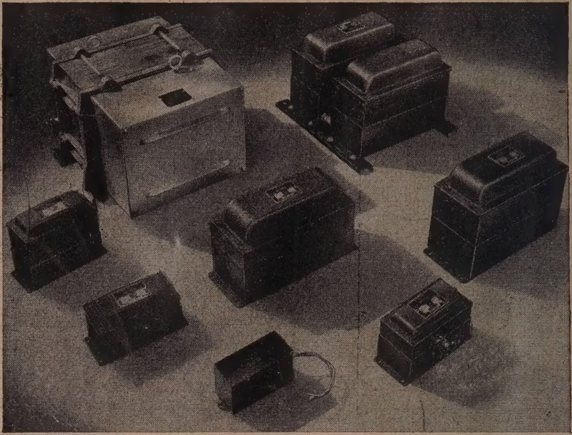
* NOTE: — Tapped at 275V, 250V, 225V.
12 volt models available on special order at slightly higher prices.

RADIART vibrator power supplies top the field. Complete RF and AF filtering is built into each unit. No extra filter accessories are required. Easily installed with the exclusive Snap-on base plate that allows instant removal of the entire chassis by opening one snap-latch.

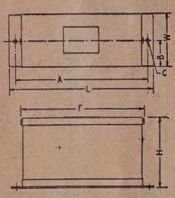


RAYTHEON VOLTAGE STABILIZERS

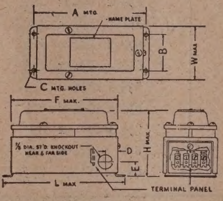
Available in standard catalog models, the Raytheon Stabilizer can be incorporated into any equipment or used as an accessory. All models will operate on an input of 95 to 130 volts, 60 cycles, single phase with an output of 115 volts stabilized to ±½%. The Catalog No. VR-7B, which is a dual purpose unit rated at 2000 watts, will also operate on an input of 190 to 260 volts and an output of 230 volts stabilized to ±½%. Change-over is by means of links and is easily and quickly done.



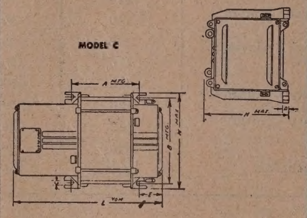
The complete line of catalog models shown above includes (upper left) Style C, No. VR-7B, 2000 watts only (upper right) Style H, No. VR 6116, 1000 watts (lower center) Style F, No. VR 6110, 15 watts only (all other models) Style E rated at 30 to 500 watts as outlined in table below. Special custom made models are available to meet every requirement.

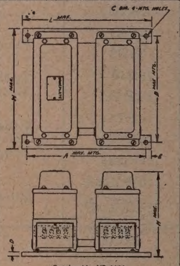


STYLE F



STYLE E





Catalog No. VR-6116

NOTE THESE FEATURES

- Patented magnetic-type stabilizer
- Constant AC output voltage (±½%)
- Wide AC input voltage limits (±15%)
- Quick response—stabilizes varying input voltage within 1/20 second
- Entirely automatic — no moving parts
- Compact, light in weight, takes little space
- Ruggedly built — safe at over-loads
- Designs are available in ratings from 5 to 10,000 watts

CATALOG NO.	OUTPUT CAP. WATTS	STYLE	DIMENSIONS IN INCHES									NET WEIGHT LBS.
			OVERALL			MOUNTING			LOCATIONS			
			L	W	H	A	B	C	D	E	F	
VR-6110	15	F	6 1/4	2 1/2	3	5 11/16	1 1/4	1/4 dia.	5/16	3/16	5 3/16	4
VR-6101*	30	E	7 1/2	3 3/8	4 1/8	6 7/8	2 1/4	9-32x7/32	11/16	7/8	6 9/16	5
VR-6111	30	E	7 1/2	3 3/8	4 1/8	6 7/8	2 1/4	9/32x7/32	11/16	7/8	6 9/16	5
VR-6112	60	E	7 1/2	3 3/8	4 9/16	6 7/8	2 1/4	9/32x7/32	11/16	7/8	6 9/16	8
VR-6113	120	E	7 1/2	3 3/8	5 15/16	6 7/8	2 1/4	9/32x7/32	11/16	7/8	6 9/16	14
VR-6114	250	E	12 3/8	5	7 5/8	11 9/16	3 1/2	9/32x11/32	7/8	1	11 1/16	25
VR-6115	500	E	12 3/8	5	9 1/8	11 9/16	3 1/2	9/32x11/32	7/8	1	11 1/16	45
VR-6116	1000	H	14 1/16	13 3/16	9 5/8	12 7/8	11 9/16	7/16	1/2	9/16		92
VR-7B	2000	C	16 3/8	14 7/8	12 3/8	8	13 5/8	1/2	1	2 11/16		200

Output 6.0 or 7.5 volts stabilized to ±½%.
Style "E" Voltage Stabilizers up to and including model VR 6113 are available with cord and plug, factory installed. Simply order by adding letters "CP" to catalog number. On the VR-6114 and VR-6115, a separate cord, plug and mounting plate can be supplied as an accessory. Order assembly 51-590G2.

RAYTHEON MANUFACTURING COMPANY
DEPARTMENT 6460 RM, WALTHAM 54, MASSACHUSETTS

STANDARD TRANSFORMER CORPORATION

STANCOR TRANSFORMERS

AND RELATED COMPONENTS

FOR TELEVISION, RADIO, SOUND AND OTHER ELECTRONIC APPLICATIONS

The STANCOR Transformer line is the most complete in the industry. There are over 450 transformers and related components listed on the following fifteen pages. Every one is a dependable, tested unit, designed for maximum service and efficiency. For industrial, amateur, experimental or replacement use, you can be sure of a quality product when you specify "STANCOR".

Our engineering staff will assist you in designing transformers to meet special industrial applications and can supply production samples where desired.

TELEVISION COMPONENTS

This section contains only specific television components. Consult following Stancor pages for other audios, powers and chokes having extensive application in television, radio and electronics.

POWER TRANSFORMERS

<table>
<tr><th rowspan="2">Part No.</th><th colspan="2">Plate Supply</th><th colspan="2">Rectifier Filament</th><th colspan="2">Auxiliary Filaments</th><th rowspan="2">Height Overall</th><th rowspan="2">Base Area</th><th rowspan="2">Mtg. Type</th><th rowspan="2">Shpg. Wt. in Lbs.</th><th rowspan="2">List Price</th></tr>
<tr><th>A.C. Volts</th><th>D.C. Ma.</th><th>Volts</th><th>Amperes</th><th>Volts</th><th>Amperes</th></tr>
<tr><td>P-8154</td><td>375–0–375</td><td>205</td><td>5.0</td><td>3.0</td><td>5.0
6.3</td><td>2.0
5.6</td><td>4¼"</td><td>3¾" x 4½"</td><td>M</td><td>9.1</td><td>$16.35</td></tr>
<tr><td colspan="12">This unit and Part Number P-8155 are designed to work together in TV chassis employing two separate power supply systems.</td></tr>
<tr><td>P-8155</td><td>225–0–225</td><td>90</td><td>5.0</td><td>2.0</td><td>6.3</td><td>5.15</td><td>3¾"</td><td>2/13⁄16 x 3⅜"</td><td>M</td><td>4.5</td><td>9.80</td></tr>
<tr><td colspan="12">This unit and Part Number P-8154 are designed to work together in TV chassis employing two separate power supply systems.</td></tr>
<tr><td>P-8156</td><td>365–0–365</td><td>295</td><td>5.0</td><td>6.0</td><td>5.0
12.6 CT</td><td>2.0
5.0</td><td>6⅝"</td><td>3¹³⁄₁₆" x 4¾"</td><td>M</td><td>16.5</td><td>26.50</td></tr>
<tr><td colspan="12">Designed to deliver 405 volts DC at 295 ma. into an 80 mfd. capacitor input filter following two Type 5U4-G tubes in a full-wave rectifier circuit. Copper shorting band reduces external magnetic field.</td></tr>
<tr><td>P-8157</td><td>385–0–385
235–0–235</td><td>195
105</td><td>5.0
5.0</td><td>3.0
2.0</td><td>6.3
6.3
5.0</td><td>7.65
0.6
2.0</td><td>4¾"</td><td>3¾" x 4½"</td><td>M</td><td>11.1</td><td>22.80</td></tr>
<tr><td colspan="12">Designed for use with dual full-wave rectifiers and filters to supply two outputs simultaneously: 5U4-G (395 volts DC at 195 ma. across 40 mfd. input) and 5Y3-GT (212 volts DC at 105 ma. across 40 mfd. input).</td></tr>
<tr><td>P-8158</td><td>117</td><td>600</td><td>...</td><td>...</td><td>6.3
6.3
6.3</td><td>4.25
4.0
2.0</td><td>3½"</td><td>3⁷⁄₁₆" x 4⅛"</td><td>M</td><td>6.2</td><td>14.00</td></tr>
<tr><td colspan="12">Designed to deliver 6.3 volts at 4.25 amperes, 6.3 volts at 4.0 amperes, 6.3 volts at 2.0 amperes and 117 volts at 600 ma., RMS. For use with selenium-type rectifiers where all supply voltages are to be isolated from the line. A copper shorting band reduces external magnetic field.</td></tr>
<tr><td>P-8159</td><td>360–0–360</td><td>250</td><td>5.0</td><td>3.0</td><td>5.0
6.3
6.3</td><td>2.0
8.0
0.6</td><td>5⁵⁄₁₆"</td><td>3¹³⁄₁₆" x 4¾"</td><td>M</td><td>10.0</td><td>21.35</td></tr>
<tr><td colspan="12">Designed to deliver 355 volts DC at 250 ma. into a 40 mfd. capacitor input filter following a Type 5U4-G full-wave rectifier. Copper shorting band reduces external magnetic field.</td></tr>
<tr><td>P-8160</td><td>358–0–358
166–0–166</td><td>185
65</td><td>5.0</td><td>3.0</td><td>6.45</td><td>12.0</td><td>4¼"</td><td>3¾" x 4½"</td><td>M</td><td>9.6</td><td>18.40</td></tr>
<tr><td colspan="12">Designed for use with dual full-wave rectifiers and filters to supply two outputs simultaneously; 5U4-G (382 volts DC at 185 ma. across 40 mfd. input) and 6X5 (155 volts DC at 65 ma. across 30 mfd. input). Copper shorting band reduces external magnetic field.</td></tr>
<tr><td>P-8161</td><td>390–0–390</td><td>230</td><td>5.0
5.0</td><td>3.0
2.0</td><td>6.3</td><td>9.0</td><td>5⁹⁄₁₆"</td><td>3¹³⁄₁₆" x 4¾"</td><td>M</td><td>11.8</td><td>23.75</td></tr>
<tr><td colspan="12">Designed to deliver 415 volts DC at 230 ma. into an 80 mfd. capacitor input filter following a type 5U4-G full-wave rectifier. Copper shorting band reduces external magnetic field.</td></tr>
<tr><td>P-8162</td><td>380–0–380</td><td>180</td><td>5.0 CT</td><td>3.0</td><td>6.3</td><td>9.0</td><td>5½"</td><td>4⅛" x 3⁷⁄₁₆"</td><td>M3</td><td>9.0</td><td>17.00</td></tr>
<tr><td colspan="12">Designed to deliver 400 volts DC at 180 ma. into an 80 mfd. capacitor input filter following a type 5U4-G full-wave rectifier. Socket for rectifier mounted on shell and wired to transformer. Copper shorting band reduces external magnetic field.</td></tr>
</table>

FILTER CHOKES

Part No.	Rating Induc. at D.C. Ma.	D.C. Res. in Ohms	Rms. V. Insul.	Mtg. Type	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2325	2.0 hy. at 200 ma.	60	1,500	A	2¼"	3¾" x 2¼"	1.8	**$3.50**
C-2326	1.0 hy. at 300 ma.	43	1,500	A	2¼"	3¾" x 2¼"	1.7	**3.95**

VERTICAL DEFLECTION OUTPUT TRANSFORMERS

Part No.	Turns Ratio Pri. to Sec.	Height Overall	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8112	10:1	2"	3¼" x 1¾"	A	1.0	**$4.00**
A-8113	8.8:1	2"	3¼" x 1¾"	A	1.0	**4.05**
A-8115	10:1	3¹⁄₁₆"	2½" x 2½"	A	2.5	**6.00**
A-8116	10:1	3¹⁄₁₆"	2½" x 2¼"	A	2.2	**5.50**
A-8123	11.4:1	2"	3¼" x 1¾"	A	1.2	**3.75**

(Con. next page)

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TELEVISION COMPONENTS

STANDARD TRANSFORMER CORPORATION

HORIZONTAL DEFLECTION OUTPUT and HIGH VOLTAGE TRANSFORMERS

Part No.	Application	Height Overall	Base Area	Shpg. Wt. in Lbs.	Mtg. Type*	List Price
A-8117	Designed for use with Stancor DY-1 deflection yoke, or equivalent, and with direct viewing kinescopes requiring 50° magnetic deflection. Used with one 6BG6-G deflection amplifier, one 6AS7-G or one 5V4-G scanning booster and one 1B3-GT/8016 pulse rectifier (may require filament resistor, adjusted for proper voltage). Auto-transformer primary provides voltage for pulse rectifier supply kinescope anode potential. Filament winding for pulse rectifier included. Tap on secondary permits connection of width control.	4 11/16"	3 3/4" x 2 1/4"	1.7	HO	**$9.25**
A-8119	For use in pulse-operated power supply requiring two rectifiers in a voltage-doubling circuit to deliver 13,000 to 14,000 volts to the anode of a kinescope such as the 16AP4.	4 11/16"	3 5/8" x 2 1/4"	1.8	HO	**10.40**
A-8127	For use in pulse-operated, single rectifier power supply and provides 5–10% more deflection than RCA Type 211T1. This Stancor unit is intended for use in newer TV receiver designs emplying the 10BP4 kinescope.	4 11/16"	3 3/4" x 2 1/4"	1.8	HO	**9.25**
A-8128	In a pulse-operated, single rectifier power supply, the A-8128 will develop 10,000 to 12,000 volts of anode potential with adequate sweep for full horizontal scan of a 12 1/2" kinescope such as the 12LP4. May also be used for simple conversion of a smaller television receiver to a 16" picture, providing very satisfactory operation of the 16AP4 and similar picture tubes at slightly reduced brilliance.	4 11/16"	3 3/4" x 2 1/4"	1.8	HO	**10.50**
A-8129	For use in a pulse-operated, single rectifier power supply to deliver 13,000–14,000 volts of anode potential with adequate sweep for full horizontal scan of a 65–70° kinescope. May be used for conversion of older TV receivers to take newer picture tube types. Appropriate wide angle deflection yoke, such as the Stancor DY-7, should be employed with the A-8129.	4 11/16"	3 3/4" x 2 1/4"	1.8	HO	**$11.00**

*These units meet requirements of Underwriters Laboratories for interlocked enclosure mounting.

VERTICAL BLOCKING-OSCILLATOR TRANSFORMERS

Part No.	Application	Height Overall	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8111	Generates 60 cps pulse required to drive grids of vertical discharge tubes	1 1/2"	2 1/2" x 1 1/2"	A	0.4	**$ 2.50**
A-8121	Generates 60 cps pulse required to drive grids of vertical discharge tubes	1 3/4"	2 5/16" x 1 1/2"	TD	0.4	**3.20**
A-8122	Generates 60 cps pulse required to drive grids of vertical discharge tubes	1 9/16"	1 3/16" x 1 3/16"	TS	0.3	**3.90**

HORIZONTAL BLOCKING-OSCILLATOR TRANSFORMERS

Part No.	Application	Height Overall	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8110	Generates 15,750 cps pulse required to drive grids of horizontal discharge tubes	1 1/2"	2 1/2" x 1 1/2"	A	0.4	**$ 2.75**
A-8120	Generates 15,750 cps pulse required to drive grids of horizontal discharge tubes	1 3/4"	2 5/16" x 1 1/2"	TD	0.4	**3.90**

DEFLECTION YOKE

Part No.	Application	Mtg. Type	Shpg. Wt. in Lbs.	List Price
DY-1	Designed for use with direct viewing kinescopes requiring 50° deflection Provides required retrace time when used with deflection circuits employing horizontal output transformers, such as Stancor Part Numbers A-8117 and A-8127, and vertical output transformers, such as Stancor Part Numbers A-8115 and A-8116. Performance checked to close linearity limits.	DY	1.2	**$ 7.50**
DY-7	For use with direct viewing kinescope requiring 65–70° deflection. Provides required retrace time when used with deflection circuits employing horizontal output transformers such as the A-8129. For tubes having neck diameter of 1 7/16", such as RCA 16GP4.	DY	1.0	**$10.75**

FOCUS COIL

Part No.	Application	Mtg. Type	Shpg. Wt. in Lbs.	List Price
FC-10	Designed for use with magnetically focused kinescopes with deflection angles up to 50°. The larger center hole of the coil provides ample clearance between core and kinescope neck, allowing for tipping and displacing axis when necessary. For best performance, a rheostat adjustment of the operating current should be used.	FC	2.0	**$7.50**

HIGH FIDELITY OUTPUT TRANSFORMERS

Better than ±1 db from 20 to 20,000 cps.

These Stancor output transformers combine the most advanced design and manufacturing practices to provide outstanding audio response at low cost. Maximum power level is conservatively rated at 50 watts. They are designed to match the most popular types of output tubes to speaker or line impedances.

Extensively interleaved "trifilar" windings, extremely tight coupling and careful electrical balance result in audio fidelity to please the most critical specialist. Inasmuch as elaborate shielding is not required at the audio output level, an inexpensive, but thoroughly practical, Type C mounting is used. Shipping weight is 6.5 lbs.

Part No.	Pri. Imp. (P-P) in Ohms	Sec. Imp. in Ohms	Max. Pri. D.C. Per Side	Audio Watts	Height Overall	Base Area	List Price
A-8050	1500	8, 16	200	50	4 5/16"	3 9/16" x 4 1/4"	**$18.10**
A-8051	2500	8, 16	150	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8052	3000	8, 16	175	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8053	5000	8, 16	150	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8054	9000	8, 16	100	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8060	1500	500	200	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8061	2500	500	150	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8362	3000	500	175	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8063	5000	500	150	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**
A-8064	9000	500	100	50	4 5/16"	3 9/16" x 4 1/4"	**18.10**

*Where more than one secondary impedance is shown, only one value is to be used at any time.

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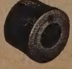
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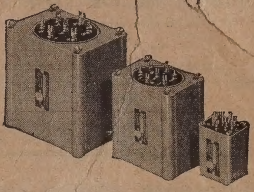
HIGH FIDELITY TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

HF AND WF SERIES HIGH FIDELITY AUDIO TRANSFORMERS



HF Series

These units have a wide frequency response of 20 to 20,000 cps with ±1 db. Correct design reduces harmonic and intermodulation distortion to a negligible amount. Balanced construction minimizes hum pickup. Stancor impregnation insures long life. Cases are finished in gray enamel and have four threaded holes at each end for flush mounting. Stud-type terminals are plainly marked for easy identification.

LOW IMPEDANCE TO GRID

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	60,000 overall, in two sections	15 db	−74 db	HF-1	**$28.75**
HF-20X	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	14 db	−92 db‡	HF-1	**36.80**
HF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	120,000 overall, in two sections	15 db	−74 db	HF-1	**32.20**
HF-22X	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	14 db	−92 db‡	HF-1	**40.25**

INTERSTAGE

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-29	Sgl. Pl. to P.P. Grids—Split secondary	15,000	95,000 (Turn ratio 2.5:1 overall)	17 db	−50 db	HF-1	**$27.60**
HF-31	Single Plate to P.P. Grids. Split pri. and sec.	15,000	135,000 (Turn ratio 3:1 overall)	14 db	−74 db	HF-1	**27.60**
HF-32	P.P. Plates to P.P. Grids. Split pri. and sec.	30,000 Plate to Plate	80,000 (Turn ratio 1.6:1 overall)	26 db	−50 db	HF-2	**35.65**

MIXING

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-40	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	17 db	−74 db	HF-1	**$28.75**

OUTPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-65†	P.P. 2A3's, 6L6's, etc. to Line or Voice Coil	3,000 or 5,000 Plate to Plate	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333 or 500	20 watts	......	HF-2	**$32.20**
HF-67†	P.P. 2A3's, 6L6's, etc. to Voice Coil	3,000 or 5,000 Plate to Plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20 watts	......	HF-2	**23.00**
HF-68†	P.P. Par. 2A3's, 6A5G's, 300A's, 6A3's to Line or Voice Coil	1,500 or 2,500 Plate to Plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	40 watts	......	HF-3	**57.50**

§HF-1 Case: *Shpg. wt., 3.0 lbs. Height overall,* $3\frac{1}{4}$". *Base area,* $2\frac{9}{16}$x$3\frac{1}{16}$". *Mtg. ctrs.,* $1\frac{15}{16}$"x$2\frac{7}{16}$". HF-2 Case: *Shpg. wt., 7.5 lbs. Height overall,* $4\frac{1}{8}$". *Base area,* $3\frac{3}{16}$"x$4\frac{3}{16}$". *Mtg. ctrs.,* $2\frac{11}{16}$"x$3\frac{11}{16}$". HF-3 Case: *Shpg. wt., 15.0 lbs. Height overall,* $4\frac{11}{16}$". *Base area,* $4\frac{11}{16}$"x$5\frac{9}{16}$". *Mtg. ctrs.,* $4\frac{3}{16}$"x$5\frac{1}{32}$".

†Response ± 1 db from 25 to 20,000 cps.

¶As compared to standard uncased units.

‡Quadruple alloy magnetic shield.

WF Series

These units are of the same outstanding quality as the HF Series above, and, with the exception of two units, have a frequency response of 30–20,000 cps within ±2 db. The WF-21 and WF-35 have a response within ±2 db from 50–20,000 cps and have multiple alloy shields for extremely low hum pickup. All WF units are cased in the WF-6 type cast case with phenolic terminal board and four tapped holes for flush mounting. Overall dimensions are 2" high with $1\frac{1}{2}$" x $1\frac{1}{2}$" base area. Mounting centers are $1\frac{5}{32}$" x $1\frac{5}{32}$". Shipping weight is 0.6 lbs.

INPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	**$17.25**
WF-21	Low Imp. Mic., Pickup, or L. to Sgl. or P.P. Grids	50, 200, 500	50,000	**18.40**
WF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	**17.25**
WF-24	Dynamic Microphone to 1 or 2 Grids	30	50,000 overall, in two sections	**16.10**

INTERSTAGE

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-26	Single Plate to Single Grid	15,000	60,000 (Turn ratio 2:1)	**$14.95**
WF-28	Sgl. Pl. to 2 Grids. Can use split pri. for P.P. Pl.	15,000	80,000 overall (Turn ratio 2.3:1 overall)	**16.10**

LOW LEVEL OUTPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-34	Single Plate to Line	15,000	50, 125/150, 200, 250, 333, 500/600	**$17 25**
WF-36	P.P. Low Level Plates to Line	30,000 Plate to Plate	50, 125/150, 200, 250, 333, 500/600	**17.25**
WF-35	Single Plate to Multiple Line Primary D.C. 8.0 ma. Response from 50–20,000 cps within ±2 db	15,000	50, 125/150, 200, 250, 333, 500/600	**16.10**

MIXING

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-30	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	**$17.25**

INPUT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

MICROPHONE OR LINE TO LINE

Part No.	Impedance In Ohms	Mtg.	Height Overall	Base Area	Shpt. Wt. In Lbs.	List Price
A-4350#	Pri—500/333/200/125/50 Sec—500/333/200/125/50	Q	2"	3¼" x 1¾"	1.0	**$ 5.90**
A-4407#†	Pri—500/333/200/125/50 Sec—500/333/200/125/50	D	3 3/16"	2⅝" x 3¼"	2.4	**11.60**

MICROPHONE PICKUP OR LINE TO GRID

Part No.	Application	Impedance in Ohms	Turns Ratio	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4705	S. B. Mic. to S. Grid	Pri—200/70 Sec—80,000	1:20	A	1⅜"	2⅜" x 1⅜"	0.4	**$2.90**
A-4706	S. B. Mic. to S. Grid	Pri—100 Sec—60,000	1:24.5	A	1⅜"	2⅜" x 1½"	0.5	**2.95**
A-4708	D. B. Mic. to S. Grid	Pri—200 CT Sec—57,000	1:17	J	2"	2⅜" x 1⅝"	0.7	**3.90**
A-4742	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	S	2 5/16"	2⅞" x 1¾"	1.2	**4.15**
A-4743	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	VE	2 5/16"	2⅞" x 2⅛"	1.2	**5.70**
A-4351#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	TD	2 11/16"	2¾" x 2 3/16"	1.4	**6.30**
A-4352#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	Q	2"	3¼" x 1¾"	1.0	**5.50**
‡A-4726	Line and High Imp. to P.P. Grids	Pri—200 CT/50 and 2,500 Sec—100,000	1:22.4 1:6.3	TD	2 11/16"	2¾" x 2 3/16"	1.4	**7.10**
‡A-4728†	2 Ckt mixer Line & Line or Mic. to S. Grid	Pri—200 —200/150/100/50 Sec—100,000	1:40 1:40	TD	2 11/16"	2¾" x 2 3/16"	1.7	**7.60**
A-4709	Dynamic Mic. or Pickup to S. Grid	Pri—30/15/8/4 Sec—106,000	1:60	TD	2 11/16"	2¾" x 2 3/16"	1.7	**6.90**

INTERCOMMUNICATOR AND TRANSCEIVER

Part No.	Application	Impedance in Ohms	Max. Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4744	Intercom. input	Pri—4 Sec—25,000	—	VE	1⅜"	2⅜" x 1½"	0.5	**$2.55**
A-3833	Transceiver Input Mic. and Plate to Grid	Pri—200 and 5,000 Sec—60,000	5	A	1⅝"	2⅞" x 1½"	0.7	**3.90**
A-3836	Transceiver Output. Plate to Low or High impedance phones	Pri—10,000 Sec—50 and 2,000	5	A	1⅝"	2⅞" x 1½"	0.7	**3.80**

#Has a dual primary—when properly connected the 500 and 200 ohm sections are center tapped.

†Has a static shield between primary and secondary windings.

‡Designates part numbers to be removed from next catalog.

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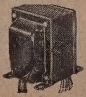
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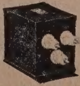
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INTERSTAGE TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO SINGLE GRID—FOR 7,000-20,000 OHM PLATE IMPEDANCES

Part No.	Turns Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-53	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1½″	0.5	**$2.40**

SINGLE PLATE TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-52-C	1:2	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.50**
A-62-C	1:2	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
A-4745	1:2	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**7.50**

Recommended for use in super-regenerative circuits. Has a static shield between pri. and sec. windings.

A-53-C	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.5	**2.45**
A-63-C	1:3	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
A-73-C	1:3	¾″ x ¾″	10 ma.	A	2″	3¼″ x 1¾″	1.0	**3.45**
A-4719	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.60**
A-83-C	1:3	⅞″ x ⅞″	10 ma.	A	2¼″	3¾″ x 2¼″	1.5	**5.85**
A-103-C	1:3	1″ x 1″	10 ma.	A	2⅝″	4″ x 2¼″	2.2	**6.85**
A-64-C	1:4	⅝″ x ⅝″	10 ma.	A	2″	2⅜″ x 1¾″	0.7	**3.25**
A-4206#	1:3.25	1″ x 1″	15 ma.	C	3⅛″	2⅝″ x 2⅝″	2.5	**8.70**

MULTI-PURPOSE INTERSTAGE—PIE-WOUND SPLIT SECONDARIES

May be used as single plate to single grid, single plate to push-pull grid, or push-pull plate to push-pull grid interstage transformers. Overall ratios are 3:1, however, primaries are center-tapped and secondaries have split windings, thus providing ratios of 1:1, 3:1 and 6:1 in either step-up or step-down applications.

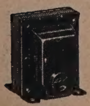
A-4774	1:3	¾″ x ¾″	10 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$4.15**
A-4773	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.90**

PUSH-PULL PLATES TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-4711	1:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**$3.30**
A-4155	1:3	¾″ x ¾″	10 ma.	L	2 1/16″	2 5/16″ x 1¾″	1.0	**5.80**

PUSH-PULL PLATES TO PARALLEL OR PUSH-PULL GRIDS—FOR 7,000-20,000 OHM PLATE IMPEDANCES

A-4208	1:1.4	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**$7.40**
A-4777	1:1.5	1″ x 1″	10 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**8.60**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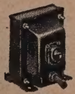
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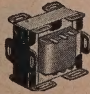
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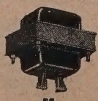
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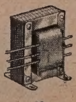
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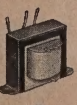
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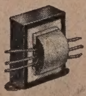
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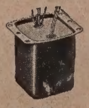
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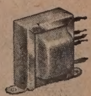
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DRIVER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO PUSH-PULL GRIDS

Part No.	Pri. Impedance in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4405	10,000	1.24:1	1″ x 1″	40 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.7	**$8.10**
A-4713	10,000	2:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1⅛″	0.7	**2.70**
A-4752	10,000	2/1.5/1:1	¾″ x ¾″	40 ma.	A	2″	3¼″ x 1¾″	1.2	**4.00**
A-4722	10,000	2:1	¾″ x 1″	30 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**5.90**
A-4292	10,000	2.5:1	⅝″ x ⅝″	20 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.85**
A-4734	10,000	2.5:1	¾″ x ¾″	25 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**3.90**
A-4723	10,000	3:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.70**
A-4721	10,000 to 22,500	3/2:1	¾″ x 1″	25 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**6.45**
A-4210	1,500 to 5,000	3:1	1″ x 1″	40 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.4	**6.60**
A-4702	1,500 to 5,000	5:1	1″ x 1″	80 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**6.50**

PUSH-PULL PLATES TO PUSH-PULL GRIDS

Part No.	Pri. Imp. (P.P.) in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4404	3,000 to 5,000	2:1	1⅛″ x 1⅛″	90 ma.	C	3⅝″	3″ x 3⅛″	3.7	**$8.65**
A-4208#	20,000 to 30,000	2.8:1	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.40**
A-4712	20,000	3:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.20**
A-4701#	20,000	3:1	1″ x 1″	25 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.7	**8.50**
A-4212	1,500 to 5,000	3.2:1	1″ x 1″	50 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**6.90**
A-4416#	3,000 to 10,000	5:1	1″ x 1″	40 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.8	**7.70**
A-4703#	3,000 to 10,000	5:1	1⅛″ x 1⅛″	95 ma.	C	3⅝″	3″ x 3⅛″	3.7	**8.40**

POLY-PEDANCE DRIVER MULTI-TAPPED UNITS FOR USE IN CIRCUITS WHERE THE OPTIMUM RATIO CANNOT BE PREDETERMINED.

Driver circuit changes often require new transformers. Many times it is impossible to match correctly tubes involved with a specific transformer, with high distortion resulting. *Poly-Pedance* units solve that problem; three transformers with the maximum number of usable ratios will match the driver tubes to any Class B modulator grid circuit without exceeding the power capabilities of the driver tubes.

Part No.	Application and Ratio Pri./½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4761	Driver to Class "B" Grids 1.25:1/ 1.4:1/ 1.6:1/ 1.8:1/ 2:1/ 2.2:1/ 2.4:1	Pri—150 ma. Sec—100 ma.	15	CD	3 3/16″	2⅝″ x 3⅝″	3.4	**$14.75**
A-4762	Driver to Class "B" Grids 2.6:1/ 3:1/ 3.2:1/ 3.4:1/ 4:1/ 4.5:1/ 5:1	Pri—150 ma. Sec—180 ma.	15	CD	3 3/16″	2⅝″ x 3⅛″	2.7	**13.90**
A-4763	Driver to Class "B" Grids 1.25:1/ 1.5:1/ 1.75:1/ 2:1/ 2.25:1/ 3.2:1	Pri—225 ma. Sec—280 ma.	30	CD	3⅝″	3″ x 4″	4.3	**17.20**

POLY-PEDANCE LINE DRIVER MULTI-TAPPED UNITS TO MATCH ALL COMMON LINE IMPEDANCES TO GRID CIRCUIT OF MODULATOR OR CLASS "B" AMPLIFIER.

Designed with pie wound coils to assure low leakage inductance, low resistance and low capacity, these two units will easily match all common line impedances to any modulator grid circuit. Individually boxed with complete instructions.

Part No.	Application and Ratio Pri./ ½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4765	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—180 ma. Sec—100 ma.	15	CD	3 3/16″	2⅝″ x 3⅜″	3.2	**$15.25**
A-4766	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—280 ma. Sec—200 ma.	30	CD	3⅜″	3″ x 3¾″	3.9	**16.95**

AUDIO CHOKES

Audio reactors are rated at 2 volts, 200 cycles, with maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rated Inductance	Max. D.C.	D.C. Res. in Ohms	Test Volts	Core	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1034	8 hy at 30 ma.	30 ma.	1365	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**$3.35**
C-1003	16 hy at 50 ma.	50 ma.	580	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**2.25**
C-2301	135 hy at 5 ma.	10 ma.	6500	1500	¾″ x 1″	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**5.60**

#These units have split secondaries for individual bias adjustment and/or use of inverse feedback.
¶Center tapped.

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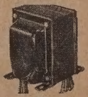
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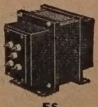
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OUTPUT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3865	1,500 ohms to 6/4/2 ohms	55 ma.	48, 25B6, 25L6, 50L6	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**$3.00**
A-3332	2,000 ohms to 3.2 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	3	A	1 3/16"	2⅛" x 1"	0.4	**1.45**
A-3330	2,000# ohms to 3.5 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.10**
A-3876	2,000 ohms to 4 ohms	60 ma.	2A3, 6A3, 6B4, 6W6, 6Y6, 25AC5, 25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.75**
A-3328	4,000 ohms to 3.5 ohms	10 ma.	1S4, 3S4	A	3	A	1 3/16"	2⅛" x 1"	0.4	**1.85**
‡A-2203	4,000 ohms to 8 ohms	40 ma.	43, 45, 48, 12A5, 25A6	A	5	A	1⅝"	2⅛" x 1⅝"	0.7	**3.35**
A-3877	5,000 ohms to 4 ohms	40 ma.	43, 59, 6V6, 7C5, 25A5	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.85**
A-3310	5,000 ohms to 500/15/8/4 ohms	55 ma.	45, 6L6, 6V6, 25A6, 25A7	A	20	C	3 3/16"	2⅝" x 2⅝"	2.5	**7.30**
A-3878	7,000 ohms to 4 ohms	30 ma.	20, 31, 33, 42, 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.80**
A-2313	7,000 ohms to 8 ohms	40 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	10	A	2"	3¼" x 1¾"	1.0	**3.10**
A-8114	7,600 ohms to 3.2 ohms	32 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜"	2⅜" x 1⅝"	0.4	**2.40**
A-3329	8,000 ohms to 3.5 ohms	10 ma.	1C5-GT, 1G5-G, 1Q5-GT/G, 1S4, 3S4	A	3	A	1 3/16"	2⅛" x 1"	0.4	**1.75**
A-3879	10,000 ohms to 4 ohms	30 ma.	1J6, 3C5, 6A4, 6G6, 6N7	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.75**
A-3881	15,000 ohms to 4 ohms	10 ma.	1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6V7, 6Y7, 12A7	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.95**
A-3327	25,000 ohms to 4 ohms	5 ma.	1A5, 1D8-GT, 1F4, 1F5-G, 1LA4, 1LB4, 1N6-G	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.20**

PUSH-PULL PLATES TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3306	P.P. Par. 2,500 ohms to 500/15/8/4 ohms	100 ma.	45, 48, 2A3, 25L6	AB	25	C	3⅝"	3" x 3⅛"	3.8	**$9.95**
A-3301	3,000 ohms to 500/15/8/4 ohms	55 ma.	48, 2A3, 6A3, 6B4, 25L6	AB	30	C	3⅝"	3" x 3⅛"	3.7	**9.25**
A-3802	3,800/3,300 to 500/250/8/4 ohms	250 ma.	45, 6L6, Par. 6L6	AB2, AB1	75	C	4¾"	4" x 3⅞"	7.9	**12.95**
A-5528	4,000 ohms to 500/15/8/4 ohms	65 ma.	6Y6, 25LG	AB	8	C	3 3/16"	2⅝" x 2¼"	1.9	**7.25**
A-3851§	4,400 ohms to 500/250/15/8/4 ohms	70 ma.	6L6	AB1	30	C	3⅝"	3" x 3⅛"	3.6	**9.55**
A-3872	5,000 ohms to 15/8/4 ohms	75 ma.	45, 2A3, 6A3, 6L6	AB	18	TD	2 11/16"	2¾" x 2 3/16"	1.7	**6.20**
A-3500	5,000 ohms to 500/250/15/8/4 ohms	80 ma.	45, 2A3, 6A3, 6L6	AB	30	C	3⅝"	3" x 3⅜"	3.7	**7.90**
A-3307	6,000 ohms to 500/15/8/4 ohms	100 ma.	46, 59, 42, 2A5, 6F6, Par. 58, 6A6, 6N7	B, AB2	30	C	3⅝"	3" x 3⅛"	3.5	**10.25**
A-3801	6,600 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4"	3¼" x 3⅜"	5.8	**9.50**
‡A-3855	7,000 ohms to 2,000 and 10 ohms	40 ma.	45, 12A5	AB	5	TD	2 11/16"	2¾" x 2 3/16"	1.5	**6.20**
A-2201	8,000 ohms to 6 ohms	40 ma.	43, 45, 48, 71, 25A6	AB	10	A	2"	3¼" x 1¾"	1.0	**4.25**
A-3885	9,000 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4"	3¼" x 3⅜"	4.5	**11.25**
A-3304	10,000/7,000 ohms to 500/15/8/4 ohms	60 ma.	45, 6V6, 6AC5	AB	25	C	3 3/16"	2⅝" x 2⅝"	2.7	**8.75**
A-3311	10,000 ohms to 500/15/8/4 ohms	70 ma.	6F6, 6V6, 6AC5	AB	25	C	3⅝"	3" x 3⅛"	3.5	**8.25**
‡A-3839	10,000 ohms to 2,000 and 15/8/4 ohms	30 ma.	30, 49, 1H4	AB	10	TD	2 11/16"	2¾" x 2 3/16"	1.3	**6.60**
A-3831	10,000 ohms to 8/4/2 ohms	40 ma.	30, 49	AB	5	A	1⅝"	2" x 1½"	0.7	**3.05**
A-2312	14,000 ohms to 4 ohms	40 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	10	A	2"	3¼" x 1¾"	1.0	**3.15**
A-3496	14,000 ohms to 4 ohms	25 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.90**
A-3303	14,000 ohms to 500/15/8/4 ohms	55 ma.	41, 42, 47, 59, 89, 2A5, 6F6, 6K6, 7B5	AB	20	C	3 3/16"	2⅝" x 2⅝"	2.7	**8.65**
A-3857	25,000 ohms to 4 ohms	10 ma.	1F4, 1F5, 1J5, 1T5, 6G6 12A7, 950	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.30**

CRYSTAL RECORDER OUTPUT

Part No.	Application	Max. Pri. D.C.	Audio Watts	Core Size	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3853	Single 7,000 ohm plate to 70,000 ohm crystal cutter OR 4 ohm voice coil	35 ma.	5	¾" x ¾"	A	2"	3¼" x 1¾"	1.0	**$5.25**
A-3854	Single 7,000 ohm plate to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma.	10	⅞" x ⅞"	A	2¼"	3¾" x 2¼"	1.5	**5.85**
A-3859	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter OR 4 ohm voice coil	30 ma. ea. ½	5	¾" x ¾"	A	2"	3¼" x 1¾"	1.0	**5.65**
A-3860	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma. ea. ½	10	⅞" x ⅞"	A	2¼"	3¾" x 2¼"	1.5	**6.35**
‡A-3897	500 ohm line to 70.000 ohm crystal cutter	—	10	⅞" x ⅞"	W2	3⅛"	3⅛" x 2 13/16"	4.4	**16.80**

#Has tapped primary for use in hum-reducing circuit. §This unit has a tertiary winding to provide 10% inverse feedback.
‡Designates part number to be removed from next catalog.

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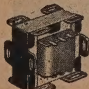
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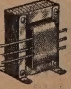
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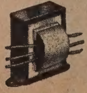
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OUTPUT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

UNIVERSAL OUTPUT

Part No.	Application	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3856	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.65**
A-3822	Single plate (7,000 to 10,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**2.50**
A-3848	Single plate (7,000 to 16,000 ohms) to voice coil	10 ma.	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**3.45**
A-3823	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	Q	1⅝″	2⅜″ x 1½″	0.7	**2.85**
A-3850	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	J	2″	2⅜″ x 1½″	0.7	**3.25**
A-3825	Single plate (1,500 to 4,500 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 1⅝″	0.9	**3.60**
A-3824	Single or Push-pull plates (6,000 to 10,000 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 2″	1.4	**4.50**
A-3849	Single plate (1,500 to 10,000 ohms) to voice coil	55 ma.	10	Q	1⅝″	2⅞″ x 1½″	0.7	**2.85**
A-3880	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	15	Q	2¼″	3¾″ x 2¼″	1.7	**5.40**
A-2855	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	L	2 1/16″	2 5/16″ x 1¾″	1.0	**4.70**
A-3890	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**7.20**
A-3852	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	18	J	2 5/16″	2⅞″ x 2″	1.3	**3.65**
A-3870	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	18	Q	2″	3¼″ x 2″	1.3	**4.50**
A-3830	Push-pull plates (3,000 to 10,000 ohms) to voice coil	60 ma. ea. ½	20	J	2 11/16″	3 5/16″ x 2¼″	1.8	**4.90**

TUBE TO LINE

Part No.	Application	Impedance in Ohms	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3841	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.5	**$6.80**
A-3842	Push-pull plates to line	Pri—14,000/12,000/10,000/8,000 CT Sec—500	55 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.7	**6.90**
A-4770	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	20	J	3⅛″	3⅝″ x 2¼″	2.4	**7.00**
A-3250	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	15 ma.	—	Q	2″	3¼″ x 1¾″	1.0	**4.50**
A-3315	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	35 ma.	—	D	3 3/16″	2⅝″ x 2⅝″	2.7	**10.00**

LINE TO VOICE COIL

Part No.	Impedance in Ohms	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-8101	Pri—500 Sec—3.2/6-8	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.00**
A-3883	Pri—500 Sec—15/8/6/4	25	J	2 5/16″	2⅞″ x 1¾″	1.1	**4.25**
A-3882	Pri—500/333/250 Sec—15/8/4	25	D	3 3/16″	2⅝″ x 3½″	2.4	**8.25**
A-3838	500/250/175/150/140/125/100/85/45/14/4/0.7 This Unit is designed to operate one or more speakers in series across a 500 ohm line or to match unequal lines.	30	B	3⅛″	2½″ x 2¼″	2.3	**6.50**
A-3818	Pri—1,500/1,000/500 Sec—15/8/4	25	J	3⅛″	3⅝″ x 2¼″	2.2	**4.95**
A-7947	Pri—2,000/1,500/1,000/500 Sec—6 ohms	8	Q	1⅝″	2 13/16″ x 1 9/16″	0.7	**2.95**
A-7949	Pri—2,000/1,500/1,000/500 Sec—6-8 ohms	12	J	2 5/16″	2⅞″ x 1 13/16″	1.1	**3.85**
A-3820	Pri—2,000/1,500/1,000/500 Sec—15/8/4	40	D	4 5/16″	3⅝″ x 4½″	5.0	**13.45**
A-3837	Line to Line or V. C. (Autoformer) Pri—500 Sec—8/4/2.65/2.35/2/1.5/0.7/0.5/0.3/0.2/0.1/0.05 This Unit is designed to operate one or more speakers in parallel across a 500 ohm line.	15	J	2 5/16″	2⅞″ x 2″	1.4	**5.00**

LINE TO VOICE COIL—OUTDOOR TYPE

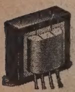
Part No.	Impedance in Ohms	Rated Watts	Mtg.	Mtg. Centers Can or Brkt.	Height Overall	Base Area†	Shpg. Wt. in Lbs.	List Price
A-3333	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	14	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.4	**$12.95**
A-3334	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	25	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.5	**15.70**
20-337	Adapter Hardware Set							**.50**

For clamping Part Numbers A-3333 and A-3334 to the mounting bracket of a trumpet projector. Set consists of holding plate and four each of screws, nuts and lockwashers to secure transformer assembly to speaker bracket up to 2″ wide.

TONE CONTROL UNIT

Part No.	Application	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡C-2332-1	Used in amplifiers for separate control of bass and treble frequencies	W1	2½″	2″ x 2⅛″	1.3	**$10.10**

†Dimensions with bracket.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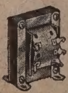
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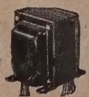
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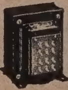
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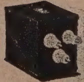
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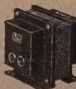
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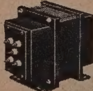
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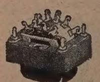
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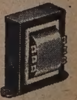
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MODULATION TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

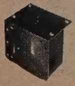
PLATE MODULATION

Part No.	Impedance in Ohms	Max. Ma. D.C./Tube Pri.	Sec.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3812	Pri—10,000 CT Sec—4,000	32	50	Sgl.—37, 38, 41, 1G5, 6K6 Sgl.—19, 1G6, 1J6, 6E6, 6G6, 6Z7 P.P.—30, 49, 1H4	A B B	5	A	1⅝″	2⅞″ x 1½″	0.7	**$3.25**
A-3871	Pri—4,500 Sec—8,500 #Secondary used as primary.	60	50	Sgl.—6L6, HY69 #Sgl.—6B5, 6F6, 6N6	A A	10	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**5.90**
A-3873	Pri—8,500 CT Sec—8,000	100	100	Sgl.—6B5, 6F6, 6N6 P.P.—6L6, RK56, HY60	A AB	25	C	3 3/16″	2⅝″ x 3⅝″	4.2	**9.60**
A-3845	Pri—10,000 CT Sec—8,000/6,500/5,000/3,000	100	100	Sgl. 53, 79, 6A6, 6N7, 6Y7 P.P.—42, 2A5, 6F6, 6V6	B AB2	25	C	3 3/16″	2⅝″ x 2¾″	2.8	**7.60**
A-3835	Pri—5,000/3,000 CT Sec—10,000/8,350/5,350	80	100	P.P.—45, 50, 2A3, 6A3, 6A5, 6B4, 6L6	AB	25	C	4″	3¼″ x 3⅛″	4.0	**10.25**
‡A-3868	Pri—6,600 CT Sec—12,000/10,000	100	70	P.P.—6L6	AB	35	C	3 3/16″	2⅝″ x 3⅝″	4.0	**9.95**
‡A-3843	Pri—6,600 CT Sec—14,500/7,500/5,000	150	150	P.P.—6L6, RK56, HY56	AB	40	D	4 5/16″	3⅝″ x 4⅞″	6.2	**14.15**
A-3808	Pri—3,800/3,300 CT Sec—10,000/7,500/5,000/4,000	260	170	P.P.—6L6, 807, HY61, RK41 P.P. Par—6L6	AB2 AB1	60	D	4¾″	4″ x 2⅞″	7.7	**16.60**
A-2907	Pri—8,000 CT Sec—12,500/9,000/6,800/5,000/3,300	200	150	P.P.—10, T20, TZ20, HY25, 46, 801, 825, 841	B	90	D	4¾″	4″ x 5¼″	9.7	**19.35**
A-2908	Pri—12,000/7,200 CT Sec—6,250/5,350/4,500/3,000	260	220	P.P.—RK18, T20, TZ20, HY25, RK31, 35T, 50T, 800, 801, 830B, 1623	B	120	D	4¾″	4″ x 5⅝″	9.7	**20.80**
A-3829	Pri—9,000/6,900 CT Sec—6,250/5,000/4,000/3,300	250	300	P.P.—RK12, HY25, 35T, HY40Z, T40, TZ40, 100TL, HK354, 756, 809, 830B	B	175	D	4¾″	4″ x 6⅛″	11.4	**21.00**

POLY-PEDANCE MODULATION MULTI-TAPPED UNITS TO PROPERLY MATCH THE OUTPUT OF THE MODULATOR STAGE TO THE MODULATED LOAD. WILL MATCH ALL COMMON IMPEDANCES OF CLASS "B" MODULATOR (2,000 to 20,000 OHMS) TO CLASS "C" LOAD IMPEDANCES OF 2,000 TO 20,000 OHMS.

The number of excellent transmitting tubes available is constantly increasing. R.F. applications, too, have increased and it is sometimes difficult to obtain the correct modulation transformer suitable for matching some given modulator tubes or R.F. load. These units give an almost unlimited range in power and impedance ratings to assure a correct impedance match in all cases.

Part No.	Max. Watts	Max. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3891	15	Pri—100 ma. Sec—100 ma.	D	3 3/16″	2⅝″ x 2⅞″	2.5	**$12.00**
A-3892	30	Pri—150 ma. Sec—150 ma.	D	4″	3¼″ x 3⅝″	4.3	**15.20**
A-3893	60	Pri—180 ma. Sec—180 ma.	D	4″	3¼″ x 4⅛″	6.2	**14.75**
A-3894	125	Pri—225 ma. Sec—225 ma.	D	4¾″	4″ x 4⅝″	9.4	**19.90**
A-3898	300	Pri—260 ma. Sec—260 ma.	FS	7¾″	7⅜″ x 8⅛″	37.9	**62.50**
A-3899	600	Pri—500 ma. Sec—500 ma.	FS	11¼″	7⅜″ x 9″	70.0	**124.50**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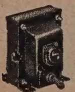
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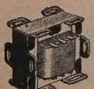
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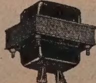
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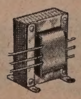
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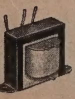
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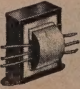
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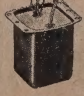
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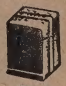
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AUDIO FILTERS

STANDARD TRANSFORMER CORPORATION

SPLATTER SUPPRESSOR FILTER

Use of a splatter suppressor filter between the modulator and Class C amplifier eliminates undesirable high audio frequencies and harmonics which cause interference to stations on other channels. Stancor Part Number C-2317, illustrated in a typical circuit application in Figure 1, attenuates frequencies higher than 3,000 cps when used in accordance with supplied instruction data. The effectiveness of the system is greatly enhanced by the negative peak limiter tube shown in the circuit.

Part No.	Application	Range of Inductance†	Max. D.C. in Ma.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2317	Splatter Suppressor Filter	0.048 to 0.9 hy.	300	B	2⅝″	3″ x 3″	2.3	**$6.75**

†Taps provided for obtaining various amounts of inductance.

BAND PASS FILTER

In radiotelephony, it is highly desirable to limit frequencies in the sidebands to those providing the greatest degree of intelligibility. Useless, power-consuming low and high frequencies can be efficiently eliminated by insertion of the Stancor Part Number C-2340 band-pass filter in the speech amplifier. When used in conjunction with a peak-clipper, a high *average* percentage of modulation is possible, providing a signal that rides over the QRM. The graph (Figure 2) illustrates the frequency curve of this three-section, *m*-derived filter.

Part No.	Application	Input Impedance	Output Impedance	Max. Level	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2340	Band Pass Filter 200 to 3,000 C.P.S.	10,000 ohms	500 or 100,000 ohms	10.0 V. RMS. Across Output	TD	2¹¹⁄₁₆″	2¾″ x 2³⁄₁₆″	0.6	**$15.50**

LOW PASS FILTER

The economical Stancor Part Number C-2341 unit offers an *m*-derived, low-pass filter that will give a good account of itself and may be used to further advantage with a peak-clipper. Typical circuit application of this low-pass filter may be found on page 24 of the November, 1946, issue of QST. See Figure 3 below for frequency curve of the C-2341.

Part No.	Application	Input Impedance	Output Impedance	Max. Level	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2341	Low Pass Filter 3,000 C.P.S. Cutoff	100,000 ohms	100,000 ohms	1.5V. RMS. Across Output	TD	2″	2½″ x 1¹⁵⁄₁₆″	0.5	**$6.90**

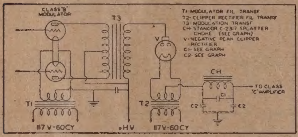

Figure 1

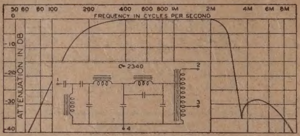

Figure 2

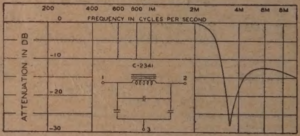

Figure 3

PLATE TRANSFORMERS—NEW FUNCTIONAL UNITS

No exposed terminals. Insulated leads provide protected routing to circuits. Simplified design offers ease of mounting and neat, convenient circuit wiring. No difficult cutouts needed. Each of these units is "all transformer," taking a minimum of chassis space. No bulky casing or protruding, "hot" terminals to increase mounting area.

D.C. output rated CCS at load terminals of single-section reactor-input filter, ICAS with single-section capacitor-input filter. Primaries for 117 volts, 60 cycles.

Type Part No.	Secondary A.C. Volts	D.C. Output Volts	D.C. Output Ma.	Type Filter	Rectifier	List Price
PC8301	415-0-415	300 425	200 160	Reactor Input Capacitor Input	5U4G 5U4G	**$10.65**
PC8302	515-0-515	385 500	235 200	Reactor Input Capacitor Input	5U4G 5R4GY	**13.65**
PC8303	665-0-665	500 750	250 200	Reactor Input Capacitor Input	5R4GY 5R4GY	**17.30**
PC8304	750-0-750	600 850	265 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**19.35**
PC8305	920-0-920	750 1000	250 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**20.20**
PC8306*	920-0-920	750 1100	150 125	Reactor Input Capacitor Input	5R4GY 5R4GY	**20.50**
	500-0-500	380 550	150 125	Reactor Input Capacitor Input	5U4G 5U4G	

*Tapped for use with dual rectifier-filler systems to deliver two rated outputs simultaneously.

D.C. output rated at load terminals of single-section, reactor-input filter with full-wave mercury-vapor rectification. Primaries for 117 volts, 60 cycles.

Type and Part No.	Secondary A.C. Volts	D.C. Volts	D.C. Ma. CCS	D.C. Ma. ICAS	List Price
PT8311	1200-0-1200	1000	225	280	**$22.30**
PT8312	1200-0-1200	1000	325	405	**36.90**
PT8313	1475-0-1475	1250	250	310	**36.30**
PT8314	1790-0-1790	1500	225	280	**41.50**
PT8315	2065-0-2065	1750	200	250	**41.15**

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POWER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

COMBINATION PLATE AND FILAMENT SUPPLY

POWER TRANSFORMERS TO PROVIDE APPROXIMATELY 260 VOLTS D.C. TO CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	D.C. Ma.	Rectifier Fil. Volts	Amps.	Other Windings Volts	Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8401	235-0-235	40	5.0	2.0	6.3 CT	2.0	2 5/8" x 2 5/8"	3 3/16"	2" x 1 9/16"	2.2	**$ 6.15**
PM8401							2 1/2" x 3"	2 5/8"	2" x 2 1/2"		
PC8402	240-0-240	55	5.0	2.0	6.3 CT	2.0	2 5/8" x 2 3/4"	3 3/16"	2" x 1 11/16"	2.4	**6.80**
PM8402							2 1/2" x 3"	2 3/4"	2" x 2 1/2"		
PC8403	250-0-250	70	5.0	2.0	6.3 CT	2.5	2 5/8" x 3 1/8"	3 3/16"	2" x 2 1/16"	3.2	**7.65**
PM8403							2 1/2" x 3"	3 1/8"	2" x 2 1/2"		
PC8404	260-0-260	90	5.0	2.0	6.3 CT	3.0	3" x 3 1/2"	3 5/8"	2 1/4" x 2 1/4"	4.0	**8.60**
PM8404							2 7/8" x 3 3/8"	3 5/8"	2 1/4" x 2 13/16"		
PC8405	270-0-270	120	5.0	3.0	6.3 CT	3.5	3 1/4" x 3 1/2"	4"	2 1/2" x 2 3/16"	4.9	**9.50**
PM8405							3 1/8" x 3 3/4"	3 1/2"	2 1/2" x 3 1/8"		

POWER TRANSFORMERS FOR USE WITH CHOKE INPUT FILTER, VR-TUBE REGULATED SUPPLY, SPEAKER FIELD IN FILTER, OR HIGHER VOLTAGE WITH CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	D.C. Ma.	Rectifier Fil. Volts	Amps.	Other Windings Volts	Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8406	325-0-325	40	[illegible].0	2.0	6.3 CT	2.0	2 5/8" x 2 3/4"	3 3/16"	2" x 1 11/16"	2.4	**$ 6.25**
PM8406							2 1/2" x 3"	2 3/4"	2" x 2 1/2"		
PC8407	325-0-325	55	5.0	2.0	6.3 CT	2.0	2 5/8" x 3 1/8"	3 3/16"	2" x 2 1/16"	3.2	**6.90**
PM8407							2 1/2" x 3"	3 1/8"	2" x 2 1/2"		
PC8408	340-0-340	70	5.0	2.0	6.3 CT	2.5	3" x 3 3/8"	3 5/8"	2 1/4" x 2 1/8"	3.8	**7.95**
PM8408							2 7/8" x 3 3/8"	3 1/2"	2 1/4" x 2 13/16"		
PC8409	350-0-350	90	5.0	2.0	6.3 CT	3.0	3" x 3 5/8"	3 5/8"	2 1/4" x 2 3/8"	4.5	**8.85**
PM8409							2 7/8" x 3 3/8"	3 3/4"	2 1/4" x 2 13/16"		
PC8410	360-0-360	120	5.0	3.0	6.3 CT	3.5	3 1/4" x 3 3/4"	4"	2 1/2" x 2 7/16"	5.5	**9.65**
PM8410							3 1/8" x 3 3/4"	3 3/4"	2 1/2" x 3 1/8"		
PC8411	375-0-375	150	5.0	3.0	6.3 CT	4.5	3 5/8" x 4"	4 5/16"	2 3/4" x 2 13/16"	5.8	**11.55**
PM8411							3 1/2" x 4 1/8"	3 7/8"	2 3/4" x 3 7/16"		
PC8412	400-0-400	200	5.0	3.0	6.3 CT	5.0	4" x 4"	4 3/4"	3" x 2 13/16"	8.2	**13.25**
PM8412							3 3/4" x 4 1/2"	3 7/8"	3" x 3 3/4"		
PC8413	400-0-400	250	5.0	4.0	6.3 CT	5.0	4" x 4 1/2"	4 3/4"	3" x 3 5/16"	10.0	**16.30**
PC8414	600-0-600	200	5.0	3.0	6.3 6.3	3.0 3.0	4" x 4"	4 3/4"	3" x 2 13/16"	8.3	**16.40**

POWER TRANSFORMERS FOR USE WITH 6AX5, 6X4, 6X5, OR SELENIUM RECTIFIERS

Type and Part No.	Plate Supply A.C. Volts	D.C. Ma.	Rectifier Fil. Volts	Amps.	Other Windings Volts	Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PS8415	125 1/2-wave	15	...	...	6.3	0.6	2 3/8" x 1 3/8"	2"	2"	0.7	**$ 2.90**
PS8416	125-0-125	25	...	...	6.3	1.0	2 7/8" x 1 3/4"	2 5/16"	2 3/8"	1.0	**3.60**
PC8417	220-0-220	50	6.3	0.6	25.2	0.5	2 5/8" x 2 5/8"	3 3/16"	2" x 1 9/16"	2.2	**6.70**
PC8418	230-0-230	50	...	...	6.3	2.5	2 5/8" x 2 5/8"	3 3/16"	2" x 1 9/16"	2.2	**5.95**
PM8418							2 1/2" x 3"	2 5/8"	2" x 2 1/2"		
PC8419	240-0-240	70	...	...	6.3	3.0	2 5/8" x 2 7/8"	3 3/16"	2" x 1 13/16"	2.6	**6.80**
PM8419							2 1/2" x 3"	2 7/8"	2" x 2 1/2"		
PC8420	260-0-260	90	...	...	6.3	4.0	3" x 3 1/2"	3 1/2"	2" x 2 1/4"	3.5	**7.60**
PM8420							2 7/8" x 3 3/8"	3 1/2"	2 1/4" x 2 13/16"		

CATHODE RAY TUBE POWER TRANSFORMERS

For use with type 2X2 rectifier tubes in a conventional half-wave voltage supply.

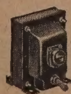
Part No.	Plate Supply A.C. Volts	D.C. Milliamperes	Rectifier Filament Volts	Amperes	Other Windings Volts	Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
***P-8150**	1,550 half-wave	1.5	2.5	1.75	...	...	TD	3 1/16"	3" x 2 1/2"	1.8	**$ 9.75**
***P-8151**	2,400 half-wave	5.0	2.5	2.0	2.5	2.0	C	4 9/16"	3 9/16" x 3 7/8"	6.4	**14.80**

SPEAKER FIELD SUPPLY TRANSFORMER

Part No.	Plate Supply A.C. Volts	D.C. Milliamperes	Rectifier Filament Volts	Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6146	120-0-120	250	5.0	3.0	C	4"	3[illegible]" x 3 1/8"	4.2	**$10.40**

All Primary Windings for 117 V-60 cycle operation unless otherwise indicated. *New part number.

PC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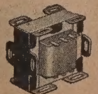
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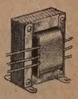
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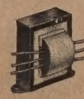

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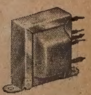
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POWER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

REPLACEMENT POWER TRANSFORMERS (Misc.)

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Filament Volts—Amperes	Other Windings Volts—Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6001	325-0-325	40	5.0 CT–2.0	2.5 CT–4.0	M	2¾″	2½″ x 3″	2.5	**$ 7.95**
P-6002	350-0-350	50	5.0 CT–2.0	2.5 CT–7.25	M	3⅛″	2½″ x 3″	3.0	**9.90**
‡P-6293	300-0-300	60	5.0 CT–3.0	2.5 CT–7.5 6.3 CT–2.5	M-2	3⅜″	2⅞″ x 3⅜″	4.4	**12.90**
P-6003	350-0-350	70	5.0 CT–2.0	2.5 CT–9.0	M	3⅛″	2⅞″ x 3⅜″	3.7	**11.30**
P-6005	350-0-350	70	5.0 CT–3.0	2.5 CT–9.0 2.5 CT–3.5	M	4¼″	2⅞″ x 3⅜″	4.8	**7.75**
‡P-6009	275-0-275	70	5.0 CT–3.0	2.5 CT–10.5 5.0 C.T.–0.5	M	3¼″	2⅞″ x 3⅜″	3.8	**11.85**
‡P-4042	350-0-350	70	5.0–3.0	2.5 CT–3.5 2.5–7.5	C	4″	3¼″ x 3″	3.8	**11.90**
‡P-4047	350-0-350	70	5.0–3.0	2.5 CT–9.0 6.3–3.0	C	4″	3¼″ x 3″	3.8	**11.20**
P-6004	350-0-350	90	5.0 CT–3.0	2.5 CT–12.5	M	3″	3⅛″ x 3¾″	4.2	**10.20**
‡P-4043	350-0-350	90	5.0–3.0	2.5 CT–3.5 2.5–9.0	C	4 5/16″	3⅝″ x 3⅜″	4.8	**13.05**
‡P-4048	350-0-350	90	5.0–3.0	2.5 CT–10.0 6.3–3.5	C	4 5/16″	3⅝″ x 3⅜″	5.2	**12.55**
‡P-4044	350-0-350	110	5.0–3.0	2.5 CT–3.5 2.5–14.0	C	4 5/16″	3⅝″ x 3⅝″	6.0	**13.45**
P-6007	400-0-400	110	5.0 CT–3.0	2.5 CT–15.0 2.5 CT–3.5	M	3⅜″	3⅛″ x 3¾″	5.4	**12.50**
‡P-6290	350-0-350	120	18/24/50 v. † 5.0 CT–3.0	6.3 CT–4.7	M-2	3⅛″	3¾″ x 3⅜″	5.4	**13.60**
P-6006	350-0-350	120	5.0 CT–3.0	2.5 CT–12.5 2.5 CT–3.5	M	3⅝″	3⅛″ x 3⅝″	5.5	**13.20**
‡P-1503	350-0-350	120	5.0 CT–3.0	1.5–5.0 1.5 CT–1.0 2.5 CT–4.0 2.5 CT–3.5	C	4¾″	4″ x 3¾″	7.4	**17.20**
P3005#	360-0-360 80 v. Bias	125	5.0 CT–3.0 5.0 CT–2.0	2.5 CT–10.0 6.3 CT–4.0	C	4¾″	4″ 3⅞″	8.0	**17.95**
‡P-6143	440-0-440	130	5.0–3.0	6.3 CT–3.5	C	4 5/16″	3⅝″ x 3⅞″	7.0	**13.50**
P-4004#	400-0-400 80 v. Bias	175	5.0 CT–3.0	2.5–1.75 6.3 CT–2.5 6.3 CT–2.5	C	4¾″	4″ x 3⅞″	8.3	**15.80**
‡P-5059#	337.5-0-337.5	200	5.0 CT–3.0	6.3 CT–5.0	C	4¾″	4″ x 4¼″	9.6	**15.35**
‡P-6315	370-0-370	275	5.0 CT–3.0	6.3 CT–7.0	M	4¼″	3¾″ x 4½″	9.3	**17.70**

VIBRATOR TRANSFORMERS WITH 6 VOLT D.C. PRIMARY

Part No.	Secondary A.C. Volts	Secondary Volts	D.C. to Filter Milliamperes	Recommended Buffer Cap.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6301	210-0-210	150	40	0.008 mfd.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$4.60**
P-4060	240-0-240	225	40	0.008 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**5.95**
P-4061	290-0-290	250	50	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**5.90**
P-4062	300-0-300	260	65	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.3	**6.50**
P-4063	320-0-320	285	75	0.006 mfd.	N	3⅛″	2½″ x 2¾″	2.8	**8.25**
P-6131	370-0-370	330	100	0.007 mfd.	N	3½″	2⅞″ x 2″⅞	3.5	**8.90**

VIBRATOR TRANSFORMER WITH 6 VOLT D.C. AND 117 VOLT A.C. PRIMARY

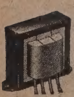
P-6166	350-0-350	—	135 Filament—6.3 volts at 2.25 Amps.	C	4¾″	4″ x 3⅝″	6.9	**$14.90**

AUTO RADIO VIBRATOR TRANSFORMERS—EXACT DUPLICATE

Exact duplicate of mounting type used in original equipment. For detailed drawings, see Howard W. Sams *Auto Radio Manual.*

Part No.	Original Part No.	Trade Name	D.C. Volts at Filter Input	D.C. Ma.	Recommended Buffer Cap.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
***P-4064**	7240519	United Motors (Delco)	280	65	0.015–0.015 mfd.	3 9/16″	2 9/16″ x 2 9/16″	2.5	**$10.40**
***P-4065**	7255881	United Motors (Delco)	265	56	0.006 mfd.	4 1/16″	2⅜″ x 2 7/32″	2.6	**9.90**
***P-6470**	140-111	Regal (5-tube univ. series)	145	50	0.009 mfd.	2 11/16″	2 11/16″ x 2 3/16″	1.4	**6.75**
***P-6471**	25B472533	Motorola (408, 508, etc.)	235	70	0.006 mfd.	3″	3⅜″ x 2 3/16″	2.0	**6.90**
***P-6472**	D 71014 C 217020 C 71014 25B70950	Colonial-Detrola No. 8072 Colonial-Bendix 8M Colonial-Motorola Motorola (405, 505, etc.)	270	56	0.007 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**6.90**
***P-6473**	95-1073	Zenith	272	73	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.4	**7.85**
***P-6474**	95-1066	Zenith	240	52.5	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.2	**7.00**
***P-6476**	D 70267 C 70267	Colonial-Detrola No. 7070 Col.-Mot.-Det. No. 8030	220	53.5	0.008 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**7.10**

All Primary Windings for 117 V-60 cycle operation unless otherwise indicated. #Primary for 117/107 volts.
†Motor-tuner windings for intermittent duty. ‡Designates part number to be removed from next catalog. *New part number.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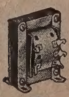
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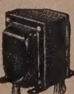
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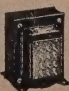
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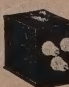
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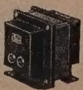
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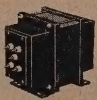
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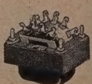
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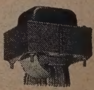
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FILTER CHOKES

STANDARD TRANSFORMER CORPORATION

SMOOTHING CHOKES FOR D.C. POWER SUPPLIES.

Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. They are rated at 10 volts, 60 cycles, with maximum D.C. in winding. Tolerance of plus 15% is maintained on all ratings.

Part	Rating			D.C. Res.	R.M.S. V.		Height	Base	Shpg. Wt.	List
No.	Induc.	at	Ma. D.C.	in Ohms	Insul.	Mtg.	Overall	Area	in Lbs.	Price
C-1515	20.0 hy.	at	15 ma.	900	1500	A	1⅝"	2⅞" x 1½"	0.7	**$2.00**
C-1706	4.5 hy.	at	50 ma.	300	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**1.65**
C-1707	7.0 hy.	at	50 ma.	550	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**1.80**
C-1003	16.0 hy.	at	50 ma.	580	1500	A	2"	3¼" x 1¾"	1.1	**2.25**
C-1708	13.0 hy.	at	65 ma.	500	1500	A	2"	3¼" x 1¾"	1.0	**2.75**
C-1355	8.0 hy.	at	75 ma.	290	1500	L	2¹⁄₁₆"	2⁵⁄₁₆" x 1¾"	1.0	**2.75**
C-1002	15.0 hy.	at	75 ma.	400	1500	A	2¼"	3¾" x 2¼"	1.7	**3.00**
C-1420	16.0 hy.	at	80 ma.	360	1500	C	3³⁄₁₆"	2⅝" x 2⅝"	2.5	**4.90**
C-1709	8.0 hy.	at	85 ma.	250	1500	A	2"	3¼" x 2"	1.4	**3.10**
C-2305	5.0 hy.	at	100 ma.	300	1500	TD	2¹¹⁄₁₆"	2¾" x 2³⁄₁₆"	1.5	**4.25**
C-1001	10.5 hy.	at	110 ma.	225	3000	A	2⅝"	4" x 2¼"	2.3	**4.10**
C-2303	2.5 hy.	at	130 ma.	100	2000	A	2"	3¼" x 1¾"	1.0	**2.80**
C-1421	7.0 hy.	at	140 ma.	165	3000	C	3³⁄₁₆"	2⅝" x 2⅝"	2.5	**5.60**
C-2304	2.3 hy.	at	150 ma.	60	1500	A	2"	3¼" x 1¾"	1.0	**2.90**
C-2309	3.0 hy.	at	150 ma.	90	2000	A	2¼"	3¾" x 2¼"	1.7	**3.50**
C-1710	7.0 hy.	at	150 ma.	200	1500	A	2⅝"	4" x 2¼"	2.2	**4.50**
C-1410	4.0 hy.	at	175 ma.	100	3000	C	3³⁄₁₆"	2⅝" x 2⅝"	2.4	**5.70**
C-1646	5.0 hy.	at	200 ma.	90	5000	C	4"	3¼" x 3⅜"	4.5	**8.15**
C-1411	4.5 hy.	at	200 ma.	80	3000	C	3⅝"	3" x 3⅛"	3.5	**6.50**
C-1721	8.5 hy.	at	200 ma.	120	3000	N	3⅞"	3⅛" x 3"	4.4	**7.45**
C-1703	4.0 hy.	at	250 ma.	60	3000	B	3½"	2⅞" x 3⅛"	4.2	**8.25**
C-1412	4.0 hy.	at	250 ma.	60	3000	C	3⅝"	3" x 3½"	4.3	**9.50**
C-1722	8.0 hy.	at	300 ma.	80	3000	N	4⅝"	3¾" x 3½"	7.3	**12.00**
C-2308	8.0 hy.	at	300 ma.	80	3000	C	4¾"	4" x 3⅞"	7.8	**12.50**
C-1413	8.0 hy.	at	300 ma.	80	5000	D	4¾"	4" x 4⅛"	7.8	**12.15**
C-1414	7.5 hy.	at	400 ma.	60	5000	D	4¾"	4" x 5⅛"	11.8	**17.50**
C-1415	6.0 hy.	at	500 ma.	75	7500	FS	7⅝"	6⅛" x 7"	23.7	**40.50**

SWINGING CHOKES FOR INPUT SECTION OF D.C. POWER SUPPLIES.

Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Swinging chokes are rated at 10 volts, 60 cycles, from maximum to 10% of maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part	Min. Swg.	D.C. Res.	Approx. Range of			R.M.S. V.		Height	Base	Shpg. Wt.	List
No.	Induc.	in Ohms	Induc.	at	D.C. Ma.	Insul.	Mtg.	Overall	Area	in Lbs.	Price
C-1718	10 hy.	130	13.5-3.5 hy.	at	15-150	2000	C	3³⁄₁₆"	2⅝" x 2½"	2.3	**$5.60**
C-1400	10 hy.	100	12-2	at	17.5-175	3000	C	3³⁄₁₆"	2⅝" x 2⅝"	2.4	**6.25**
C-1401	10 hy.	80	12-2	at	20-200	3000	C	3⅝"	3" x 3⅛"	3.5	**7.15**
C-1645	10 hy.	90	12-2	at	20-200	5000	C	4"	3¼" x 3⅜"	4.5	**8.25**
‡C-1719	15 hy.	120	18-3	at	20-200	3000	N	3⅞"	3⅛" x 3"	4.4	**8.20**
C-1702	10 hy.	60	12-2	at	25-250	3000	B	3½"	2⅞" x 3⅛"	4.3	**8.25**
C-1402	10 hy.	60	12-2	at	25-250	3000	C	3⅝"	3" x 3½"	4.3	**9.50**
C-1720	16 hy.	80	20-4	at	30-300	3000	N	4⅝"	3¾" x 3½"	7.2	**11.75**
C-2307	16 hy.	80	20-4	at	30-300	3000	C	4¾"	4" x 3⅞"	7.9	**13.75**
C-1403	16 hy.	80	20-4	at	30-300	5000	D	4¾"	4" x 4⅛"	7.7	**11.95**
C-1404	14 hy.	60	17-3	at	40-400	5000	D	4¾"	4" x 5⅛"	11.7	**17.50**
C-1405	12 hy.	75	16-4	at	50-500	7500	FS	7⅝"	6⅛" x 7"	24.3	**36.00**

SMOOTHING CHOKES FOR USE IN A.C.-D.C. POWER SUPPLIES.

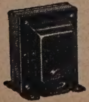
Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Filter chokes are rated at 10 volts, 60 cycles, with maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part	Rating			D.C. Res.	R.M.S. V.		Height	Base	Shpg. Wt.	List
No.	Induc.	at	Ma. D.C.	in Ohms	Insul.	Mtg.	Overall	Area	in Lbs.	Price
C-1080	3.5 hy.	at	50 ma.	200	1500	A	1⅝"	2⅞" x 1½"	0.7	**$1.95**
C-1325	5.0 hy.	at	50 ma.	250	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.10**
C-1277	7.0 hy.	at	50 ma.	300	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.25**
‡C-1711	4.5 hy.	at	50 ma.	325	1500	Q	1⅜"	2⅜" x 1⅜"	0.4	**2.05**
C-1723	4.5 hy.	at	50 ma.	325	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**1.75**
C-1227	7.0 hy.	at	50 ma.	350	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.25**
C-1279	8.5 hy.	at	50 ma.	400	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.00**
C-1333	8.0 hy.	at	50 ma.	450	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.00**
C-1215	9.0 hy.	at	50 ma.	500	1500	A	1⅝"	2⅞" x 1½"	0.7	**1.85**
‡C-1362	9.5 hy.	at	50 ma.	550	1500	A	1⅝"	2⅞" x 1½"	0.7	**1.90**

SPEAKER FIELD SUBSTITUTE CHOKE

Part No.	D.C. Resistance	Max. Current	Height Overall	Base Area	Mtg.	Shpg. Wt. in Lbs.	List Price
C-2302	1750/1000/750/500 ohms 3000/2500/2250/2000/1500/500 ohms	60 ma. cont. or 75 ma. int. 40 ma. cont. or 55 ma. int.	3½"	2⅞" x 2¼"	N	3.1	**$8.30**

‡Designates part number to be removed from next catalog.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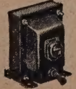
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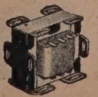
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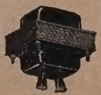
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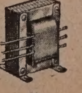
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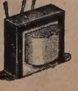
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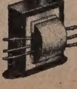
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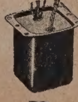
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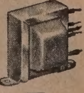
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FILAMENT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS WITH SINGLE SECONDARY

Part No.	Secondary Volts	Secondary Amperes	R.M.S. V. Insul.	Primary Volts#	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-4026	2.5	1.5	2,500	117	A	1⅝"	2⅞" x 1½"	0.7	**$3.25**
P-4082	2.5 CT	2.5	2,500	117/107	TD	2¹¹⁄₁₆"	2¾" x 2³⁄₁₆"	1.5	**6.40**
P-6133	2.5 CT	5.0	7,500	117	S	2¹¹⁄₁₆"	3⁵⁄₁₆" x 2¼"	1.5	**5.15**
P-4083	2.5 CT	6.0	2,500	117/107	C	3³⁄₁₆"	2⅝" x 2⅜"	2.2	**6.70**
P-3024	2.5 CT	10.0	2,500	117/107	C	3³⁄₁₆"	2⅝" x 2⅝"	2.5	**6.80**
P-3060	2.5 CT	10.0	10,000	117	B	3½"	2⅞" x 2½"	2.5	**6.25**
P-3025	2.5 CT	10.0	10,000	117/107	FA	5⅛"	4¼" x 8½"	10.7	**19.75**
P-3026	5.0 CT	3.0	2,500	117/107	C	3³⁄₁₆"	2⅝" x 2⅝"	2.4	**6.80**
P-4088	5.0 CT	3.0	2,500	117	B	3⅛"	2½" x 2½"	1.8	**4.95**
P-3062	5.0 CT	6.0	2,500	117	B	3⅛"	2½" x 2½"	2.3	**5.75**
P-5000	5.0 CT	6.0	2,500	117/107	C	3³⁄₁₆"	2⅝" x 2⅞"	3.1	**7.90**
P-6135	5.0 CT	10.0	2,500	117	N	3⅛"	2½" x 2⅞"	3.0	**6.40**
P-4086	5.0 CT	14.0	10,000	117/107	FA	5⅛"	4¼" x 8½"	12.3	**22.50**
P-6302	5.0 CT	22.0	10,000	117/107	FA	5⅛"	4¼" x 8½"	13.5	**24.60**
P-6305	5.0 CT	30.0	10,000	117/107	FB	5⅛"	4¼" x 10"	18.3	**30.70**
P-6137	5.25 CT	13.0	2,500	117	N	3⅞"	3⅛" x 3¼"	5.2	**10.25**
P-6134	6.3 CT	1.2	2,500	117	A	1⅝"	2⅞" x 1⅝"	0.8	**2.70**
P-5014	6.3 CT	3.0	2,500	117	B	3⅛"	2½" x 2½"	2.0	**4.75**
P-4019	6.3 CT	4.0	2,500	117/107	C	3³⁄₁₆"	2⅝" x 2⅝"	2.7	**6.55**
P-3064	6.3 CT	6.0	2,500	117	B	3⅛"	2½" x 2⅞"	2.4	**5.80**
P-4089	6.3 CT	6.0	2,500	117/107	C	3⅝"	3" x 3⅛"	3.5	**7.50**
P-6308	6.3 CT	10.0	2,500	117/107	N	3½"	2⅞" x 2¾"	3.4	**6.95**
P-6309	6.3 CT	20.0	2,500	117/107	N	4⅝"	3¾" x 3"	6.7	**12.90**
P-6164	6.3/5/2.5	2.5	2,500	117	J	2¹¹⁄₁₆"	3⁵⁄₁₆" x 2¼"	1.7	**5.30**
P-5015	7.5 CT	4.0	2,500	117	B	3⅛"	2½" x 2⅞"	2.7	**5.75**
P-4091	7.5 CT	5.0	2,500	117/107	C	3⅝"	3" x 3"	3.4	**8.90**
P-6138	7.5 CT	8.0	2,500	117	N	3⅞"	3⅛" x 2⅞"	4.7	**8.15**
P-4092	7.5 CT	8.0	2,500	117/107	C	4"	3¼" x 3⅜"	4.7	**9.25**
P-5016	10.0 CT	4.0	2,500	117	B	3½"	2⅞" x 2⅝"	3.3	**6.95**
P-4096	10.0 CT	5.0	2,500	117/107	C	4"	3¼" x 3⅛"	4.0	**8.25**
P-6139	10.0 CT	8.0	2,500	117	N	3⅞"	3⅛" x 3⅛"	4.9	**8.45**
P-4097	10.0 CT	8.0	2,500	117/107	C	4"	3¼" x 3⅝"	5.2	**8.95**
P-5002	10.0 CT	12.0	7,500	117/107	FA	5⅛"	4¼" x 8½"	14.7	**23.65**
P-3020	11.0 CT	10.0	2,500	117/107	C	4¾"	4" x 3½"	7.7	**13.25**
***P-8130**	12.6 CT	2.0	1,500	117	A	2"	3¼" x 2"	1.4	**4.65**
***P-6469**	25.2	1.0	1,500	117	A	2"	3¼" x 2"	1.4	**4.50**

FILAMENT TRANSFORMERS WITH MULTIPLE SECONDARY

P-6144	2.5 CT 5.0 CT 6.3 CT	3.5 3.0 3.0	2,500 2,500 2,500	117	C	3⅝"	3" x 3⅛"	3.7	**$10.35**
P-6338	2.5 5.0 5.0 CT 6.3 CT	3.0 3.0 2.0 3.0	2,500 2,500 2,500 2,500	117	N	3½"	2⅞" x 2¾"	3.4	**9.80**
P-5009	5.0 CT 6.3 CT	3.0 6.0	2,500 2,500	117/107	C	4"	3¼" x 3¼"	4.5	**11.80**
P-5008	5.0 CT 6.3 CT	4.0 3.6	2,500 2,500	117/107	C	3⅝"	3" x 3¼"	3.8	**10.40**
P-4022	5.0 CT 6.3 CT	6.0 6.0	2,500 2,500	117/107	C	4"	3¼" x 3⅜"	4.8	**11.40**
P-6333	5.0 5.0 6.3 CT 7.5/6.3 CT	3.0 3.0 4.0 3.0	2,500 2,500 2,500 2,500	117	B	3½"	2⅞" x 3⅞"	4.7	**11.40**
‡P-4090	6.3 CT 7.5 CT	3.0 4.0	2,500 2,500	117	B	3½"	2⅞" x 3⅛"	3.7	**8.60**

TUBE CHECKER MULTI-TAPPED FILAMENT TRANSFORMER

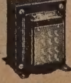
Part No.	Secondary Volts	Primary Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-1834-3	1.1/ 1.4/ 1.5/ 2.0/ 2.5/ 3.0/ 3.3/ 5.0/ 6.3/ 7.0/ 7.5/ 12/ 25/ 30/ 35/ 50/ 70/ 85/ 110/ 117	125/115/105	A	2⅝"	4" x 2"	2.4	**$12.90**

#All primary windings for 60 cycle operation. *New part number. ‡Designates part number to be removed from next catalog.

A

B

C



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FA-FB

FK

FS

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PLATE TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

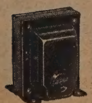
PLATE TRANSFORMERS*

Part No.	D.C. Volts	Sec. A.C. Volts at Plate	D.C. Ma. CCS	D.C. Ma. ICAS	Pri. Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡P-8046#	370	580–0–580	235	290	117	C	4¾"	4" x 3⅞"	8.7	**$17.50**
‡P-8040	400 40	500/40–0–500	300	375	115	C	4¾"	4" x 4½"	9.8	**16.85**
‡P-6326	500	615–0–615	200	250	115	C	4¾"	4" x 4⅞"	11.3	**17.95**
‡P-8041	500 400 40	615/520/40–0–520/615	250	310	115	C	4¾"	4" x 5⅛"	13.6	**18.25**
‡P-8042	600 400 40	770/510/40–0–510/770	300	375	115	C	4¾"	4" x 6⅜"	18.0	**26.95**
‡P-8043	750 600 40	950/750/40–0–750/950	300	375	115	FS	7⅝"	6⅛" x 8"	29.0	**50.15**
‡P-8044†	1000 400	1200–0–1200 535–0–535	150 150	190 190	115	FS	7⅝"	6⅛" x 8¼"	29.8	**51.00**
‡P-8045	1000 750	1225/850–0–850/1225	250	310	115	FS	7⅝"	6⅛" x 8"	28.5	**53.95**
‡P-8025	1000 750	1230/940–0–940/1230	400	500	115	FS	7⅝"	6⅛" x 8¾"	35.0	**63.65**
‡P-8026	1250 1000	1475/1175–0–1175/1475	300	375	115	FS	7¾"	7⅜" x 8¼"	36.5	**60.55**
P-8027	1250 1000	1510/1210–0–1210/1510	500	625	115	FS	7¾"	7⅜" x 9"	45.2	**71.60**
‡P-8028	1500 1250	1740/1460–0–1460/1740	300	375	115	FS	7¾"	7⅜" x 8½"	38.7	**64.10**
P-8029	1500 1250	1775/1500–0–1500/1775	500	625	115–230	FS	11¼"	7⅜" x 8¾"	65.0	**99.40**
‡P-8030	1750 1500	2100/1800–0–1800/2100	300	375	115	FS	7¾"	7⅜" x 9"	45.8	**70.70**
P-8031	1750 1500	2075/1775–0–1775/2075	500	625	115–230	FS	11¼"	7⅜" x 8¾"	65.5	**97.85**
P-8032	2000 1750	2400/2100–0–2100/2400	300	375	115	FS	7¾"	7⅜" x 9¼"	46.0	**83.65**
P-8033	2000 1750	2375/2065–0–2065/2375	500	625	115–230	FS	11¼"	7⅜" x 9½"	77.0	**122.40**
P-8034	2500 2000	2900/2385–0–2385/2900	300	375	115–230	FS	11¼"	7⅜" x 8¾"	62.8	**119.00**
P-8035	2500 2000	2950/2375–0–2375/2950	500	575	115–230	FS	11¼"	7⅜" x 9¾"	80.0	**130.00**
P-9920	2500§ 2000	2980–0–2980 2450–0–2450	350 500	450 625	117	Y	9⅛"	11⅛" x 9⅞"	122.0	**203.40**

BIAS SUPPLY TRANSFORMERS

Part No.	High Voltage Supply A.C. Volts at D.C. Milliamps.	Rectifier Fil. Volts	Rectifier Fil. Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6317	200/170/130/90/0/90/130/170/200 @ 200 ma.	5.0	3.0	CD	4"	3¼" x 3⅝"	4.9	**$15.20**
P-6318	450/400/350/250/0/250/350/400/450 @ 200 ma.	5.0	3.0	CD	4⁵⁄₁₆"	3⅝" x 4⅛"	7.0	**17.30**

All Primary Windings for 60 cycle operation.
#D.C. voltage rating is for type 5R4-GY full-wave rectifier.
†For use with dual rectifier-filter systems to deliver both rated outputs simultaneously.
§Output changed by means of tap on primary winding. Rating is for a single section choke input filter using a 6 mfd. condenser.
*See Page N-10 for additional Plate Transformers.
‡Designates part number to be removed from next catalog.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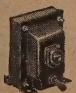
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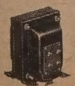
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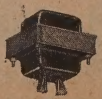
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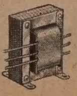
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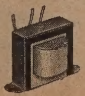
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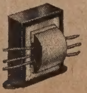
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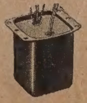
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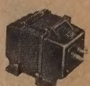
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ISOLATION AND AUTOFORMERS

STANDARD TRANSFORMER CORPORATION

STRAIGHT ISOLATION—125/115/105 VOLTS TO 115 VOLTS.

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6160	100	125/115/105	115	KA	4¾"	4" x 3⅝"	7.0	**$17.25**
P-6161	250	125/115/105	115	KA	4¾"	4" x 5⅜"	14.2	**32.50**
P-6298	500	125/115/105	115	FK	7⅝"	6⅛" x 7⅛"	28.0	**49.50**
P-6125	1000	125/115/105	115	FK	7¾"	7⅜" x 6⅞"	34.8	**64.90**
P-6123	1500	125/115/105	115	FK	7¾"	7⅜" x 8½"	49.8	**80.95**

STEP-DOWN ISOLATION—250/230/210 VOLTS TO 115 VOLTS.

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6383	100	250/230/210	115	KA	4¾"	4" x 3⅝"	7.3	**$18.40**
P-6385	250	250/230/210	115	KA	4¾"	4" x 5⅜"	14.2	**29.80**
P-6387	500	250/230/210	115	FK	7⅝"	6⅛" x 7⅛"	29.5	**51.10**
P-6389	1000	250/230/210	115	FK	7¾"	7⅜" x 6⅞"	33.8	**65.85**
P-6390	1500	250/230/210	115	FK	7¾"	7⅜" x 8½"	50.3	**91.10**

ISOLATION TESTING TRANSFORMER

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6415	350	117	105/115/125	KC	5⅜"	4½" x 5¾"	17.0	**$27.50**

Large enough to handle almost any television or radio receiver on test. Has three standard receptacles, providing output voltages of 105, 115 and 125, with 117 volts, A.C., from the line for testing purposes or for correction of high or low line voltage. Has electrostatic shield.

AUTOFORMERS

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6287	40	230	115	—	4½"	3" Diam. can	2.7	**$ 8.40**
P-5062	80	230	115	K	3⅝"	3" x 3¼"	3.8	**9.00**
P-5063	100	230	115	K	4"	3¼" x 3¼"	4.5	**10.20**
P-5064	150	230	115	K	4$\frac{5}{16}$"	3⅝" x 3⅝"	5.2	**11.80**
P-5065	300	230	115	K	4¾"	4" x 4⅛"	8.8	**16.00**
P-6141	500	230	115	K	4¾"	4" x 5⅛"	13.7	**21.00**
P-6124	1000	230	115	FK	7⅝"	6⅛" x 6½"	24.5	**44.50**
P-6299	150	115	150/140/130/120/110/100/90	KA	4"	3¼" x 4¾"	6.0	**16.85**

Testing Autoformer—Designed especially for various service and test application. Incorporates a convenient tap switch to permit variable voltages from 90 to 150 volts. It may be used to apply an overload voltage to amplifiers, radio receivers, or other electronic devices being serviced, which will indicate and cause suspected parts to break down. Primary equipped with 6 ft. approved cord and plug. Secondary connected to female receptacle.

LINE ADJUSTING AUTOFORMERS

Stancor Line Adjusters permit operation of electrical devices at 115 volts when the supplied voltage is 65, 75, 90, 100, 115, 130 or 145. They are also useful for altering a 115 volt line above or below that level. The line adjuster input is correctable in seven steps by means of a selector switch and is accurately indicated by an output voltmeter. The meter has a convenient red-line marker at 115 volts on a 150 volt scale.

Type and Part No.	Va.*	Input Voltage 50-60 Cycle	Output Voltage	Height	Base Area	Shpg. Wt. in Lbs.	List Price
PV-6441	150	65/75/90/100/115/130/145	115	5½"	3⅞" x 5⅜"	6.4	**$19.95**
PV-6442	350	65/75/90/100/115/130/145	115	5½"	3⅞" x 6⅛"	10.5	**25.35**
PV-6443	500	65/75/90/100/115/130/145	115	5½"	3⅞" x 6⅞"	15.0	**31.60**
PV-6444	750	65/75/90/100/115/130/145	115	6$\frac{5}{16}$"	4½" x 8⅛"	19.0	**46.35**

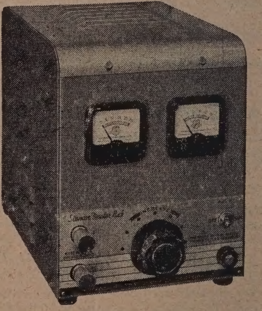
*Watts to pure resistive load. To other types of loads, multiply rating of line adjuster by power factor of load for actual wattage.

#All Primary Windings for 60 cycle operation.

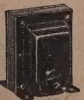
SIX VOLT DC POWER SUPPLY

The Stancor Model 752 Master Pack replaces bothersome storage batteries, meeting the needs of the serviceman for a six volt power supply that is practical in design, convenient to use, and large enough to handle heavy-duty jobs.

The Stancor Master Pack is conservatively rated to provide 6 volts D.C. at 12.5 amperes continuously from the standard 115 volt, 50–60 cycle source. An instantaneous rating of 25 amperes makes the Model 752 ideal for demonstrating or testing auto radios with push-button or floor-switch magnetic tuning. Reserve power permits simultaneous operation of two or more receivers. Separate voltmeter and ammeter afford a continuous, visual check of voltage and current delivered to load. Meter needles are damped to prevent annoying "wiggle." The extractor-type line fuse gives positive protection against damage from excessive overloads. Thorough filtering, less than 3% ripple through a choke-capacitor filter, allows use in applications where the hum from a poorly filtered power supply cannot be tolerated. Selenium rectifiers are used for dependability and cooler operation. Controls and terminals are conveniently located on the front panel. The sturdy steel case is finished in durable gray hammertone. No detail has been slighted in making the Stancor Model 752 Master Pack the outstanding power supply for the service bench. Size overall, 9½" high, 7⅜" wide, 12" long. Weight in carton, 30 pounds.



MODEL 752 MASTER PACK **USERS NET**............**$43.90**



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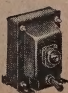

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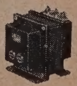

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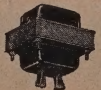

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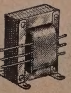

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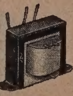

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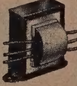

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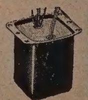

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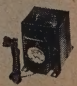


PV

TRANSFORMERS

For Electronic Equipment

MILITARY, INDUSTRIAL, & COMMERCIAL

Plate
Filament
Plate and Filament
Filter Reactors
Pulse
Audio
Vertical Output
Deflection Yokes
Focus Coils

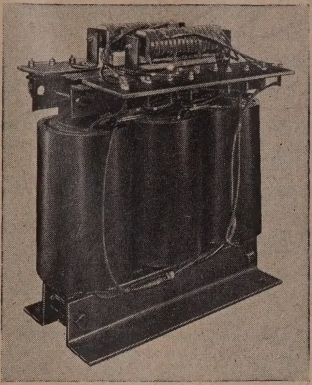
in

Core-and-coil
Permafil
Compound-filled
Hermetic
Construction

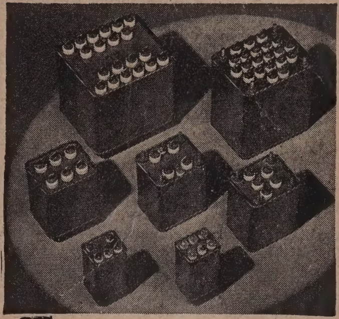
for

Radar
Communication
Television and Radio
Transmitters
and Similar Equipment,

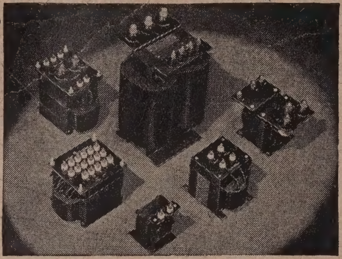
Details on transformers for electronic equipment can be obtained from the nearest G-E Apparatus Sales Office, or by writing General Electric Company, Section 640-282, Schenectady 5, N. Y., for Bulletin GEC-481.



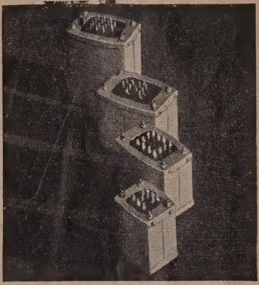
Core-and-coil assemblage for plate transformer for use with rectifier, 33.3 kva



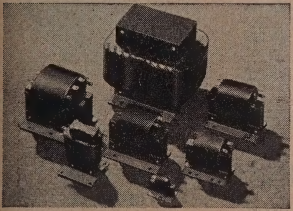
Hermetically sealed transformers



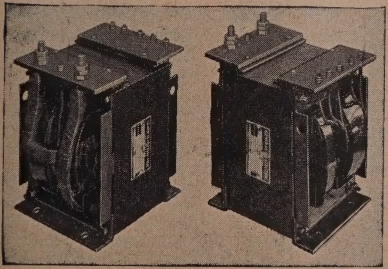
Core and coil type units



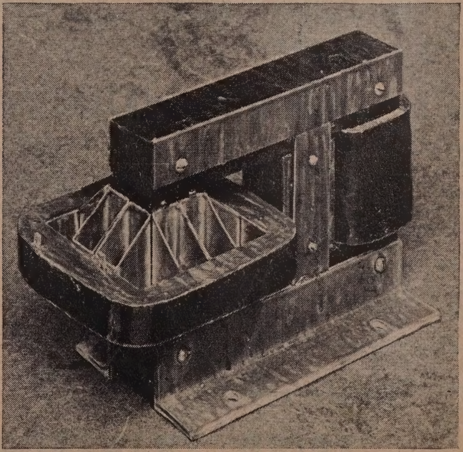
Standard compound filled transformers



Permafil Type transformer



Heavy duty, high reactance filament transformers



Special magnetron filament transformer

"HS" (hermetically sealed) SERIES TRANSFORMERS

DURING World War II, it became apparent that even the best in pre-war transformer construction was not adequate protection against failure in the conditions prevalent in South Pacific combat areas. Hurried developments in sealing and fungicidal treatments achieved some data which was later amplified experimentally and codified under JAN-T-27 specifications and testing procedures. TRIAD hermetically sealed transformers of the "HS" Series come from a production line which has produced many thousands of transformers under these specifications. TRIAD "HS" Series Transformers feature:

Wide range. Frequency responses from 20-20,000 cycles within ± 1 db.

Protection against stray fields. The GP Series of drawn and annealed nickel-alloy cases, interlaced with high conductivity shading rings, reduce hum pickup by as much as 95 db.

Small size. High quality electronic equipment frequently must be portable, and not only in a truck. We call attention to the HS-11 and HS-1, affording 20-20,000 frequency range and adequate shielding in less than half the cubic volume of comparable pre-war transformer designs.

Strong mechanical construction. TRIAD's own hermetic seals, employing sturdy brass studs and low-loss molded plastics, minimize mechanical failure in production, service and storage.

Attractive appearance. Sturdy deep-drawn steel cases, of smoothly matching lines, and finished in attractive TRIAD gray, add much to the appearance of the equipment in which "HS" Series Transformers are used.

Wide range power handling capacity. TRIAD "HS" Series Output Transformers deliver their full power without distortion within ± 3 db. from 20-20,000 cycles. Low leakage reactance, low flux density, and ample quantities of the highest quality lamination alloy contribute to this result.

Dependability. Liberally designed and accurately wound transformers of low temperature rise; "Climatite" treated, poured with silica-filled asphalt of high heat conductivity, rigidly supported, and hermetically sealed, TRIAD leaves no step untaken to supply the best in quality transformers.

"HS" Series Audio INPUT Transformers

Type No.	Application	Primary Impedance	Turn Ratio	Freq. Resp.	Max. Level VU	Shielding	Case No.	List Price
HS-1	Univ. line or mike to grid.	600*/250*/ 150/62.5	1:11.4	20-20000	10	P-5	GP-4	$38.50
HS-11	Same as above.					P-1	GP-2	26.40
HS-3	Univ. line or mike to p.p. class A grids.	600*/250*/ 150/62.5	1:14 over-all	20-20000	10	P-5	GP-5	43.50
HS-4	Same as above.					P-3	GP-4	39.70
HS-14	Same as above.					P-1	GP-3	28.60
HS-5	Dynamic mike to grid —Hi-gain.	30-50	1:65.7	50-10000	0	P-5	GP-4	38.50
HS-8	Line to p.p. class A grids—Hi-level.	600*/250*/ 150/62.5	1:10 over-all	20-20000	26	P-1	GP-4	38.50

*Balanced center tap available.

Only TRIAD transformers are

CLIMATITE TREATED

—the improved and exclusive vacuum impregnation process used on all TRIAD transformers.

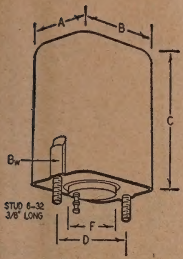
"HS" Series Audio INTERSTAGE Transformers

Type No.	Application	Primary Impedance	Turn Ratio	Freq. Resp.	Max. Level Pri. Volts	Shielding	Case No.	List Price
HS-23	Single plate to single grid.	15000	1:3	20-20000	15	P-3	GP-4	$26.40
HS-25	Single plate to p.p. class A grids.	15000	1:2.72 over-all	20-20000	25	P-1	GP-4	28.60
HS-35	Single plate to p.p. class A grids.	15000	1:2.72 over-all	20-20000	20	P-1	GP-2	21.80
HS-27	P.p. plate to p.p. class A grids.	20000/ 5000	1:1.72 over-all	20-20000	50	P-1	G-P4	29.70
HS-29	Bridging-line to 1 or 2 grids.	20000/ 5000	1:2 over-all	20-20000	20	P-5	GP-4	38.50
HS-31	P.p. 6J5's or parallel-fed 6F6 triode to AB grids.	20000/ 5000	1:1 or 2:1	20-20000	240		GP-7	25.00

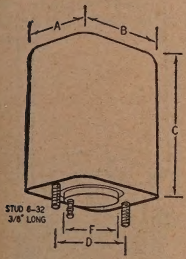
TRIAD TRANSFORMER MFG. CO.

"HS" (hermetically sealed) SERIES TRANSFORMERS

TRIAD



	GP-1	GP-2	GP-3
A	7/8	1 1/16	1 1/4
B	1 1/16	1 1/4	1 1/2
BW	1 1/8	1 11/32	1 9/16
C	1 11/16	2 1/4	2 3/8
D	1 3/32	1 3/16	1 1/2
F	3/4	3/4	7/8
Wt.	3 oz.	5 1/2 oz.	8 oz.



	GP-4	GP-5
A	1 7/16	1 5/8
B	1 3/4	2
C	2 1/2	2 3/4
D	1 1/2	1 1/2
F	7/8	7/8
Wt.	12 oz.	17 oz.

SHIELDING AGAINST STRAY FIELDS AVAILABLE IN

"HS" Series

AUDIO TRANSFORMERS

P-1 — One nickel-alloy high permeability shield — 45 db. reduction in pickup.

P-3 — Two nickel-alloy shields inter-leaved with one heavy copper shading ring — 70 db. reduction in pickup.

P-5 — Three nickel-alloy shields inter-leaved with two heavy copper shading rings—95 db. reduction in pickup.

"HS" Series LOW LEVEL OUTPUT, MIXING, MATCHING and BRIDGING Transformers

Type No.	Application	Impedance		Freq. Resp.	Max. Level-VU	Shielding	Case No.	List Price
		Primary	Secondary					
HS-50	Plate to universal line	15000	600*/250*/150/62.5	20-20000	26	P-3	GP-4	$29.70
HS-60	Plate to universal line	15000	600*/250*/150/62.5	20-20000	10	P-1	GP-2	21.80
HS-52	P.p. plates to universal line.	20000/5000	600*/250*/150/62.5	20-20000	26	P-1	GP-4	32.50
HS-54	Bridging, single or p.p. plates, to univ. line.	20000/5000	600*/250*/150/62.5	20-20000	10	P-5	GP-4	38.50
HS-56	Universal line to universal line.	600*/250*/150/62.5	600*/250*/150/62.5	10-30000	20	P-3	GP-4	38.50
HS-66	Same as above.			10-30000	20	P-1	GP-3	27.50

*Balanced center tap available.

"HS" Series HIGH LEVEL OUTPUT Transformers Tube to Line — Tube to Voice Coil — Line to Voice Coil

Type No.	Application	Impedance		Freq. Resp.	Max. Level-Watts	Case No.	List Price
		Primary	Secondary				
HS-81	P.p. 6V6's to voice coil	8000/2000	16/8/4	20-20000	15	GP-9	$30.50
HS-82	As above—to line.	8000/2000	500/250/125	20-20000	15	GP-9	30.50
HS-84	P.p. 2A3's, 6B4's, 6L6's, etc. to V.C.	5000/1250	16/8/4	20-20000	20	GP-10	30.50
HS-85	As above—to line.	5000/1250	500/250/125	20-20000	20	GP-10	30.50
HS-87	P.p. 6L6's, AB1 to V.C.	9000/2250	16/8/4	20-20000	25	GP-10	35.80
HS-88	As above—to line.	9000/2250	500/250/125	20-20000	25	GP-10	35.80
HS-91	P.p. par. 2A3's, 6L6's, etc. to V.C.	2500/625	16/8/4	20-20000	40	GP-12	49.50
HS-94	P.p. par. 6L6's to V.C.	4500/1125	16/8/4	20-20000	55	GP-12	61.00
HS-95	As above—to line.	4500/1125	500/250/125	20-20000	55	GP-12	61.00
HS-97	P.p. 845's AB1 to line.	6600/1650	500/250/125	20-20000	125	GP-15	115.00
HS-101	Line to par. line autoformer.	500	500/250/167/125/100/88/71	20-20000	30	GP-10	35.80
HS-103	Line to V.C. autoformer.	500	16/8/4	20-20000	30	GP-10	30.80

POWER Transformers, Combined Plate and Filament

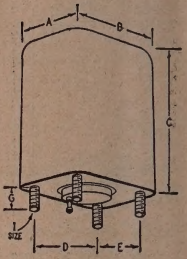
Type No.	Plate Supply		Filaments	Case No.	List Price
	A.C. Volts	D.C. Ma.			
HS-201*	500 C.T.	20	6.3 C.T.— 2A	GP- 8	$16.75
HS-205	700 C.T.	70	6.3 C.T.— 3A 5 — 3A	GP-10	27.50
HS-207	700 C.T.	120	6.3 C.T.— 5A 5 — 3A	GP-11	30.80
HS-211	700 C.T. 70 bias Tap	150	6.3 C.T— 6A 5 — 3A 2.5 C.T.— 5A	GP-13	33.00
HS-215	800/700 C.T. 70 bias Tap	200	6.3 C.T.— 6A 5 — 6A 2.5 C.T.—10A	GP-14	41.50
HS-217	800/700 C.T. 70 bias Tap	300	6.3 C.T.— 8A 5 — 6A 2.5 C.T.—10A	GP-15	48.00

*Low flux density—for pre-amplifier service.

TRIAD . . . For HIGHEST QUALITY EQUIPMENT

FILAMENT Transformers

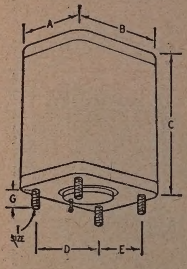
Type No.	Primary Volts	Secondary Volts	Secondary Amps.	Insulation Test Voltage	Case No.	List Price
HS-225	105-115-125	6.3 C.T.	2	2500	GP- 6	$ 9.90
HS-229	105-115-125	6.3 C.T.	8	2500	GP- 9	16.50
HS-231	105-115-125	5 C.T. 6.3 C.T.	3	2500	GP- 9	17.60
HS-235	105-115-125	2.5 C.T. 10 C.T.	10 10	7500 2500	GP-12	23.00



	GP-6	GP-7	GP-8	GP-9	GP-10
A	2	2 3/16	2 3/8	3	3 3/16
B	2 1/8	2 3/8	2 1/2	3 1/4	3 5/8
C	2 3/4	3	3 1/8	3 3/4	4 1/4
D	1 7/16	1 11/16	1 7/8	2 7/16	2 5/8
E	1 5/16	1 9/16	1 7/8	2 3/16	2 3/8
G	1/2	1/2	1/2	1/2	3/4
I	8-32	8-32	8-32	10-32	10-32
Wt.	1 1/4	1 3/4	2	4 1/2	6 3/4

FILTER Reactors

Type No.	Current D.C. Ma.	Inductance Henries	Resistance Ohms	Test Voltage	Case No.	List Price
HS-301	20	30	1000	1500	GP- 6	$10.30
HS-305	70	15	300	2500	GP- 7	11.90
HS-307	120	15	185	2500	GP- 9	15.10
HS-309	150	9	115	2500	GP- 9	15.90
HS-315	200	10	100	2500	GP-10	17.35
HS-319	300	10	85	2500	GP-12	24.20



	GP-11	GP-12	GP-13	GP-14	GP-15
A	3 1/2	3 7/8	4 1/4	4 3/8	4 3/4
B	3 3/4	3 7/8	4 3/8	5	5 7/8
C	4 1/2	4 7/8	5 3/8	5 5/8	6 5/8
D	2 3/4	2 7/8	3 3/8	4	4 7/8
E	2 1/2	2 7/8	3 1/4	3 3/8	3 3/4
G	3/4	3/4	3/4	3/4	3/4
I	10-32	10-32	1/4-20	1/4-20	1/4-20
Wt.	7 1/2	9 1/2	13	16	22

"TRIJETS"-Midget Hermetically Sealed Transformers

"Trijets" are midget hermetically sealed transformers for use wherever good quality and portable operation must be combined. Originally, "Trijets" were designed to meet the requirements for "Miniaturization" developed by the Armed Service and have been used in many types of military equipment. "Trijets" are linear in frequency response from 50-10,000 cycles and will handle operating levels up to + 10 dbm. "Trijets" are 15/16" in diameter and mount on 2-56 studs spaced 9/16". Case JOA is 1-13/32" long, weighs 1¼ oz. Case JOB is 1-25/32" long, weighs 1½ oz.

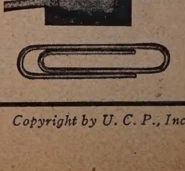
Type No.	Application	Primary Impedance	Secondary Impedance	Shielding	Case No.	List Price
JO-1	Line or mike to grid.	600/250/50	50000	P-1	JO-A	$14.50
JO-3	Line or mike to p.p. grids.	600/250/50	60000 C.T.	P-1	JO-A	15.30
JO-5	Dyn. mike or speaker VC to grid.	30/12/4	50000	P-1	JO-A	14.50
JO-11	Plate to grid.	15000	50000	P-1	JO-B	13.60
JO-12	Plate to p.p. grids.	15000	60000 C.T.	P-1	JO-B	14.50
JO-21	Plate to line.	15000	600/250/50	P-1	JO-B	14.50
JO-23	P.p. plates to line.	20000 C.T.	600/250/50	P-1	JO-B	15.30
JO-31	Line to line.	600/250/50	600/250/50	P-1	JO-B	14.50
JO-101	Coupling Reactor.	50h @ 2ma.		P-1	JO-B	11.60

TRIAD
TRANSFORMER

Uncased "TRIJETS"

Uncased "Trijets" are ⅝" x ¾" x 9/16". Weight less than ½ oz. Paper clip shows relative size.

Type No.	Application	Primary Impedance	Secondary Impedance	List Price
T-1	Line or mike to grid.	600/250/50	50000	$4.85
T-5	Dynamic mike or speaker VC to grid.	30/12/4	50000	4.85
T-21	Plate to line.	30000	50	4.85
T-101	Coupling Reactor.	50 henries @ 1ma.		4.70



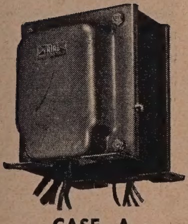
TRANSFORMERS for REPLACEMENT . . .

POWER Transformers, Combined Plate and Filament General Purpose

ORDERING INSTRUCTIONS

TRIAD transformer numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer. For example: A=Audio. Type of mounting is indicated by the suffix letter which refers to the illustration. For example: A-1X= Audio transformer in X case.

Type No.	Plate Supply Volts	Plate Supply DC Ma.	Filament Amperes 5V.	Filament Amperes 6.3V. C.T.	Filament Amperes 2.5V. C.T.	Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
R-4A	500 C.T.	40		2		2¾	2⅜	2¾	1¾	$6.50
R-5A	600 C.T.	65		2.7		3 3/16	2⅝	3	2¾	6.65
R-7A	600 C.T.	50	2	2		3 3/16	2⅝	3	2¾	8.00
R-7B	600 C.T.	50	2	2		3⅛	3	2½	2¾	7.70
R-9A	600 C.T.	75	2	3		3 9/16	3	3⅜	3½	8.50
R-9B	600 C.T.	75	2	3		3 9/16	3⅜	2 13/16	3½	8.20
R-11A	700 C.T.	90	3	3.5		3 9/16	3	3⅝	4	9.25
R-11B	700 C.T.	90	3	3.5		3 11/16	3⅜	2 13/16	4	8.90
R-14A	700 C.T.	125	3	4.5		4	3¼	3 9/16	4¾	11.50
R-14B	700 C.T.	125	3	4.5		3⅝	3¾	3⅛	4¾	11.10
R-16A	700 C.T.	160	3	5		4	3¼	4 1/16	6	12.85
R-16B	700 C.T.	160	3	5		4⅛	3¾	3⅛	6	12.50
R-17A	750 C.T. (80v tap).	160	3	5	5	4 5/16	3⅝	4¼	7¼	15.10
R-19A	750 C.T. (80v tap).	200	3	6	10	4¾	3⅞	4½	9¼	19.40
R-21A	800 C.T.	200	3	6		4 5/16	3⅝	4¼	7¼	17.60
R-24A	800 C.T.	300	6	6		4¾	3⅞	5½	13	22.60



CASE A

for Television

Type No.	Plate Supply Volts	Plate Supply DC Ma.	Filaments—Volts and Amps.		Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
R-31A	760 C.T.	320	5V.—6A. 5V.—2A.	12.6 C.T.—5A.	4¾	3⅞	6	15	$25.00
R-32A	760 C.T.	320	5V.—6A. 6.3V.—1.2A.	12.6 C.T.—5A.	4¾	3⅞	6	15	25.00
R-34A	750 C.T.	230	5A.—6A. 6.3V.—1.2A.	6.3V.—8.5A.	4¾	3⅞	4¾	10½	17.60
R-36A	775 C.T.	275	5V.—6A. 6.3V.—1.2A.	6.3V.—8.5A.	4¾	3⅞	5¼	12	21.00
R-38B	750 C.T.	225	6.3V.—10A. 6.3V.—1.2A.*	6.3V.—9A. 5V.—3A.	3⅝	4½	3¾	10½	17.60
R-39A	640 C.T.	225	6.3V.—10A. 6.3V.—1.2A.*	5V.—3A.	4¾	3⅞	4¾	10½	17.60

*Less than 100 mmfd. capacity to ground. Insulated for 4000 volts.

CASE B

for Cathode-ray Tubes

Type No.	Plate Supply Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes		Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
R-41C	440-0- 440-1250.	125/5	*6.3V.—.6A. †2.5V.—1.75A.	†2.5V.—1.75A. 5V.—3A.	4⅛	4⅛	3 7/16	7¼	$23.15
R-45C	400-0- 400-800.	30/5	*6.3V.—.6A. 6.3 C.T.—3A. †5V.—2A.	6.3V.—1A. 5V.—2A.	3¼	3¾	3⅛	3½	16.90

*Statically shielded and insulated for full plate voltage. †Insulated for full plate voltage.

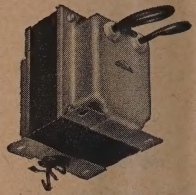
TRIAD . . . AMATEUR and ORIGINAL EQUIPMENT

for Preamplifiers, VTVM, etc.

Type No.	Plate Supply Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Dim.—Inches H	W	D	Wt. Lbs.	List Price
R-2C	135	15	6.3V.—9A.	1⅞	1 9/16	1⅞	1	**$4.90**
R-3A	500 C.T.	20	6.3 C.T.—2.A.	2¾	2⅜	2⅝	1¾	**6.05**
R-29A	230 C.T.	40	6.3V.—1.5A.	2¾	2⅜	2¼	1½	**6.05**

for Regulated Power Supplies

Type No.	Plate Supply Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes		Dim.—Inches H	W	D	Wt. Lbs.	List Price
R-26A	880-720 C.T.	200	6.3 C.T.—8A. 6.3V.—1A.	6.3V.—3A. 5V.—3A.	4¾	3⅞	4¾	10½	**$20.40**
R-28A	1250 C.T.	300	6.3 C.T.—8A. 6.3V.—3A.	6.3V.—3A. 5V.—6A.	5⅜	4½	6½	21	**32.50**



CASE A

Leads out side for 866 plates

PLATE POWER Transformers

Type No.	Secondary Volts AC	Secondary Volts DC	Sec. DC Ma. CCS	Sec. DC Ma. ICAS	Rect. Fil.	Dim.—Inches H	W	D	Wt. Lbs.	List Price
P-1A	440/220 C.T.	180/90	160	190	5V.-3A.	3 9/16	3	3⅜	4½	**$8.95**
P-3A	600/300 C.T.	250/125	300	360	5V.-4A.	4	3¼	3 15/16	5¾	**12.50**
P-5A	1100 C.T.	400	250	310	5V.-3A.	4¾	3⅞	4	7½	**16.50**
P-7A	1235 C.T.	500	250	310	5V.-3A.	4¾	3⅞	4¾	9½	**19.00**
P-9A	1235 C.T.	500	500	600	5A.-6A.	5⅜	4½	5¼	20	**33.00**
P-11A	1455 C.T.	600	250	310		4¾	3⅞	5¼	11½	**21.50**
***P-13A**	1780 C.T.	750	250	310		5⅜	4½	4¾	12	**28.60**
***P-15A**	2340 C.T.	1000	250	310		5⅜	4½	5¼	15	**32.00**
***P-17A**	2880 C.T.	1250	250	310		5⅜	4½	6½	21	**38.50**

*Plate leads out side of case for 866 rectifiers.

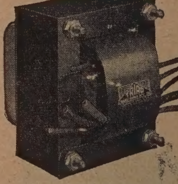
Only TRIAD transformers are

CLIMATITE TREATED

—the improved and exclusive vacuum impregnation process used on all TRIAD transfomers.

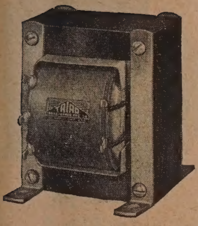
FILAMENT Transformers Single Secondary Winding

Type No.	Secondary Volts	Secondary Amperes	Test Volts	Dim.—Inches H	W	D	Wt. Lbs.	List Price
F-1X	2.5 C.T.	3	1500	1 11/16	2 13/16	1½	¾	**$2.70**
F-3X	2.5 C.T.	10	3000	2¼	3 11/16	2¼	1¾	**3.95**
F-5U	2.5 C.T.	10	7500	3 1/16	2½	2½	2	**6.90**
F-7X	5 C.T.	3	1500	1 15/16	3¼	1⅞	1¼	**3.60**
F-9U	5.2 C.T.	13	1500	3⅜	2 13/16	3	3½	**7.80**
F-11U	5.2 C.T.	24	1500	3¾	3⅛	3¼	5½	**10.85**
F-14X	6.3 C.T.	1.2	1500	1 11/16	2 13/16	1½	¾	**2.70**
F-16X	6.3 C.T.	3	1500	1 15/16	3¼	1⅞	1¼	**3.80**
F-18A	6.3 C.T.	6	1500	3 3/16	2⅝	2¾	2¼	**6.90**
F-21A	6.3 C.T.	10	1500	3 9/16	3	3⅜	3½	**8.70**
F-23U	10 C.T.	7	1500	3 9/16	3	3⅝	4	**7.65**
F-40X	24	1	1500	1 15/16	3¼	2	1¼	**3.65**



CASE C

TRANSFORMERS for REPLACEMENT . . .



CASE U

FILAMENT Transformers, Multiple Secondary

Type No.	Secondary Volts and Amperes		Test Volts RMS	Dim.—Inches H	W	D	Wt. Lbs.	List Price
F-27U	10 C.T.—10A. 2.5 C.T.—10A.		1500 7500	4⅛	3 7/16	3	7	$10.85
F-30A	5 C.T.—3A. 6.3 C.T.—8A.		1500	3 9/16	3	3⅛	3½	8.20
F-32A	6.3 C.T.—3A.	6.3 C.T.—3A.	1500	3 3/16	2⅝	3	2½	8.20
F-34A	6.3 C.T.—1.75A. 6.3V.—1.75A.	6.3V.—1.75A. 6.3V.—1.75A.	2500	3 3/16	2⅝	3	2¾	8.00
F-36A	6.3 C.T.—3.5A. 6.3V.—3.5A.	6.3V.—3.5A. 6.3V.—3.5A.	2500	4	3¼	3⅝	4¾	11.60
F-38A	6.3 C.T.—5A. 6.3V.—1A. 5V.—4A.	6.3V.—5A. 5 C.T.—2A.	2500	4	3¼	3⅞	5¼	13.20

SMOOTHING Filter Reactors

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Dim.—Inches H	W	D	Wt. Lbs.	List Price
C-1X	15	20	1000	1500	1 3/16	2⅛	1¼	¼	$1.60
C-3X	10	50	500	1500	1 11/16	2 13/16	1½	¾	1.80
C-5X	12	75	400	1500	1 15/16	3¼	1⅞	1	2.30
C-7X	10	90	270	1500	1 15/16	3¼	2	1¼	2.70
C-10X	9	125	250	1500	2¼	3 11/16	2⅛	1½	3.30
C-12X	6	160	165	1500	2¼	3 11/16	2¼	1¾	3.60
C-14X	6	200	150	1500	2 9/16	4	2½	2½	4.15
C-15X	4	250	100	1500	2 9/16	4	2½	2½	4.05
C-16A	10	200	150	2500	3 9/16	3	3⅝	4	7.25
C-17X	1.5	300	40	1500	2¼	3 11/16	2⅛	1½	3.45
C-18A	8	300	90	2500	4	3¼	3 15/16	5½	9.15
C-19A	10	300	105	3000	4 5/16	3⅝	4¼	7¼	11.25
C-20A	8	400	60	3000	4¾	3⅞	4½	9½	16.00
C-22A	10	500	65	3000	5⅜	4½	5	16½	22.70

ORDERING INSTRUCTIONS

TRIAD transformer numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer. For example: **A**=Audio. Type of mounting is indicated by the suffix letter which refers to the illustration. For example: **A-1X**= Audio transformer in **X** case.

SWINGING Filter Reactors

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Dim.—Inches H	W	D	Wt. Lbs.	List Price
C-31A	25/5	20/200	150	2500	3 9/16	3	3⅝	4	$7.25
C-33A	25/5	30/300	105	3000	4 5/16	3⅝	4¼	7¼	11.25
C-35A	20/4	40/400	60	3000	4¾	3⅞	4½	9½	16.00
C-39A	25/5	50/500	65	3000	5⅜	4½	5	16½	22.70

CASE K

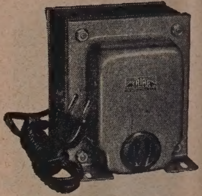
VIBRATOR Transformers

Type No.	Primary Volts	Secondary Volts	Secondary DC Ma.	Dim.—Inches H	W	D	Wt. Lbs.	List Price
V-1K	6-8	450 C.T.	40	3	2½	2⅜	2¼	$8.25
V-3K	6-8	500 C.T.	50	3	2½	2⅜	2½	8.95
V-5A	6-8	600 C.T.	75	3 3/16	2⅝	2⅝	2½	9.15
V-7A	6-8	600 C.T.	100	3 9/16	3	3¼	3½	11.70

TRIAD . . . AMATEUR and ORIGINAL EQUIPMENT

STEPDOWN Autoformers

Type No.	V. A. Output	Input Volts	Output Volts	Dim.—Inches H	W	D	Wt. Lbs.	List Price
N-1X	50	230	115	2¼	3 11/16	2⅛	1½	$5.05
N-3M	85	230	115	3 9/16	3	2⅜	2¾	9.80
N-5M	250	230	115	4	3¼	3 11/16	4¾	14.30
N-7M	500	230	115	4¾	3⅞	5	11½	22.00
N-9M	1000	230	115	5⅜	4½	5	22	40.75
N-11M	2000	230	115	5⅜	4½	7	27	67.20



CASE M

ISOLATION Transformers

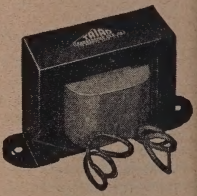
Type No.	V. A. Output	Input Volts	Output Volts	Dim.—Inches H	W	D	Wt. Lbs.	List Price
N-51X	35	115	115	2¼	3 11/16	2⅜	1¾	$5.95
N-53M	85	115	115	3 9/16	3	3¾	4	12.00
N-55M	250	115	115	4¾	3⅞	5	11½	25.30
N-57M	500	115	115	5⅜	4½	5	22	40.75
N-59M	1000	115	115	5⅜	4½	7	27	67.20
†N-60	2000	230/115	230/115					115.00

†Special case.

EQUALIZING Reactors

Type No.	Application	Ind.	DC Ma.	Res. Ohms	Dim.—Inches H	W	D	Wt. Lbs.	List Price
*A-71K	Simple pentode equalizer—hi and low frequency.	2 160	2 2	100 8000	3⅛	3	2½	2	$9.75
*A-73J	Choke for cathode equalizer.	15	0	750	1⅝	1⅝	1⅝	½	6.00
**A-74J	Choke for cathode equalizer.	15	0	750	1¾	1⅞	1⅞	¾	9.10

*40 db. alloy shielding. **70 db. alloy shielding.



CASE X

DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Ratio Primary ½ Sec.	Primary DC Ma.	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-81X	30, 1H4, etc.	P.p. 19, 30's, 1J6, etc.	2.66:1	15	1 3/16	2⅛	1¼	¼	$2.65
A-83X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	1.33:1	40	1 11/16	2 13/16	1½	¾	3.00
A-85X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	1.33:1	40	1 15/16	3¼	1⅞	1¼	3.50
A-89A	P.p. plates to class B or AB grids—Universal 15 watt.	Any class B or AB tubes. 100-500 watts output.	3.1 or 2.2:1	100 per side	3 3/16	2⅝	2⅞	2¾	8.70
A-91A	P.p. plates to class B or AB grids—Universal 30 watt.	Any class B or AB tubes. 400-1500 watts output.	3.1 or 2.2:1	160 per side	3 9/16	3	3⅜	3½	14.40

LOW LEVEL OUTPUT Transformers

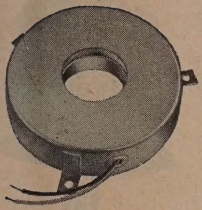
Type No.	Application	Primary Impedance	Ohms Sec.	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-51X	Tube to line.	7000	50	1 3/16	2⅛	1¼	¼	$2.50
A-53X	Single or p.p. tubes to line.	18000 C.T.	600/250/50	1 11/16	2 13/16	1½	¾	3.15
A-55J	Parallel-fed 6J5 or 6SN7 to line. 30-15000 cycles 60 db. shielding.	15000	600/250/50	2¼	1⅜	1⅜	¼	10.70
A-57J	Line to line 30-15000 cycles 60 db. shielding.	600/250/50	600/250/50	2¼	1⅜	1⅜	¼	10.90

CASE J

TRANSFORMERS for REPLACEMENT . . .

TELEVISION Components

(See Pages N-21 and N-23 for television power transformers and filter chokes)

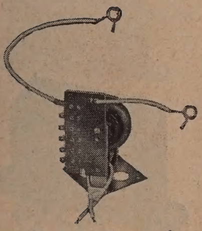


B-470 Focus Coil

Television FOCUS Coils

Type No.	Application	Dim.—Inches H	W	D	Wt. Lbs.	List Price
B-160	160 ohm coil. Focuses tubes up to 70° deflection with 210* Ma. Direct replacement for Kaye-Halbert H-3104.	5	5	1 1/2	1 3/4	$8.80
B-247	247 ohm coil. Focuses tubes up to 70° deflection with 170* Ma. Direct replacement for RCA 202-D1 and Packard-Bell 29505.	4	3 1/2	1 1/2	1 3/4	8.25
B-470	470 ohm coil. Narrow cross section. For focusing tubes up to 70° deflection with 125* Ma. Direct replacement for Packard-Bell 29519.	5 1/2	5 1/2	1 1/4	2 3/4	10.45
B-1000	1000 ohm coil. Focuses tubes up to 70° deflection with 85* Ma. Direct replacement for Hoffman 5341.	4 1/2	4	1 1/2	1 3/4	8.80

*Max. current required for 70° tubes.



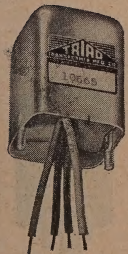
D-1 Horizontal Output

HORIZONTAL OUTPUT (Flyback) Transformers

Type No.	Application	Dim.—Inches H	W	D	Wt. Lbs.	List Price
D-1	Delivers 12,000-14,000 anode volts from single 6BG6 or 6BQ6 driver and single HV rectifier. Ample deflection for 70° tubes.	4 1/2	3 1/2	3 1/2	3/4	$10.45
D-2	Autoformer type similar to above. Direct replacement for Hoffman 5143, 5144, 5146 and 5148.	4 1/2	3 1/2	3 1/2	3/4	10.45

VERTICAL BLOCKING OSCILLATOR Transformers

Type No.	Application	Ratio	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-97X	Blocking oscillator transformer for vertical sweep.	1:4.14	1 3/16	2 1/8	1 1/4	1/4	$2.65
A-97K	Same—Case K	1:4.14	1 3/4	2 3/8	1 1/2	1/2	3.50
A-97Y	Same—Case Y	1:4.14	1 3/4	1 3/16	1 3/16	1/2	3.15



CASE Y

VERTICAL OUTPUT Transformers

Type No.	Application	Ratio	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-99X	Output—to couple vertical output tube to deflection coil.	10:1	2 1/4	3 11/16	2 1/8	1 1/2	$4.90
A-101U	Same—different mounting.	10:1	3	2 1/2	2 1/4	2	6.50
A-104X	Vertical output autoformer.	18:1	2 1/4	3 11/16	2 1/8	1 1/2	4.85
A-102X	Vertical output autoformer.	11.4:1	1 15/16	3 1/4	1 7/8	1	3.80
A-103X	Vertical output autoformer.	49:1	2 1/4	3 11/16	2 1/8	1 1/2	4.95

TRIAD . . . AMATEUR and ORIGINAL EQUIPMENT

AUDIO Components

Triad general purpose audio transformers and reactors are designed for specific applications in electronic equipment. No effort has been made to supply "universal" components capable of a wide range of functions since such designs are low in efficiency and high in cost.

Frequency response is 300-3000 cycles for portable gear, 70-7000 cycles for PA and replacement type transformers, and 30-15000 for high fidelity units. Output coils are designed to deliver their rated output over their full frequency range. Heavy steel cases are used to prevent shifting and breakage, even on heavy duty mobile equipment.

"Climatite" treatment is used in all types. Size is kept to a minimum by use of high quality materials. Cased types are finished in durable and attractive gray enamel. Static and magnetic shielding is used wherever the application indicates that these are needed.

CASE K

INPUT Transformers, Line or Microphone to Grid

Type No.	Application	Primary Impedance Ohms	Turn Ratio	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-1X	Line or single button mike to grid.	100	31.4	1 3/16	2 1/8	1 1/4	1/4	$2.40
A-3X	Line or d.b. mike to grid.	400 C.T.	15.8	1 3/16	2 1/8	1 1/4	1/4	2.60
A-5X	Single button mike to p.p. grids—Hi-gain.	100	84	1 11/16	2 13/16	1 1/2	3/4	3.80
A-7J	Speaker VC (3.2 ohms) to grid. 40 d.b. shielding	3.2	31.6	1 3/8	1 1/8	1 1/8	1/8	4.50
A-9J	Line or mike to grid 30-15000 cycles 60 d.b. shielding.	600/250/50	12	2 1/4	1 3/8	1 3/8	1/4	10.70

CASE X

Special TRANSCEIVER Transformers

Type No.	Application	Impedance-Ohms Primary	Secondary	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-21X	SB mike and plate to grid (2 pri.).	100 10000	100000	1 3/16	2 1/8	1 1/4	1/4	$2.50
A-23X	Tube to line and hi-impedance phones.	10000	50 and 2000	1 3/8	2 3/8	1 3/8	1/2	2.85

INTERSTAGE Transformers, Plate to Grid

Type No.	Application	Impedance—Ohms Primary	Secondary	Ratio	Dim.—Inches H	W	D	Wt. Lbs.	List Price
A-31X	Plate to single or p.p. grids.	10000	90000	1:3	1 3/8	2 3/8	1 3/8	1/2	$2.50
A-33X	Plate to single or p.p. grids.	10000	90000	1:3	1 15/16	3 1/4	1 7/8	1	3.80
A-35A	Plate to single or p.p. grids.	10000	90000	1:3	2 3/4	2 3/8	2 1/4	1 3/4	5.85
A-39A	P.p. plates to p.p. grids.	20000 C.T.	45000	1:1.5	2 3/4	2 3/8	2 1/4	1 3/4	6.15
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid. 30-15000 cycles 60 db. shielding.	15000	86000	1:2.76	2 1/4	1 3/8	1 3/8	1/4	10.70

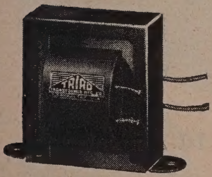
CASE J

TRANSFORMERS for REPLACEMENT . . .

Only TRIAD transformers are

CLIMATITE TREATED

—the improved and exclusive vacuum impregnation process used on all TRIAD transfomers.



CASE Z

REPLACEMENT OUTPUT Transformers

Type No.	Primary Tubes Used	Primary Impedance	DC Ma.	Audio Watts	Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
S-1X	25L6,50L6, 35A5, 50B5, 2A3, 6B4, etc.	2500	60	3	1 3/8	2 3/8	1 1/4	1/2	$1.70
S-3X	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	40	3	1 3/8	2 3/8	1 1/4	1/2	1.80
S-5Z	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	50	5	2 5/16	2 7/8	1 3/4	1 1/4	2.95
S-7X	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	40	3	1 3/8	2 3/8	1 1/4	1/2	1.80
S-9Z	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	50	5	2 5/16	2 7/8	1 3/4	1 1/4	3.10
S-11X	1J6, 3Q4, 3V4, 6AK6, 6AG7, etc.	10000	30	2	1 3/16	2 1/8	1 1/8	1/4	1.85
S-13X	1A5, 1N6, 1LA4.	25000	10	2	1 3/16	2 1/8	1 1/8	1/4	1.85
S-15X	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	40	7	1 5/8	2 13/16	1 1/2	3/4	2.95
S-19Z	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	50	10	2 5/16	2 7/8	1 3/4	1 1/4	3.75
S-21A	P.p.—6V6, 7C5, 45, 6L6, etc.	8000 C.T.	50	15	2 3/4	2 5/16	2 5/8	2 1/4	5.60
S-23X	Line to VC. autoformer.	50/3.2	0	3	1 3/16	2 1/8	1 1/8	1/4	2.20
S-25Z	70 volt line to VC. Autoformer.	4000/2000/ 1000/500 to 4-8	0	10	2 1/4	2 7/8	1 7/8	1	3.80

UNIVERSAL OUTPUT Transformers

Type No.	Application	Pri. DC Ma.	Audio Watts	Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
S-51X	Single or P.P. plates (4000 to 14000 ohms) to VC	35	5	1 3/8	2 3/8	1 3/8	1/2	$2.75
S-53X	Single or P.P. plates (4000 to 14000 ohms) to VC	40	8	1 11/16	2 13/16	1 1/2	3/4	3.10
S-55Z	Push-Pull plates (4000 to 14000 ohms) to VC	40 ea. side	10	2 1/4	2 7/8	1 7/8	1 1/4	3.95
S-57Z	Push-Pull plates (4000 to 14000 ohms) to VC	50 ea. side	15	2 5/8	3 5/16	2 1/8	1 3/4	5.15

MODULATION Transformers, Tube to RF Load

Type No.	Primary	Secondary Impedance	Secondary Ma.	Audio Watts	Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
M-1X	10000 C.T. for 19, 1J6, 6N7, 6A6, etc.	5000-8000-10000	50	5	1 3/16	2 1/8	1 1/4	1/4	$3.80
M-3X	10000 C.T. for 6N7, 6A6, 6F6's, etc.	3000-5000-8000	100	20	2 1/4	3 11/16	2 1/8	1 1/2	5.20
M-7A	4250 C.T. for 807's.	3000-5000-8000	200	60	4 3/16	3 5/8	4	6	15.20

The TRIAD high-fidelity transformers in the group at right afford a standard of performance exceeded only by the "HS" Series outputs as listed on Page N-19.

Designed with plenty of the highest quality core material and with interleaved windings of low resistance, these coils have a frequency response linear within 1 db. from 30-15000 cycles and will deliver their full rated output within 3 db. over this entire range of frequencies. Their high open circuit reactance and low leakage reactance will permit their use within feedback loops employing as high as 30 db. of negative feedback.

HIGH FIDELITY OUTPUT Transformers

Type No.	Primary Tubes Used	Primary Impedance	Secondary Output Impedance	Secondary Output Watts	Dim.—Inches H	Dim.—Inches W	Dim.—Inches D	Wt. Lbs.	List Price
S-31A	P.P. 6V6, 45, etc.	8000 C.T.	4-8-16	15	3 1/8	2 5/8	3 3/8	3 1/2	$10.50
S-32A	P.P. 6V6, 45, etc.	8000 C.T.	500/250/125	15	3 1/8	2 5/8	3 3/8	3 1/2	11.00
S-33A	P.P. 2A3, 6A5, 6B4, etc.	3000 C.T.	4-8-16	15	3 1/8	2 5/8	3 3/8	3 1/2	10.50
S-35A	P.P. 2A3, 6L6, etc.	5000 C.T.	4-8-16	18	3 1/8	2 5/8	3 5/8	4	11.50
S-36A	P.P. 2A3, 6L6, etc.	5000 C.T.	500/250/125	20	3 1/8	2 5/8	3 5/8	4	12.00
S-38A	P.P. 6L6, class AB.	9000 C.T.	4-8-16	25	3 1/2	2 7/8	4 1/4	5 3/4	15.20
S-39A	P.P. 6L6, class AB.	9000 C.T.	500/250/125	25	3 1/2	2 7/8	4 1/4	5 3/4	16.00
S-40A	P.P. par. 2A3, 6L6, etc.	2500 C.T.	4-8-16	30	3 1/2	2 7/8	4 1/4	5 3/4	15.20
S-42A	P.P. par. 6L6, class A.	4500 C.T.	4-8-16	50	4 1/4	3 1/2	4 3/8	8 3/4	21.25
S-45Z	70 volt line Autoformer.	4000/2000/ 1000/500	4-8	10	2 5/8	3 5/16	2 1/4	2	5.80
S-46A	70 volt line Autoformer.	2000/1000/ 500/250	4-8-16	20	3 1/8	2 5/8	3 5/8	4	12.95

. . . AMATEUR and ORIGINAL EQUIPMENT

HF-10 HI-FIDELITY AMPLIFIER KIT...

FEATURES...

Wide Frequency Response: Within one db. from 20-20,000 cycles.

Low Distortion: Less than 2% from 50-18,000 cycles at full 10 watts output. Less than 1% from 20-20,000 cycles at 5 watts.

Heavy Speaker Damping: Reflects less than 2 ohms to speaker from 16 ohm tap.

Equalization: Continuously variable to +12 db. or —30 db. at 50 or 8000 cycles.

High Gain: 74 db. from crystal microphone or radio receiver; 96 db. (equalized for magnetic pickup) through preamplifier.

Low Noise: Hum and other noise 60 db. below maximum output. A-74J equalizing coil has 70 db. shielding.

Beautiful Appearance: Gray hammertone chassis with ivory silk-screened lettering, matching gray Triad transformers.

HF-10 AMPLIFIER

HF-10 Amplifier

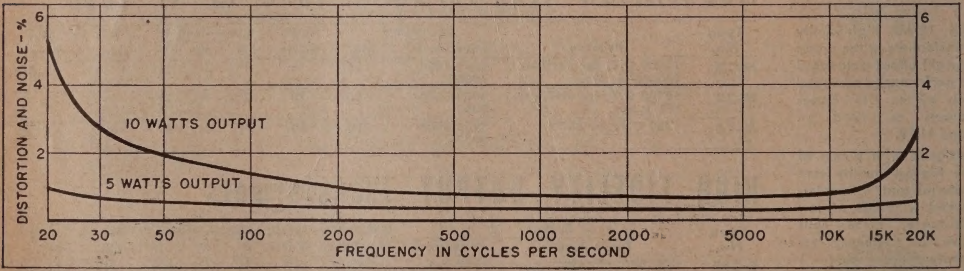
KITS...

HF-10 Kit—Includes S-31A, R-14A, A-74J, and C-10X Triad transformers, chassis, prints and assembly instructions. **List Price, $43.00**

HF-10A Kit—Same as above except for substitution of HS-81 output transformer for S-31A. **List Price, $63.50**

HF-10B Kit—Same as HF-10 except for S-32A output transformer—500/250/125 ohm secondary. **List Price, $43.00**

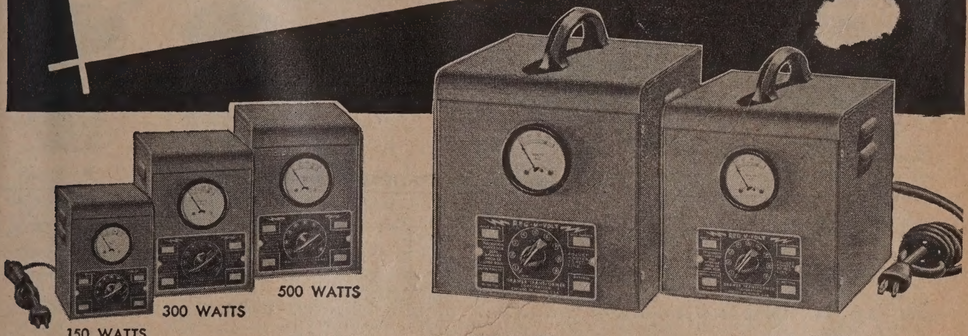
HF-10C Kit—Same as above except for substitution of HS-82 output transformer for S-32A. **List Price, $63.50**



A MORE COMPLETE listing of TRIAD transformers is contained in Catalog TR-51. Other TRIAD products include: TRIAD GEOFORMERS (Geophysical Transformers), individually calibrated components used in measuring equipment of laboratory precision for geophysical exploration. Specifications and prices contained in Catalog GP-51; TRIAD HERMETIC TERMINALS, used for hermetically sealed transformers, relays, etc. Specifications and prices contained in Bulletin TD-51; TRIAD TOROIDS for wave filters, afford almost perfect inductors for this purpose. Specifications and prices contained in Bulletin TO-51. (All above catalogs and bulletins free on request.)

TRIAD TRANSFORMER MFG. CO.

Proved FOR BETTER VOLTAGE CONTROL GRAMER "REG-U-VOLTS"



150 WATTS 300 WATTS 500 WATTS 1500 WATTS 1000 WATTS

Protect your electrical and radio apparatus, as well as television sets from damage by using the new Gramer Super "Reg-U-Volts". The correct operation of all your electrical appliances is insured by utilizing Gramer's voltage regulators, because Gramer Super "Reg-U-Volts" deliver the specific voltage required for the proper operation of your television sets, radios and electrical appliances. There is a Gramer Super "Reg-U-Volt" to deliver the correct voltage for any electrically powered equipment. Be sure to insist on Gramer Super "Reg-U-Volts". Accept no substitute.

LIST PRICES ON SUPER "REG-U-VOLTS" GRAMER PRICES EFFECTIVE NOVEMBER 15, 1950

UNIT NO.	INPUT VOLTAGE	OUTPUT VOLTAGE	WATTAGE	UNIT PRICE IN U. S. CURRENCY
CV- 150	55 to 135 V. in 10 V. steps	115 V.A.C.	150 Watts	$ 26.25
CV- 300	55 to 135 V. in 10 V. steps	115 V.A.C.	300 Watts	32.00
CV- 500	55 to 135 V. in 10 V. steps	115 V.A.C.	500 Watts	37.90
CV-1000	55 to 135 V. in 10 V. steps	115 V.A.C.	1000 Watts	79.50
CV-1500	55 to 135 V. in 10 V. steps	115 V.A.C.	1500 Watts	112.60
CV- 152	160 to 240 V. in 10 V. steps	220 V.A.C.	150 Watts	27.25
CV- 302	160 to 240 V. in 10 V. steps	220 V.A.C.	300 Watts	32.50
CV- 502	160 to 240 V. in 10 V. steps	220 V.A.C.	500 Watts	38.00
CV-1002	160 to 240 V. in 10 V. steps	220 V.A.C.	1000 Watts	81.50
CV-1502	160 to 240 V. in 10 V. steps	220 V.A.C.	1500 Watts	113.50

GRACOIL

GRAMER TRANSFORMER CORPORATION

2734 NORTH PULASKI ROAD • CHICAGO 39, ILLINOIS, U. S. A.
TELEPHONE EVERGLADE 4-4400

THORDARSON TRANSFORMERS

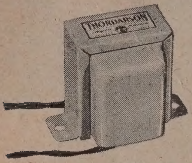
NEW STREAMLINED SERIES

This is the new Thordarson post-war series of Transformers and Chokes. Every unit has been designed for utmost efficiency and adaptability. Many of the engineering and production advancements developed by Thordarson during the war, are used in producing this line.

The new lamination alloys and insulating material, incorporated in this series, results in superior performance and a greater factor of safety without an increase in size or weight. Consequently, some types are smaller and more compact without sacrificing efficiency or performance.

Finished in baked grey enamel and fitted with matched mounting styles, the units present a uniform appearance. This is especially desirable where several Transformers and Chokes are mounted on the same chassis.

Types for Radio Receiver Replacement, Amateur Radio, Sound Systems and allied applications, can be selected from this listing.


FGV

BAH

Z

RTV

RAV

AUDIO INPUT TRANSFORMERS

Type No.	List Price	Mtg.	Application	Ohms Impedance Primary	Ohms Impedance Secondary	Turns Ratio	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt Lbs.
T-20A00	**$3.50**	BAH	Line or mic to single or push-pull grids*........	600 Ct. 200 Ct. 50	60,000 Ct. 20,000 Ct. 20,000 Ct.	1:10	2	2⅜	1¼	1 11/32	½
T-20A01	**5.55**	FGV	Line or mic to single grid§†..................	600 Ct. 200 Ct. 50	240,000 80,000 80,000	1:20	2⅜	2⅞	1⅞	2 5/16	1¼
T-20A02	**5.40**	FGV	Line or mic to push-pull grids§	600 Ct. 200 Ct. 50	240,000 Ct. 80,000 Ct. 80,000 Ct.	1:20	2⅜	2⅞	1⅞	2 5/16	1¼
T-20A03	**5.20**	BAH	Single plate and mic or line to grid*...........	5,000 to 10,000 200	100,000 250,000	1:3.25	2⅜	2 13/16	1⅝	1⅝	¾
T-20A04	**3.50**	BAH	Voice coil or mic to grid*.....................	3 to 6 50	38,400 320,000	1:80	2	2⅜	1¼	1 11/32	½
T-20A05	**12.70**	RTV	Line or mic to single or push-pull grids§....... (Hum-bucking coil and core—fully potted)	600 Ct. 200 Ct. 50	60,000 Ct. 20,000 Ct. 20,000 Ct.	1:10	1 5/16 x 1 5/16	1 9/16 Diam.		2	½
T-20A06	**12.70**	RTV	Line to Line.................................. (Hum-bucking coil and core—fully potted)	600 Ct. 200 Ct. 50 Ct.	600 Ct. 200 Ct. 50 Ct.	1:1	1 5/16x1 5/16	1 9/16 Diam.		2	½
T-20A40	**30.00**	Z	Microphone cable input transformer‡..........	30 to 60	50,000	1:31.6		1 Diam.		2 11/16	¾
T-20A41	**30.00**	Z	Microphone cable input transformer‡..........	200 to 250	50,000	1:14.2		1 Diam.		2 11/16	¾

† Can be used in reverse—i.e., High impedance source to line. * Frequency response—250 to 10,000 c.p.s. § Frequency response—60 to 10,000 c.p.s.

‡ Used for converting high impedance input of amplifier to accommodate low impedance microphones—Frequency response within ½ Db 30 to 5,000 c.p.s.—High permeability shield for reduction of hum—Fitted with 2-prong connector for balanced mic cable and single contact connector for fitting to amplifier input.

AUDIO INTERSTAGE TRANSFORMERS

Type No.	List Price	Mtg.	Application	Ohms Impedance Primary	Ohms Impedance Secondary	Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-20A16	**$3.00**	BAH	Single plate to single or push-pull grids........	10,000	40,000 Ct.	1:2	8	2	2⅜	1¼	1 11/32	½
T-20A17	**5.10**	RAV	Single plate to single or push-pull grids........	10,000	40,000 Ct.	1:2	8	1 7/16	1 9/16 Diam.		2	½
T-20A19	**4.10**	BAH	Single or push-pull plates to single or push-pull grids	Universal		1:3	8	2⅜	2 13/16	1⅝	1⅝	¾
T-20A22	**5.10**	BAH	Single plate to single or push-pull grids........	10,000	90,000 Ct.	1:3	8	2⅞	3¼	2⅛	1 15/16	1¼
T-20A23	**5.90**	FGV	Single plate to single or push-pull grids........	10,000	90,000 Ct.	1:3	8	2⅜	2⅞	2 1/16	2 5/16	1½
T-20A24	**6.00**	FGV	Push-pull plates to push-pull grids............	20,000 Ct.	180,000 Ct.	1:3	8 Bal.	2⅜	2⅞	2 1/16	2 5/16	1½
T-20A25 CHT	**12.70**	RTV	Single or push-pull plates to single or push-pull grids (Hum-bucking coil and core—fully potted)	Universal		1:1.41	8 Bal.	1 5/16 x 1 5/16	1 9/16 Diam.		2	½
T-20A27	**12.70**	RTV	Single plate to single or push-pull grids........	10,000 2,500	40,000 20,000	1:2			2⅞ Diam.		3 9/16	2½

TUBE TO LINE TRANSFORMERS (Low Level)

T-22S90	**$5.40**	FGV	Single or push-pull plates to line...............	20,000 Ct.	500 Ct. or 125 to 200	..	8	2⅜	2 27/32	1⅞	2⅜	1¼
T-22S92	**11.90**	RTV	Single or push-pull plates to line (Hum-bucking coil and core—fully potted)	20,000 Ct.	500 Ct. or 125 to 200	..	8	1 5/16 x 1 5/16	1 9/16 Diam.		2	½

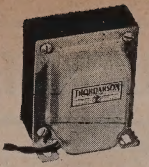
DRIVER TRANSFORMERS

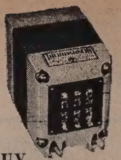
Type No.	List Price	Mtg.	Application	Turns Ratio Pri.–½ Sec.	Pri. M.A.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-20D75	**$3.30**	BAH	Single plate to push-pull Class B grids...................... Primary 10,000 ohms—1H4-G or 30 to 19, etc.	2.4:1	5	2	2⅜	1¼	1⅜	½
T-20D76	**3.50**	BAH	Single plate to push-pull Class B grids...................... Primary single 6N7 to Class B 6N7, etc.	5.2:1	15	2	2⅜	1¼	1⅜	½
T-20D77	**5.20**	FGV	Primary single 6F6 to PP 6F6, etc..........................	2.5:1	30	2⅜	2⅞	2 1/16	2 3/16	1¼
T-20D78	**6.90**	GGV	Push-pull plates to push-pull grids......................... Primary 6F6 triode to PP 6L6, etc.	4:1	40	2 x 1 11/16	2 9/16	2 11/16	3⅛	2½
T-20D79	**5.90**	FGV	Parallel or P-P parallel 6N7 to P-P parallel 6N7, etc........	5.2:1	30	2⅜	2⅞	2 1/16	2 3/16	1½
T-20D80	**8.20**	GGV	Push-pull 2A3 or 6A3 to 805-838, etc........................	3.2:1	100	2 x 1 11/16	2 9/16	2 11/16	3⅛	2½
T-20D81	**10.40**	GGV	Push-pull 845 to push-pull 805-833, etc.	5:1	100	2½ x 2 3/16	3 3/16	3 7/16	3⅞	4½
T-20D82	**9.00**	GGV	Push-pull plates to push-pull grids .... Push-pull 2A3-6F6, etc, to 805, etc.	5:1 4:1,3.2:1	100	2 x 1 11/16	2 9/16	2 11/16	3⅛	2½
T-20D83 CHT	**31.70**	PUV	20 Watt 500 Ohm line to class B grids.	1:.75,1:.85,1:1.25, 1:1.4,1:1.75,1:2,1:2.25, 1:2.5,1:2.75,1:3		1¾ x 4⅜	3⅛	4¾	4	8
T-20D84	**17.40**	GGV*	20 Watt 500 Ohm line to class B grids...........	1:.75, 1:.85, 1:1.25, 1:1.4, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3		2¼ x 2	3	3½	3⅝	3½

*Terminal Board with Solder Lugs on Both Shields 20 Watts Capacity.

TRANSFORMER SPECIALISTS SINCE 1895 **THORDARSON**

THORDARSON TRANSFORMERS


GGV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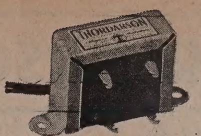
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OUTPUT TRANSFORMERS

Type No.	List Price	Mtg.	Application	Primary Imp. Ohms	Max. Prim. Per Side	D.C. M.A. Unbal.	Secondary Imp. Ohms	Power Watts	Mtg. Centers	Dimensions W	D	H	Wt. Lbs.
T-22S45	$2.45	BAH	Single plate to voice coil.....	1500 to 3000.......	..	55	3.2	3	2	2⅜	1¼	1⅜	½
T-22S46	2.80	BAH	Single plate to voice coil.....	3000 to 6000.......	..	35	3.2	3	2	2⅜	1¼	1⅜	½
T-22S47	3.35	BAH	Single or push-pull plates to voice coil	6000 to 12000 Ct...	35	35	3.2	3	2	2⅜	1¼	1⅜	½
T-22S48	3.40	BAH	Single or push-pull plates to voice coil	12000 to 25000 Ct..	10	8	3.2	3	2	2⅜	1¼	1⅜	½
T-22S56	5.00	BAH	Single or push-pull plates to voice coil	8000/10000 Ct.....	50	35	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S58	5.00	BAH	Single or push-pull plates to voice coil	5000/7000 Ct......	50	45	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S60	5.20	BAH	Single or push-pull plates to voice coil	2500/4000 Ct.......	60	60	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S64	8.70	GGV	Single or push-pull plates to voice coil	10000 Ct...........	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S66	8.70	GGV	Single or push-pull plates to voice coil	8000 Ct............	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S68	8.15	GGV	Single or push-pull plates to voice coil	6500 Ct............	70	40	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S70	9.30	GGV	Single or push-pull plates to voice coil	5000 Ct............	80	45	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S72	9.30	GGV	Single or push-pull plates to voice coil	3000 Ct............	90	50	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S78	13.15	GGV	Single or push-pull plates to voice coil	3300 Ct..............	180	150	3.2 to 4/6 to 8/15/250/500	60	2½ x 2 7/16	3 5/32	3⅝	3 15/16	5¼
T-22S74	7.65	BHH	Universal single or push-pull tubes to voice coil	14000/10000/8000/ 6600/5000/3000/2500 Ct.	80	60	1 to 30	25	3 9/16	4	2½	2 9/16	2½
T-22S76	7.90	BHH	Universal single or push-pull tubes to line	14000/12000/10000/ 8000/5000/3000 Ct.	80	60	500	25	3 9/16	4	2½	2 9/16	2½
T-22S80	5.30	BHH	Single line to voice coil......	500 to 600	..	..	3.2 to 4/6 to 8/15	8	3⅛	3 11/16	2	2¼	1½
T-22S82	8.60	BHH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	25	3 9/16	4	2¾	2 9/16	2¼
T-22S83	5.90	BAH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	15	3⅛	3 11/16	2	2¼	1½
T-22S84	5.40	BAH	Multiple lines to voice coil.....	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	5	2 13/16	3¼	1¾	2	1
T-22S85	4.90	BAH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	3	2⅜	2⅞	1½	1⅝	¾
T-22S62	5.15	BHH	Universal single plate to voice coil	4000/3000/2500/ 2000/1500	..	50	.1 to 29	8	2 13/16	3¼	2	2	1¼
T-22S88	4.50	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8/15	8	2 13/16	3¼	1¾	2	1
T-22S87	4.15	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8	6	2⅜	2⅞	1½	1⅝	¾
T-22S86	3.80	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8	3	2	2⅜	1¼	1⅜	½

"24" REPLACEMENT LINE SERVICE OUTPUT TRANSFORMERS

Type No.	List Price	Mtg. Fig.	Typical Tube Applications	Class	Pri. Imp.	Pri. Ma.	Secondary Imp.Ohms	Max. Watts	Mtg. Centers	Dimensions W	D	H	Wt. Lbs.
TS-24S50	$1.65	BAH	2A3, 6A3, 6B4, 6W6, 7A5, 23AC8, 25B5, 25N6, 25L6, 35A5, 35L6, 35B5, 50A5, 50L6, 70L7, 48, etc.	A	2000	55	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S51	1.70	BAH	31, 43, 45, 50, 59, 71A, 1S4, 2B6, 6A5G, 6V6, 7C5, 12A5, 25A5, 25A6, 25A7, 35L6, etc.	A	5000	40	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S52	1.60	BAH	20, 31, 33, 41, 42, 46, 47, 59, 89, 1C5, 1G5, 1Q5, 1S4, 2A5, 3Q5, 6A4, 6AC5, 6B5, 6F6, 6K6, 6N6, 6V6, 7B5, etc.	A	7000	30	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S54	1.80	BAH	38, 85, 1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6F6, 6V7, 6Y7, etc.	A	15000 to 25000	10	3–4	5	2	2⅜	1¼	1⅜	½

UNIVERSAL SERVICE REPLACEMENT

Type No.	List Price	Mtg. Fig.	Typical Tube Applications	Class	Pri. Imp.	Pri. Ma.	Secondary Imp.Ohms	Max. Watts	Mtg. Centers	Dimensions W	D	H	Wt. Lbs.
TS-24S60	$2.90	BHH	Single or push-pull plates....................	A	4M, 7M, 8M, 10M, 14M C.T.	35	.1 to 29 ohms	4	2	2⅜	1¼	1⅜	½
TS-24S61	3.30	BHH	Single or push-pull plates....................	A	4M, 7M, 8M, 10M, 14M, C.T.	40	.1 to 29 ohms	8	2⅜	2⅞	1½	1⅝	1

MODULATION TRANSFORMERS

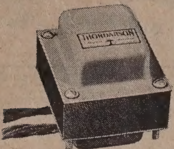
Type No.	List Price	Mtg.	Capacity Watts	Primary Imp. Ohms	Secondary Imp. Ohms	Secondary Volts	M.A.	Primary Application	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-21M50	$4.10	BAH	3	10,000 Ct.	4500	135	30	19, etc.	2	2⅜	1⅜	1⅜	½
T-21M52	5.90	FGV	10	10,000 Ct.	4500/3750/3000	350	80	6N7, etc.	2⅜	2⅞	2 1/16	2 3/16	1¼
T-21M54	7.90	GGV	25	6,600 Ct.	4000	400	100	PP 6L6, etc.	2 x 1 15/16	2 9/16	2 15/16	3⅛	2¾
T-21M56	13.15	GGV	75	10,000 Ct.	6600/3750	1250 Max.	200	TZ-20-809 etc.	2½ x 2 15/16	3 3/16	4 3/16	3⅞	6¾
T-21M58	31.10	KTV	100	15,000 Ct.	6250	1250 Max.	200	811-812, etc.	3½ x 4 1/16	4 9/16	5 11/16	5⅝	13

It is essential that the class C R.F. load be properly matched to the class B modulator tubes for a maximum transfer of speech energy with low distortion. Thordarson Multi-Match modulation transformers have sufficient flexibility to enable the engineer or amateur to adjust the impedance ratio of primary to secondary, to meet any practical condition of operation. This feature forestalls the possibility of the modulation transformer becoming obsolete due to changing the modulator or class C tubes. The use of new tubes or a change in class C voltage and current will not necessitate the need of a new modulation transformer, providing the power capacity is adequate. Complete charts and instructions for proper matching are supplied with each unit.

UNIVERSAL MULTI–MATCH MODULATION TRANSFORMERS

Type No.	List Price	Mtg.	Capacity Watts	Primary M.A. each side	Secondary M.A. Series	Parallel	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-21M60	$21.45	KTV	15	50	50	100	2 1/16 x 2½	2 15/16	3 11/16	4	3¾
T-21M61	28.80	PUV	60	125	125	250	1¾ x 4⅝	3⅛	5¼	4	8¾
T-21M62	43.20	PUV	125	210	160	320	2 3/16 x 6⅛	4 1/16	6⅝	5 3/16	16¾
T-21M64	68.95	PUV	300	250	250	500	2 11/16 x 6⅞	4 11/16	7¾	6	20
T-21M65	115.10	PUV	500	320	320	640	3 1/16 x 10	5 5/16	11	6⅞	50
T-21M66	32.40	KTV	50	500 Ohm Line to R.F. Load—5000/6000/7000/ 8000/9000/10,000 Ohms—Max. Sec. D.C. 200 M.A.			3¼ x 3¾	4 3/16	5 3/16	5¼	11

THORDARSON TRANSFORMERS


AGF

CAV

BAV

REPLACEMENT POWER TRANSFORMERS

Type No.	List Price	Mtg.	H.V. Secondary A.C. Volts	M.A. D.C.	Rct. Fil.	Fil. No. 2	Fil. No. 3	Pri. Volts 50/60 Cy.	Pri. VA.	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-22R00	**$8.30**	AGF	250–0–250	40	5V.-2A.	6.3V. CT-2A.		117	45	2 x 2½	2½	3	1 11/16	1¾
T-22R01	**8.40**	AGF	275–0–275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2½	2½	3	1 13/16	2¼
T-22R02	**10.00**	AGF	300–0–300	70	5V.-2A.	6.3V. CT-3A.		117	65	2 x 2½	2½	3	2 3/16	2¾
T-22R04	**10.25**	AGF	300–0–300	90	5V.-2A.	6.3V. CT-3.5A.		117	80	2¼ x 2 13/16	2 13/16	3⅜	2 3/16	3
T-22R05	**11.40**	AGF	300–0–300	120	5V.-3A.	6.3V. CT-5A.		117	95	2½ x 3⅛	3⅛	3¾	2½	4¼
T-22R06	**12.00**	AGF	325–0–325	150	5V.-3A.	6.3V. CT-5A.		117	125	2½ x 3⅛	3⅛	3¾	3	5¾
T-22R07	**14.90**	AGF	350–0–350	200	5V.-3A.	6.3V. CT-6A.		117	165	3 x 3¾	3¾	4½	2 13/16	7¾
T-22R08	**8.30**	AGF	250–0–250	40	5V.-2A.	2.5V. CT-4A.		117	40	2 x 2½	2½	3	1 11/16	1¾
T-22R09	**9.00**	AGF	275–0–275	50	5V.-2A.	2.5V. CT-7.5A.		117	55	2 x 2½	2½	3	1 13/16	2¼
T-22R10	**11.80**	AGF	325–0–325	85	5V.-2A.	2.5V. CT-9A.	2.5V. CT-3.5A.	117	90	2½ x 3⅛	3⅛	3¾	2¼	3½
T-22R11	**13.15**	AGF	325–0–325	120	5V.-3A.	2.5V. CT-12.5A	2.5V. CT-5A	117	125	2½ x 3⅛	3⅛	3¾	3	5½
T-22R12	**4.80**	BAH	120V	75	6.3V-1.5A					3⅛	2 11/16	1 1/64	2 3/16	1

POWER TRANSFORMERS (AMPLIFIER, ETC.)

T-22R30	**$10.05**	GGV	275–0–275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2 3/16	2 17/32	3 3/16	3 3/32	3¼
T-22R31	**11.40**	GGV	360–0–360	80	5V.-2A.	6.3V. CT-2.5A.		117	76	2 x 2 11/16	2 17/32	3 11/16	3 3/32	4
T-22R32	**13.55**	GGV	350–0–350	110	5V.-2A.	6.3V. CT-3A.	6.3V. CT-3A.	117	107	2½ x 2 11/16	3 5/32	3 15/16	3⅞	5¾
T-22R33	**14.50**	GGV	375–0–375	160	5V.-3A.	6.3V. CT-5A.		117	145	3 x 3 9/16	3 25/32	2 15/16	4⅝	7¾
T-22R34	**18.65**	GGV	385–0–385	225	5V.-3A.	6.3V. CT-5A.		117	186	3 x 3 9/16	3 25/32	4 11/16	4⅝	10
T-22R35	**19.80**	GGV	400–0–400	340	5V.-6A.	6.3V. CT-7A.		117	290	3 x 4 1/16	3 25/32	5 3/16	4⅝	12½
T-22R36	**15.00**	GGV	600–0–600	200	5V.-3A.	6.3V. CT-5A.				3 x 3 5/16	3 13/16	4 7/16	4⅝	8½

Intermittent Duty and Low Cost P.A. Amplifiers.

UNIVERSAL POWER REPLACEMENT "24" SERVICE LINE

Type No.	List Price	Mtg.	H. V. Secondary A.C. Volts	M.A. D.C.	Rct. Fil.	Fil. No. 2	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
TS-24R00	**$5.90**	AGF	240–0–240	40	5V.-2A	6.3V.CT-2A	2 x 2½	2½	3	1 13/16	1¾
TS-24R00-U	**5.90**	GGV	240–0–240	40	5V.-2A	6.3V.CT-2A	2 x 1 9/16	2 9/16	2 9/16	3⅛	1¾
TS-24R01	**6.20**	AGF	325–0–325	40	5V.-2A	6.3V.CT-2A	2 x 2½	2½	3	1 15/16	2¼
TS-24R01-U	**6.20**	GGV	325–0–325	40	5V.-2A	6.3V.CT-2A	2 x 1 11/16	2 9/16	2 11/16	3⅛	2¼
TS-24R02	**7.50**	AGF	350–0–350	70	5V.-2A	6.3V.CT-2.5A	2¼ x 2 13/16	2 13/16	3⅜	2 9/16	3½
TS-24R02-U	**7.50**	GGV	350–0–350	70	5V.-2A	6.3V.CT-2.5A	2¼ x 2¼	2⅞	3 7/16	3½	3½
TS-24R04	**8.10**	AGF	350–0–350	90	5V.-3A	6.3V.CT-3.5A	2¼ x 2 13/16	2 13/16	3⅜	2 15/16	3¾
TS-24R04-U	**8.10**	GGV	350–0–350	90	5V.-3A	6.3V.CT-3.5A	2¼ x 2⅝	2⅞	3 13/16	3½	3¾
TS-24R05	**9.20**	AGF	350–0–350	120	5V.-3A	6.3V.CT-4.7A	2½ x 3⅛	3⅛	3¾	3	5
TS-24R05-U	**9.20**	GGV	350–0–350	120	5V.-3A	6.3V.CT-4.7A	2½ x 2 11/16	3 3/16	3 15/16	3⅞	5
TS-24R06	**10.85**	AGF	375–0–375	150	5V.-3A	6.3V.CT-4.7A	2¾ x 3 7/16	3 7/16	4⅛	3⅞	5¾
TS-24R06-U	**10.85**	GGV	375–0–375	150	5V.-3A	6.3V.CT-4.7A	2¾ x 2 13/16	3½	3 15/16	4¼	5¾
TS-24R07	**14.40**	AGF	400–0–400	200	5V.-3A	6.3V.CT-5A	3 x 3¾	3¾	4½	3 5/16	8½
TS-24R07-U	**14.40**	GGV	400–0–400	200	5V.-3A	6.3V.CT-5A	3 x 3 5/16	3 13/16	4 7/16	4⅝	8½

VIBRATOR POWER TRANSFORMERS

Type No.	List Price	Mtg.	Primary	H.V. Secondary	Sec. No. 2	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-22R25	**$7.80**	TTV‡	6-8 volts D.C.	150 volts D.C. at 40 M.A.		Exact Repl.	2⅜	2 3/16	3	2
T-22R27	**8.40**	TTV‡	6-8 volts D.C.	250 volts D.C. at 50 M.A.		Exact Repl.	2⅜	2 3/16	3	2
‡ Fully shielded and potted—popular replacement size.										
T-22R20	**$7.65**	CAV	6-8 volts D.C.	250 volts D.C. at 50 M.A.		2 x 1¾	2½	2¼	3 1/16	2½
T-22R22	**9.00**	CAV	6-8 volts D.C.	325 volts D.C. at 75 M.A.		2 x 2½	2½	3	3 1/16	3½
T-22R24	**17.30**	GGV	117V. 60 cycle or 6-8 volts D.C.	325 volts D.C. at 135 M.A.	6.3 volts Ct. at 4.75 A.	3 x 3 1/16	3 13/16	4 3/16	4 9/16	8¾

PLATE TRANSFORMERS

The new Thordarson plate transformers are designed to deliver the rated D.C. voltage from a two-section filter which includes the voltage drop in the rectifier tubes and chokes. Two current ratings are indicated, "Continuous Commercial Service" (CCS) and "Intermittent Commercial or Amateur Service" (ICAS). These dual ratings make it possible to select the plate transformer exactly suited for each application.

Type No.	List Price	Mtg.	Pri. Volts 50–60 Cy.	Prim. V.A. ICAS	CCS	Secondary Volts A.C. R.M.S.	D.C. Volts	D.C.M.A. ICAS	CCS	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lb.
T-21P75	**$186.20**	PUV	115/230	1900	1500	3000-2400-1500-0-1500-2400-3000	2500-2000-1250	650	500	4 9/32 x 12 5/16	7 9/16	13½	9 9/16	135
T-21P77	**108.50**	PUV	115/230	1250	900	3000-2450-0-2450-3000	2500-2000	425	300	3¼ x 10	6⅜	11	9	77
T-21P79	**88.75**	PUV	115/230	1000	750	1875-1560-0-1560-1875	1500-1250	550	400	3 1/16 x 10⅛	5 5/16	11	6⅞	60
T-21P81	**82.75**	PUV	115*	630	480	1560-1265-0-1265-1560	1250-1000	425	300	3 1/16 x 10⅛	5 5/16	11	6⅞	57
T-21P82	**82.75**	PUV	115*	820	600	2335-1700-0-1700-2335	2000-1500	300	220	3 1/16 x 9⅛	5 5/16	10	6⅞	43
T-21P83	**43.20**	PUV	115*	440	300	1560-1250-0-1250-1560	1250-1000	300	200	2 11/16 x 7⅝	4 11/16	8½	6	33
T-21P85	**35.20**	PUV	115*	370	260	850-730-0-730-850	600-500	425	300	2 3/16 x 6⅜	4 1/16	6⅞	5 3/16	19
T-21P87	**20.70**	GGV	115*	250	185	835-656-0-656-835	650-500	300	220	3 x 3 5/16	3 25/32	4 7/16	4⅝	10
T-21P89	**13.80**	GGV	115	135	95	550-0-550	450	250	175	2½ x 2 15/16	3 3/16	4 3/16	3⅞	6½
T-21P91	**47.95**	PUV	115	375	280	1200-0-1200 900-0-900†	1000 and 750†	200 150	150 110	2 3/16 x 6⅞	4 1/16	7⅜	5 3/16	22
T-21P93	**19.30**	GGV	115	210	160	1075-0-1075 500-0-500†	1000 and 400†	110 150	95 125	3 x 3 9/16	3 25/32	4 11/16	4⅝	10

* Secondary voltages changed by means of primary taps.

† Designed for double rectifiers and will deliver both secondary ratings simultaneously. If only the lower voltage taps are used the current rating is equal to the current rating of both windings.

TRANSFORMER SPECIALISTS SINCE 1895 **THORDARSON**

THORDARSON TRANSFORMERS

FILAMENT TRANSFORMERS

Type No.	List Price	Mtg.	Secondary Volts	Secondary Amps.	Ins. R.M.S.	Pri. Volts 50/60 Cy.	Mtg. Centers	Dimensions W	Dimensions D	Dimensions H	Wt. Lbs
T-21F00	**$4.30**	BAV	2.5 Ct.	@ 5	1600	117	2⅜	2⅞	1¾	2 5/16	1
T-21F01	**5.85**	BAV	2.5 Ct.	@ 10	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F02	**7.45**	CAV	2.5 Ct.	@ 10	7500	117	2 x 1¾	2½	2¼	3 1/16	2¼
T-21F03	**5.00**	BAV	5 Ct.	@ 3	1600	117	2⅜	2⅞	1¾	2 5/16	1
T-21F04	**6.60**	BAV	5 Ct.	@ 8	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F05	**7.20**	CAV	5 Ct.	@ 3	10,000	117	2 x 1¾	2½	2¼	3 1/16	2
T-21F06	**7.65**	CAV	5 Ct.	@ 13	1600	117	2 x 2	2½	2½	3 1/16	2¾
T-21F07	**10.40**	CAV	5 Ct.	@ 21	1600	117	2½ x 2¼	3⅛	3¼	3 13/16	5¼
T-21F08	**3.80**	BAV	6.3 Ct.	@ 1	1600	117	2	2⅜	1½	2	¾
T-21F10	**5.00**	BAH	6.3 Ct.	@ 3	1600	117	2¾	3¼	1¾	2	1
T-21F11	**7.40**	BAV	6.3 Ct.	@ 6	1600	117	2 11/16	3 5/16	2	2¾	1½
T-21F12	**7.25**	CAV	6.3 Ct.	@ 10	1600	117	2 x 2	2½	2¾	3 1/16	2¾
T-21F14	**5.00**	BAH	6.3-5-2.5	@ 2.5	1600	117	2¾	3¼	1¾	2	1
T-21F15	**5.55**	BAV	7.5 Ct.	@ 4	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F16	**7.25**	CAV	7.5 Ct.	@ 8	1600	117	2 x 2	2½	2¾	3 1/16	2¾
T-21F17	**9.00**	CAV	7.5 Ct.	@ 12	1600	117	2¼ x 2¼	2 13/16	3¼	3½	4
T-21F18	**7.25**	CAV	10 Ct.	@ 5	1600	117	2 x 1¾	2½	2¼	3 1/16	2¼
T-21F19	**10.40**	CAV	10 Ct. 11 Ct.	@ 12 or @ 11	1600	117	2½ x 2¼	3⅛	3¼	3 13/16	5¼

CHOKES—REACTORS

Universal Types—Swinging and Smoothing

Thordarson Universal Chokes are designed for use both in the input and smoothing positions. Where the current taken from the power supply is essentially constant (not varying more than a few percent) the chokes should be selected so as not to exceed the rated D.C.-M.A. If the current fluctuates considerably, as is the case where the power supply furnishes a class B modulator stage, the chokes should be selected so as not to exceed the rated D.C.-M.A. rating under the steady state of operation, and not to exceed the Max. D.C.-M.A. rating when the modulator stage is fully excited.

These are truly universal chokes suitable for use in power supplies requiring either input, swinging or smoothing types.

The tapped Splatter Chokes are used between the modulator and Class C stage for eliminating objectionable side band splatter. Full instructions and circuit diagrams are supplied with each unit.

Type No.	List Price	Mtg. Fig.	Inductance in Henries* O D.C.	Inductance in Henries* Rated D.C.	Inductance in Henries* Max. D.C.	Current in M.A. Rated D.C.	Current in M.A. Max. D.C.	D.C. Res. Ohms	Test Volts R.M.S.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-20C50	**$4.15**	BAH	475	350	75	5	25	5500	2000	2⅞	3¼	2	2	1½
T-20C51	**2.80**	BAH	70	35	15	15	25	1850	1200	2	2⅜	1¼	1⅜	½
T-20C52	**2.40**	BAH	13	8	4	40	65	450	1200	2	2⅜	1¼	1⅜	½
T-20C59	**2.90**	BAH	14	7	5	55	65	200	1600	2⅜	2 3/16	1⅝	1⅝	¾
T-20C53	**3.55**	BAH	24	12	8	80	100	375	2000	2⅞	3¼	2	2	1¼
T-20C64	**4.30**	BAH	15	4	3	130	150	100	1600	3⅛	3 11/16	2⅝	2¼	1½
T-20C54	**5.90**	GGV	16	8	4	150	200	145	2700	2x1 11/16	2 17/32	2¾	3⅛	2½
T-20C54-P	**12.00**	CHT	16	8	4	150	200	145	2700	2 11/16x2 5/32	3	2¾	4	3¾
T-20C55	**7.65**	GGV	11	6	2	200	300	75	2700	2¼x2	2⅞	3¼	3½	3½
T-20C55-P	**15.30**	CHT	11	6	2	200	300	75	2700	2 25/32x2 11/32	3⅜	3	4 5/32	5
T-20C56	**11.10**	GGV	10	7	4	300	375	60	3500	2½x3	3 3/16	4 3/16	3⅞	6½
T-20C56-P	**19.50**	CHT	10	7	4	300	375	60	3500	3⅝x3⅛	4¼	3¾	4 13/16	8½
T-20C57	**41.35**	PUV	16	10	6	500	600	65	7500	2 11/16x7	4 11/16	7¾	6	26
T-20C58	**2.75**	BAH		.75		.5		30	1100	2⅜	2 13/16	1½	1⅝	½

*Measured at 50 volts,
60 cycles at D.C. current shown.

Dual Tone Control Reactor

T-20C74	**$5.70**	RAV	22	0	HUM-BUCKING CONSTRUCTION	220	500	1 7/16	1 9/16 Diameter 2	½
R-1068	**3.80**	USED IN CONJUNCTION WITH DUAL TONE CONTROL CHOKE T-20C74								¼

Splatter Chokes

Type No.	List Price	Mtg.	Application	D.C. Resistance	Mtg. Dim.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-20C62	**$4.80**	BAH	Inductance—.2 to 1.5 H. @ 100 M.A. D.C.	96 ohms	2 13/16	1 15/16	1⅞	2 5/16	1¼
T-20C60	**19.50**	KTV	Inductance—.2 to 1.5 H. @ 300 M.A. D.C.	30 ohms	2⅝ x 3⅛	3 17/32	4 13/32	4½	7
T-20C61	**24.00**	KTV	Inductance—.2 to 1.5 H. @ 500 M.A. D.C.	27 ohms	2⅞ x 3 7/16	3 27/32	4 25/32	4⅞	9

Voltage Changer—Auto Transformers

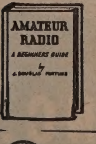
T-23V21	**$ 9.00**	GGV*	220–250	110–125†	100	2½ x 1 11/16	3 5/32	2 15/16	3⅞	5
T-23V22	**13.20**	GGV*	220–250	110–125†	150	2½ x 1 15/16	3 5/32	3 3/16	3⅞	6¼
T-23V23	**15.60**	GGV*	220–250	110–125†	250	3 x 2 5/16	3 13/16	3⅝	4 11/16	10¼
T-23V24	**23.10**	GGV*	220–250	110–125†	500	3 x 3 5/16	3 13/16	4⅝	4 11/16	13

* Furnished with primary cord and secondary receptacle. † Output is proportional to voltage applied to input.

TELEVISION REPLACEMENT & EXPERIMENTAL POWER TRANSFORMERS

Type No.	List Price	Case Style	Secondary No. 1 A.C. Volts	Secondary No. 1 D.C. MA	Rect. Fil.	Fil. No. 2	Fil. No. 3	Mtg. Centers	Dimensions W	Dimensions D	Dimensions H	Wt. Lbs.
T-22R40	**$18.00**	GGV	1800	2	2.5V-1.8A	6.3V-.6A Tapped at 2.5V-2.1A		2½x2 7/16	3 5/32	3¾	3 13/16	4¾
Use for experimental work, television replacement, oscilloscopes up to 7" tubes.												
TV-24R92	**14.40**	GGV	2400	10	2.5V-1.75A			2¾x2 11/16	3½	3⅞	4¼	5
Replacement—Half Wave—2 x 2 Rectifier—High Voltage Low Current Supplies.												
TV-24R98	**18.00**	AGF	350-0-350	200	5V-2A 5V-3A	6.3V-7A	6.3V-.9A	3x3¾	3¾	4½	4⅛	10¼
Power Supply 12" and 15" Receivers.												

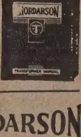
THORDARSON LITERATURE



TRANSFORMER MANUAL: A complete book containing literature on Radio receiver replacement transformers, Sound amplifiers, amateur transmitters and current Thordarson catalogs. Bound in heavy blue and orange loose leaf cover permitting addition of future Thordarson releases. Manual No. 340—50 cents.

TRANSFORMER CATALOG: A complete listing of Thordarson transformers, chokes, voltage changers, and regulators for receiver replacement, amateur radio and sound amplifiers. Tables and curves give complete data on application and characteristics of output, modulation and other transformers and chokes. Catalog 400—Free.

AMATEUR RADIO: Carefully prepared and edited to make learning of Radio, by all beginners, easy and interesting. Presents fundamental theory and instructions for making code practice oscillators, receivers and transmitters. Has 160 pages and over 100 illustrations and drawings. Heavy book cover, finished in wear-resistant blue cloth and imprinted with gold lettering. Amateur net price—75 cents.



TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON

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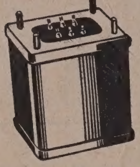
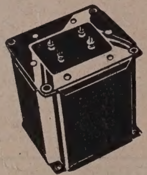
FREED TRANSFORMERS

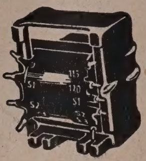
"PRODUCTS OF EXTENSIVE RESEARCH"



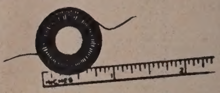
HI-FIDELITY
½ DB; 20-30,000 CYCLES



COMMERCIAL
COMPONENTS
QUALITY
DEPENDABILITY — PRICE



FOSTERITE TREATMENT
ANE-19 SPECS.



MINIATURE INDUCTORS
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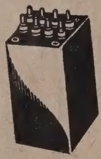
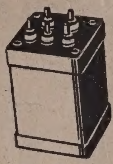
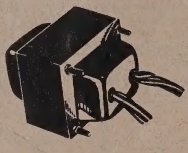


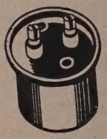
HERMETICALLY
SEALED COMPONENTS
TO MEET MIL-T-27 SPECS



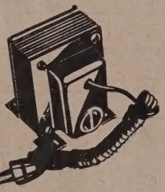
DISCRIMINATORS
10 CPS TO 1 MC



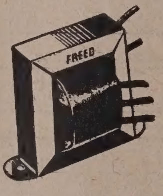
POWER
TRANSFORMERS
RUGGED, DEPENDABLE
INEXPENSIVE



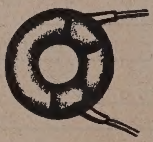
SUB MINIATURE
HERMETICALLY SEALED
TOROIDAL INDUCTORS



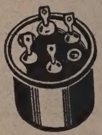
STEPDOWN
TRANSFORMERS
50 WATTS TO 3 KW



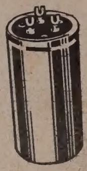
CHANNEL MOUNTING
INEXPENSIVE-RELIABLE



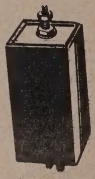
TOROIDAL INDUCTORS
60 CPS TO 1 MC



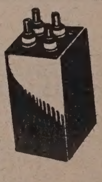
SUB MINIATURE
HERMETICALLY SEALED
COMMUNICATION
COMPONENTS



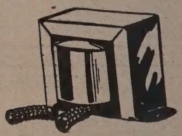
PRECISION FILTERS
10 CPS. TO 1 MC.



SLUG TUNED
COMPONENTS
1000 CPS TO 1 MC



PULSE TRANSFORMERS
FROM WATTS TO
MEGAWATTS



AUDIO
TRANSFORMERS

FREED TRANSFORMER CO., INC.

1716 WEIRFIELD STREET BROOKLYN (RIDGEWOOD) 27, N.Y.

UNITED TRANSFORMER CO.

PRICE LIST

Type No.	List Price
A-10	$16.00
A-11	18.00
A-12	16.00
A-14	17.00
A-16	15.00
A-17	17.00
A-18	16.00
A-19	19.00
A-20	16.00
A-21	18.00
A-24	16.00
A-25	17.00
A-26	16.00
A-27	16.00
A-30	12.00
A-32	10.00
CG-1C	75.00
CG-1S	75.00
CG-2L6	20.00
CG-4L6	35.00
CG-15	13.00
CG-16	13.00
CG-19	13.00
CG-33	8.00
CG-34	13.00
CG-40	10.00
CG-41	10.00
CG-44	10.00
CG-45	10.00
CG-48C	10.00
CG-50	16.00
CG-51AX	13.00
CG-53AX	15.00
CG-59AX	15.00
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CG-238AX	35.00
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CG-315	20.00
CG-316	30.00
CG-333	14.00
CG-422	22.00
CG-428	30.00
CG-429	31.00
CG-431	45.00
CG-433	14.00
CG-512	35.00
CG-710	13.00
CGE-1A	30.00
CVA-1	14.00
CVA-2	17.00
CVA-3	22.00
CVA-4	32.00
CVA-5	45.00
CVL-1	10.00
CVL-2	13.50
CVL-3	20.00

Type No.	List Price
CVL-10	$10.00
CVL-11	13.50
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CVM-0	10.00
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CVM-2	23.00
CVM-3	33.00
CVM-4	55.00
CVM-5	130.00
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CVP-5	60.00
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FT-9	6.00
FT-10	7.00
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HA-100X	26.00
HA-101	24.00
HA-101X	29.00
HA-103A	25.00
HA-104	22.00
HA-105	16.00
HA-106	18.00
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HA-108X	25.00
HA-111	22.00
HA-113	20.00
HA-114	22.00
HA-130X	30.00
HA-133	20.00
HA-134	25.00
HA-135	25.00
HA-137	22.00
HC-115	13.00
HC-116	20.00
HC-117	13.00
HP-122	15.00
HP-123	22.00

Type No.	✱ Net Price
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HQA-2	7.00
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HQA-4	7.50
HQA-5	8.00
HQA-6	8.00
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HQB-12	24.00
HQC-1	13.00
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HQC-3	13.00
HQC-4	13.00
HQC-5	13.00

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HDQ-1	$15.00
HQD-2	15.00
HQD-3	15.00
HQD-4	15.00
HQD-5	15.00
HQE-1	6.00
HQE-2	6.00
HQE-3	7.00
HQE-4	7.50
HQE-5	8.00

Type No.	List Price
LS-6L1	50.00
LS-6L3	35.00
LS-6L4	60.00
LS-5	50.00
LS-6	35.00
LS-7	40.00
LS-10	25.00
LS-10X	35.00
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LS-151	27.00
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LS-183	125.00

Type No.	List Price
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LS-190	30.00
LS-192	35.00
LS-691	400.00
LS-692	800.00
LS-950	15.00
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MC-2	17.00
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R-58	3.30
R-59	4.00
R-60	4.10
R-64	80.00
R-72	9.50

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R-111	9.00
R-112	10.50
R-113	16.00
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SO-2	6.50
SO-3	6.50
SO-4	6.50
SO-5	5.50
SO-6	6.50
SSO-1	6.50
SSO-2	6.50
SSO-3	6.50
SSO-4	6.50
SSO-5	5.50
SSO-6	6.50

Type No.	✱ Net Price
S-1	3.60
S-2	4.50
S-3	3.50
S-4	5.70
S-5	4.70
S-6	3.50
S-7	5.50
S-8	5.00
S-9	6.00
S-10	5.50
S-11	4.70
S-12	5.50
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S-14	5.20
S-15	5.50
S-16	7.00
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S-18	6.00
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S-21	18.00
S-22	28.00
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S-39	15.00
S-40	15.00
S-41	15.00
S-42	17.00
S-43	22.00
S-44	18.00
S-45	15.00
S-46	18.00

Type No.	✱ Net Price
S-47	$23.00
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S-49	33.00
S-50	50.00
S-51	11.00
S-52	14.00
S-53	3.70
S-54	3.70
S-55	3.70
S-56	3.70
S-57	5.50
S-58	6.50
S-59	5.50
S-60	12.00
S-61	5.50
S-62	6.50
S-63	12.50
S-64	6.50
S-65	6.50
S-66	6.50
S-67	6.50
S-68	7.00
S-69	7.00
S-70	7.00
S-71	12.00
S-72	7.50
S-74	20.00
SC-1	3.00
SC-2	4.50
SC-3	5.00
SC-4	7.00
SC-5	13.00
V-0	13.00
V-0-B	17.00
V-1	20.00
V1-M	35.00
V-2	17.00
V-2-B	20.00
V-3	25.00
V-3-B	33.00
V-4	37.00

Type No.	List Price
V1-C1	11.00
V1-C2	11.00
V1-C3	11.00
V1-C4	11.00
V1-C5	11.00
V1-C6	11.00
V1-C7	14.00
V1-C8	14.00
V1-C9	14.00
V1-C10	14.00
V1-C11	14.00
V1-C12	14.00
V1-C13	14.00
V1-C14	14.00
V1-C15	16.50
V1-C16	16.50
V1-C17	16.50
V1-C18	16.50
V1-C19	16.50
V1-C20	16.50
V1-C21	17.50
V1-C22	18.50

FILTERS AND EQUALIZERS

Type No.	✱ Net Price
3A	150.00
3AX	240.00
4C	200.00
BMI	25.00
BML	25.00
HMI	25.00
HML	25.00
LMI	25.00
LML	25.00

AMPLIFIER KITS

Type No.	List Price
W-10	75.00
W-20	120.00

(✱Net)

LINEAR STANDARD AUDIO TRANSFORMERS

LINEAR STANDARD AUDIO UNITS FEATURE:

UNIFORM FREQUENCY RESPONSE . . . at low frequencies, is effected through the use of HIPERM-ALLOY, a STABLE nickel iron alloy of very high initial permeability. Uniform high frequency response is the result of multiple section interleaved windings arranged in a semi-toroidal coil structure. This, plus special winding methods and insulations, assures a minimum of distributed capacity and leakage reactance.

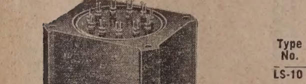
UTC LINEAR STANDARD transformers are the ONLY audio units with a **GUARANTEED** uniform response . . . ± 1 DB from 20 to 20,000 cycles.

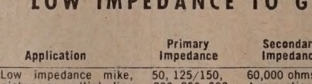
MINIMUM HUM PICKUP . . . is accomplished through the use of a hum balanced, semi-toroidal, coil structure which affords maximum neutralization of external fields. In addition, all units employ high conductivity outer case for maximum shielding. For very low level applications, units whose code numbers end in X employ multiple alloy shielding, making possible a transformer with extremely low inductive pickup.

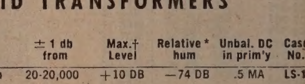
NEGLIGIBLE WAVE FORM DISTORTION . . . is a function of proper impedance matching, minimum phase shift, and low flux density. These elements have been given great attention in the design of Linear Standard units. It is interesting to note that an output transformer reasonably flat from 20 to 20,000 cycles may show serious distortion at 30 and 10,000 cycles. For this reason, UTC high level units have a frequency range better than guaranteed value, generally 10 cycles to 50,000 cycles (see page 6).

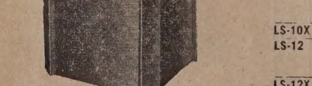
MULTIPLE TAP WINDINGS . . . make possible a wide combination of impedance terminations without impairing fidelity or efficiency. Precision winding methods result in winding accuracy of .1% . . . perfect balance of inductance and capacity . . . exact impedance reflection.

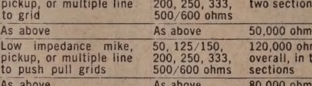
DEPENDABILITY . . . is a function of external and internal structure. Linear Standard units are housed in rugged die cast cases of precise dimension with reversible mounting to permit above chassis or subchassis wiring. The solid terminal posts on low absorption bakelite are arranged in a circular layout so that a round chassis hole will clear all terminals. Coils are vacuum baked and impregnated. **Semi-hermetic sealing** is accomplished through the use of a high adhesion compound poured through the large opening opposite the terminal board after controlled preheating of the unit for full compound penetration.

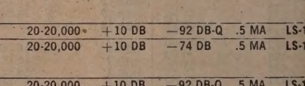


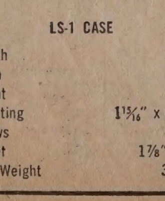












LS-1 CASE

Length	3⅛"
Width	2⅝"
Height	3¼"
Mounting	1¹⁵⁄₁₆" x 2⁷⁄₁₆"
Screws	6-32
Cutout	1⅞" dia.
Unit Weight	3 lbs.

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-10X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms overall, in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-12X	As above	As above	80,000 ohms overall, split	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-14	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-14X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-15	Three isolated lines or pads to one or two grids	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-15X	As above	As above	As above	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-18	High level multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	50,000 ohms overall, in two sections	20-20,000	+20 DB	—50 DB	.5 MA	LS-2
LS-26	Bridging line to single or push pull grids	5,000 ohms	60,000 ohms in two sections	15-20,000	+15 DB	—74 DB	0 MA	LS-1

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative* hum	Unbal. DC in prim'y	Case No.
LS-30	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200, 250, 333, 500/600 ohms.	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	LS-1
LS-30X	As above	As above	As above	20-20,000	+15 DB	−92 DB-Q	.3 MA	LS-1
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	LS-1
LS-31X	As above	As above	As above	20-20,000	+14 DB	−92 DB-Q	.3 MA	LS-1
LS-32	Mixing, low impedance mike, pickup, or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	LS-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative* hum	Unbal. DC in prim'y	Case No.
LS-19	Single plate to push pull grids like 2A3, 6L6, 300A. Split secondary	15,000 ohms	95,000 ohms; 1.25:1 each side	20-20,000	+12 DB	−50 DB	0 MA	LS-1
LS-20	Single plate to single grid	15,000 ohms	60,000 ohms; 2:1 turn ratio	20-20,000	+10 DB	−74 DB	0 MA	LS-1
LS-21	Single plate to push pull grids. Split pri. and sec.	15,000 ohms	135,000 ohms; 3:1 overall	20-20,000	+10 DB	−74 DB	0 MA	LS-1
LS-40	Single plate to push pull grids. Split secondary	15,000 ohms	135,000 ohms; 3:1 overall	30-20,000	+12 DB	−74 DB	8 MA	LS-1
LS-22	Push pull plates to push pull grids. Split primary and secondary	30,000 ohms plate to plate	80,000 ohms; turn ratio 1.6:1 overall	20-20,000	+18 DB	−50 DB	.25 MA	LS-2
LS-25	Push pull plates to push pull grids. Medium level. Split primary and sec.	30,000 ohms plate to plate	50,000 ohms; turn ratio 1.3:1 overall	20-20,000	+15 DB	−74 DB	1 MA	LS-1
LS-26	Bridging line to 1 or 2 grids	5000 ohms	60,000 in two sections	15-20,000	+15 DB	−74 DB	0 MA	LS-1

PLATE, CRYSTAL, PHOTOCELL, AND BRIDGING TO LINE TRANSFORMERS

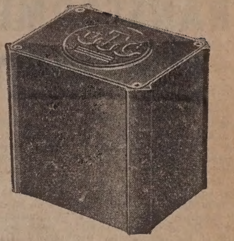
Type No.	Application	Primary Impedance	Secondary Imp. ohms	± 1 db from	Max.† Level	Relative* hum	Unbal. DC in prim'y	Case No
LS-27	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-15,000 cycles	+15 DB	−74 DB	8 MA	LS-1
LS-50	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+15 DB	−74 DB	0 MA	LS-1
LS-51	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	20-20,000	+16 DB	−74 DB	1 MA	LS-1
LS-38	Crystal microphone or pickup to multiple line, with internal equalizer	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	Equalized for crystal	+10 DB	−74 DB	0 MA	LS-1
LS-39	Photocell, high-mu triode, diode or overbiased detector to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+10 DB	−74 DB	0 MA	LS-1
LS-150	Bridging from 50 to 500 ohm line to line	4,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+15 DB	−74 DB	1 MA	LS-1
LS-151	Bridging from 50 to 500 ohm line to line	16,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+18 DB	−74 DB	1 MA	LS-1

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .4 db. from	Max. Level	Case No.
LS-56	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6AS7, 6L6	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-66	Class B 203A, 838, ZB120, 805	9,000 ohms plate to plate*	5000, 4200, 4100, 3500, 3300, 2650, 2500, 2100, 1250, 600	25-20,000	260 watts	*
LS-67	Class B 203A, 838, ZB120, 805	9,000 and 6,900 ohms plate to plate	10000, 2500	25-20,000	260 watts	*
LS-691	Class B 849, 833, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	25-20,000	1000 watts	LS-6
LS-692	Class B push pull parallel 833's	4,750 ohms plate to plate	2500, 2000, 1750, 1500, 1250	25-20,000	2500 watts	LS-6

MODULATION REACTORS

Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	5000	*
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	7500	*
LS-104A	Modulation reactor	50 hy	1.3 amp	75 ohms	20000	LS-7
LS-106	Modulation reactor	50 hy	750 MA	120 ohms	10000	Spec.



LS-2 CASE

Length	$4\frac{7}{16}$"
Width	$3\frac{1}{2}$"
Height	$4\frac{3}{16}$"
Mounting	$2\frac{11}{16}$" x $3\frac{11}{16}$"
Screws	8-32
Cutout	$2\frac{3}{4}$" dia.
Unit Weight	7.5 lbs.

LS-3 CASE

Length	$5\frac{13}{16}$"
Width	5"
Height	$4\frac{11}{16}$"
Mounting	$4\frac{3}{16}$" x $5\frac{1}{32}$"
Screws	10-24
Cutout	$3\frac{3}{4}$" dia.
Unit Weight	15 lbs.

The values of unbalanced DC shown will effect approximately 1.5 DB loss at 30 cycles.

*** Comparison of hum balanced unit with shielding to normal uncased type.**

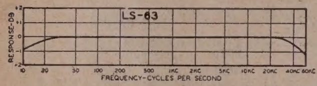
Q Multiple alloy magnetic shield.

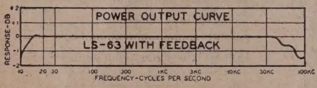
† 6MW as ODB reference.

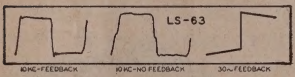
‡ See page N-39 for dimensions.

LS OUTPUT TRANSFORMERS THE FINEST

While the UTC Linear Standard line is generally designed for a flat response from 20 cycles to 20 Kc., a much wider response is required for output transformers. As is noted in the first curve below, typical UTC output transformers are down less than 1 BD at 10 cycles and less than 1 DB at 40 to 60 Kc. Because of this, a fine power output curve is possible. (Second curve.)
The third figure below illustrates square waves obtained with the LS-63 transformer in a "Williamson" Amplifier Circuit. Of particular interest is the short rise time, which is far superior for UTC transformers than any standard make which we have measured.







LS-6 CASE

Length	15¾"
Width	13"
Height	24"
Mounting Hole	⅜" dia.
Unit Weight	350 lbs.

LS-7 CASE

Length	20⅜"
Mounting	7⅜" x 14⁵⁄₁₆"
Height	18½"
Mounting	11⅝" x 19⅜"
Mounting Hole	⅜" dia.
Unit Weight	500 lbs.
Width	17¾"

HYBRID AND REPEAT COILS

Type No.	Application	Pri. and Sec. Impedances	± 1 db from	Max. Level	Hum Reduction	Max. Unbal. DC in Pri.	Case No.
LS-140	Line to line for isolating balanced and unbalanced circuits; balanced for maximum reduction cross talk (70 DB)	500/600 ohms split 500/600 ohms split	30-20,000	+10 DB	—92 DB Quadruple alloy shield	0 MA	LS-1
LS-141	Three sets of balanced windings for hybrid service, centertapped	500/600 ohms 500/600 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-142	Line to line and to push pull grids for hybrid service	500/600 ohms 500/600 ohms 60,000 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-143	High efficiency ring and talk repeat coil, for low frequency ringing	500/600 ohms 500/600 ohms	Efficient 15/12,000 cycles	+25 DB	—74 DB	5 MA	LS-2

DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Refl. Sec. Impedance	± 1 db from	Max. Level	Max. Unbal. Dc in Pri.	Case No.
LS-5	Driver, multiple line to class B 838's, 805's, ZB-120's, 203A's and similar tubes	50, 125, 200, 250, 333, 500/600 ohms	2,000 ohms; 1:2 overall turns ratio	20-20,000	+32 DB	5 MA	LS-2
LS-6	Driver, push pull 45's, 2A3's, 6A5G's, etc., to push pull 845 or 211D grids	5,000 ohms plate to plate	2.25 primary impedance; turns ratio 1.5:1 overall	20-20,000	+32 DB	5 MA	LS-2
LS-7	Push pull 6C5 or similar plates to A prime 45's, 6F6's, 2A3's, 6L6's	30,000 ohms plate to plate	.45 primary impedance turn ratio 1.5:1 Pri. to Sec.	20-20,000	+25 DB	1 MA	LS-2
LS-47	Driver from push pull 2A3's, 6A5G's, or 300A's to class B 838's, 203A's, 805's, or ZB120's	5,000 ohms plate to plate	.1 pri. impedance turns ratio, Pri./½ Sec. 3.2:1	20-20,000	+32 DB	5 MA	LS-2
LS-48	Driver transformer push pull 845's to 204 or 849 grids in class B	12,000 ohms plate to plate	.038 pri. impedance turns ratio, Pri./½ Sec. 5.1:1	20-20,000	+37 DB	15 MA	LS-3
LS-49	Push pull parallel 2A3, 6A5G, or 300A tubes to four 838, 203A, 805, or ZB120 tubes	2,500 ohms plate to plate	Ratio Pri./½ Sec. 4:1 and 2.5:1	20-20,000	+37 DB	10 MA	LS-3

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-52	Push pull 245, 250, 6V6 or 245 A prime	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-55	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6L6's, 6AS7G	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-58	Push pull parallel 2A3's, 6A5G's, 300A's, 6A3's	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	40 watts	LS-3
LS-60A	Push pull 2A3's, 6A3's, 6B4G's fixed bias, cathode follower drive	4,600 ohms plate to plate	15, 10, 7.5, 5, 3.75, 2.5, 1.2	20-20,000	30 watts	LS-3
LS-62A	Same as above	As above	500, 125	20-20,000	30 watts	LS-3
LS-61	Push pull 6F6, class B 46's 6AS7G, 807-TR, 1614-TR	10,000 ohms plate to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-6L1	Push pull 6L6's self bias	9,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L3	Same as above	9,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias	3,800 ohms plate to plate and 4,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	55 watts	LS-3

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	15 watts	LS-2
LS-34	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	30 watts	LS-3

LINEAR STANDARD POWER EQUIPMENT

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Typical Application	Pri. Volts 50/60 cycles	High Voltage	Filament Windings	Case No.
LS-180	For pre-amplifier service	110	225-0-225 15 MA	6.3 V.C.T.-2A 6.3 V.C.T.-6A	LS-1
LS-192	Power amplifier service	105, 115, 125	335-0-335 180 MA DC 60-0-60, 20 MA	5 V.-3A 6.3 V.C.T.-.75A 6.3 V.C.T.-5.25A	LS-3
LS-70	High power amplifier service	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA 70-0-70 50 MA	5 V.C.T.-3A 5 V.C.T.-2A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-3
LS-72	For fixed or self bias 6L6's, 300A's	100, 105, 110, 115, 120, 125	525-450-0-450-525 250 MA 70-0-70 50 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-3A 6.3 V.C.T.-1A 6.3 V.C.T.-3A tapped at 5 V.C.T.-6A	LS-3
LS-74	For push pull parallel 6L6's, 2A3's, 6B4's	115	415-395-0-395-415 275 MA	5 V.-6A 6.3 V.C.T.-5A	LS-3

In choosing power components for broadcast and commercial equipment, the first factor to be considered is dependability. Linear standard power components are very conservatively designed for maximum reliability. Designs provide for low temperature rise, 40°, and high insulation safety factors. Only the finest of materials and workmanship are used throughout.

The low power components of the Linear Standard series are housed in the familiar rectangular LS case with top or bottom mounting facilities. High power components are housed in end castings which completely protect the winding, while directly exposing the laminations for maximum heat transfer.

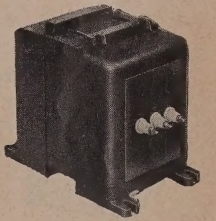
All units have a deep grey finish to obtain the highest heat radiation coefficient. Large components (up to 250 KVA) are housed in oil tanks.

PLATE TRANSFORMERS*

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Approximate DC Voltage Out of Filter	DC Current
LS-183	Class B 805 or push pull parallel 203A's, etc.	100, 110, 120, 220, 230, 240	1750-1500-0-1500-1750	1500-1250	400 MA
LS-184	Class B 204A, 849, HF200, HF300, 250TH, HK354, 100TH, etc.	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	500 MA
LS-185	For combined class B and class C stages as above	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	1.2 amp.

FILAMENT TRANSFORMERS

Type No.	Application	Pri. Volts 50/60 cycles	Secondary Voltage	Insulation Test Voltage	Case No.
LS-80	866 rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	10,000	LS-3
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	10,000	LS-3
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	2,500	LS-3
LS-86	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1
LS-120	866 Bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A 2.5 V.C.T.-5A	12,000	LS-3
LS-121Y	872 Bridge rectifier	100, 110, 120, 220, 230, 240	5 V.C.T.-20A 5 V.C.T.-10A 5 V.C.T.-10A	12,000	*
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	*
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	*



LINEAR STANDARD FILTER, SWINGING, AND AUDIO CHOKES

(Inductance values are at D.C. current shown)

Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-90	Filter choke with hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	450 ohms 110 ohms	2000	LS-2
LS-91	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	2000	LS-2
LS-92	Filter choke with hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	88 ohms 22 ohms	2500	LS-3
LS-93	Filter choke with hum bucking tap	Series-26 hy Parallel-6.5 hy	200 MA 400 MA	120 ohms 30 ohms	3500	LS-3
LS-94	Parallel feed and filter choke	Series-320 hy Parallel-80 hy	3 MA 6 MA	6400 ohms 1600 ohms	1500	LS-1
LS-950	Filter choke with hum bucking tap	Series-100 hy Parallel-25 hy	35 MA 70 MA	1000 ohms 250 ohms	1500	LS-2
LS-96	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp	90 ohms 22.5 ohms	7500	*
LS-980	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	400 MA 800 MA	100 ohms 25 ohms	5000	LS-3
LS-98	Swinging choke	8-40 hy	400 MA	125 ohms	5000	LS-3
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp 2 amp	50 ohms 12.5 ohms	10000	*
LS-105	Swinging choke	8-40 hy	1 amp	50 ohms	10000	*

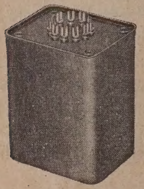
* See dimension chart, this page.

DIMENSIONS

Type No.	L	W	H	Mtg.	Wt.
LS-66	9¾	4¾	6¾	3⅞x 9⅛	37
LS-67	9¾	4¾	6¾	3⅞x 9⅛	37
LS-73	9½	4¾	6¾	3⅞x 8⅞	34
LS-83	8¾	4¾	6¾	3⅞x 8⅛	25
LS-89A	9⅝	7	9	6 x 8⅝	68
LS-96	10¼	4¾	6¾	3⅞x 9⅝	40
LS-99	14⅛	8½	10¼	7¼x13⅛	80
LS-102	9¾	4¾	6¾	3⅞x 9⅛	37
LS-103	13⅛	8½	10¼	7¼x12⅛	58
LS-105	13⅛	8½	10¼	7¼x12⅛	58
LS-121Y	8¼	3¾	5⅛	3x7-13/16	23
LS-181	9¾	4¾	6¾	3⅞x 9⅛	37
LS-182	10¾	4¾	6¾	3⅞x10⅛	45
LS-183	15½	10	13¼	8½x14½	70
LS-184	17¼	10	13¼	8½x16¼	102
LS-185	23	10	13¼	8½x22	230

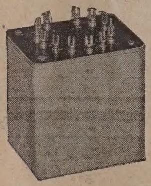
HIPERM ALLOY TRANSFORMERS

The UTC Hiperm alloy audio and power transformers are specifically designed for portable and compact service. While light in weight, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hiperm alloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hiperm-alloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Prim'y shown is maximum unbalanced.



TYPE H-1 CASE

Length	2⅜"
Width	1 15/16"
Height	3⅛"
Mounting	1⅜" x 1 13/16"
Screws	6-32
Cutout	1 13/16" dia.
Unit Weight	2 lbs.



TYPE H-2 CASE

Length	3 9/16"
Width	2 13/16"
Height	3½"
Mounting	2" x 2¾"
Screws	8-32
Cutout	2 11/16" dia.
Unit Weight	5 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Imp. (ohms)	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-100	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-101	Low impedance mike, pickup, or multiple line to P.P. grids	50, 125/150, 200, 250, 333, 500/600	120,000 ohms overall, split	30-20,000	+ 10DB	.5 MA	H-1
HA-101X	As above but with tri-alloy internal shield to effect very low hum pickup		80,000 ohms overall, split				H-1
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-108	Mixing, low impedance mike, pickup, or multiple line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 10DB	.5 MA	H-1
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shield	30, 50, 200, 250 each primary	60,000 ohms overall, in two sections	30-20,000	+ 10DB	.5 MA	H-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Imp.	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-104	Single plate to P.P. grids like 2A3, 6L6 (split secondary)	15,000 ohms	95,000 ohms 1.25:1	30-20,000	+12 DB	0 MA	H-1
HA-105	Single plate to single grid (split secondary)	15,000 ohms	60,000 ohms 2:1 turn ratio	30-20,000	+ 12 DB	0	H-1
HA-106	Single plate to push pull grids (split secondary)	15,000 ohms	135,000 ohms 3:1 ratio overall	30-20,000	+ 12 DB	0	H-1
HA-107	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	80,000 ohms 1.6:1 turn ratio overall	30-20,000	+ 20 DB	.25 MA	H-2
HA-137	Push pull plates to push pull grids (split Pri. and Sec.)	30,000 ohms plate to plate	68,000 ohms 1.5:1 turn ratio	30-20,000	+ 12 DB	0	H-1

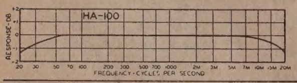
PLATE AND CRYSTAL TO LINE TRANSFORMERS

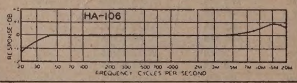
Type No.	Application	Primary Imp.	Secondary Imp. ohms	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-111	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000 measured with resistive source	+ 10 DB	0	H-1
HA-113	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600.	30-20,000	+ 12 DB	0 MA	H-1
HA-133	Single plate to multiple line (D.C. in Pri.)	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 15 DB	8 MA	H-1
HA-114	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 16 DB	1 MA	H-1
HA-134	Push pull 6B4's, 6L6, or 2A3's to line	5000/9400 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 32 DB	5 MA	H-2
HA-135	Push pull 2A3's, etc. to voice coil	3000/5000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	30-20,000	+ 34 DB	5 MA	H-2

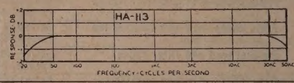
POWER TRANSFORMERS AND CHOKES

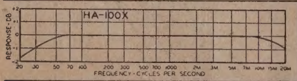
Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
HP-122	Pre-amp. power supply using 6X4, 6X5 rectifier	115	220-0-220 15 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-1.2A	H-1
HP-123	Pre-amp. or tuner power supply using 6X4, 6X5 rectifier	115	275-0-275 35 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-2A	H-2

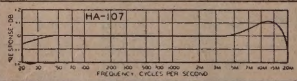
Type No.	Application	Inductance	DC Current	DC Resistance	Test Voltage	Case No.
HC-115	Parallel feed and filter choke	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	6000 ohms 1500 ohms	1500	H-1
HC-116	Parallel feed and filter choke	Series-600 hy Parallel-150 hy	8 MA 16 MA	3400 ohms 850 ohms	1500	H-2
HC-117	Parallel feed and filter choke	Series-200 hy Parallel-50-hy	15 MA 30 MA	3200 ohms 800 ohms	1500	H-1

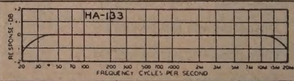


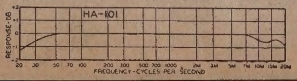


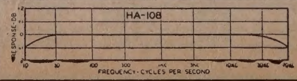


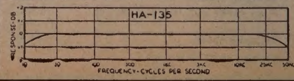












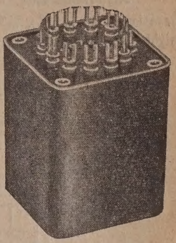
ULTRA COMPACT AUDIO UNITS

The **UTC Ultra compact** audio units are small and light in weight, ideally suited to remote amplifier and similar compact equipment. High fidelity is obtainable in all individual units, the frequency response being ± 2 DB from 30 to 20,000 cycles.

All units except those carrying DC in Primary employ a true hum balancing coil structure, which combined with a high conductivity outer case, effects good inductive shielding. The die-cast case provides for top or bottom mounting. Maximum operating level +7 DB.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200/250, 333, 500/600 ohms	50,000 ohms	30-20,000
A-11	Low impedance mike, pickup, or line to 1 or 2 grids	50, 200, 500	50,000 ohms	50-20,000 multiple alloy shield for extremely low hum pickup
A-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200/250, 333, 500/600 ohms	80,000 ohms overall, in two sections	30-20,000
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall, in two sections	30-20,000
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200/250, 333, 500/600 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-21	Mixing, low impedance mike, pickup, or line to line	50, 200/250, 500/600	50, 200/250, 500/600	50-20,000 multiple alloy shield for extremely low hum pickup



INTERSTAGE AUDIO TRANSFORMERS

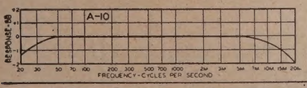
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-16	Single plate to single grid	15,000 ohms	60,000 ohms, 2:1 turn ratio	30-20,000
A-17	Single plate to single grid 8 MA unbalanced D.C.	As above	As above	50-20,000
A-18	Single plate to two grids. Split primary, can also be used for P.P. plates	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	30-20,000
A-19	Single plate to two grids 8 MA unbalanced D.C.	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	50-20,000

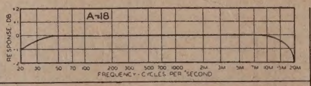
TYPE A CASE

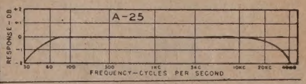
Length	1½"
Width	1½"
Height	2"
Mounting	1$\frac{5}{32}$" sq.
Screws	4-40
Cutout	1⅜" dia.
Unit Weight	½ lb.

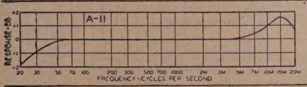
PLATE AND CRYSTAL TO LINE TRANSFORMERS

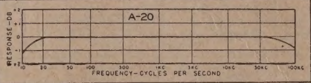
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-24	Single plate to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-25	Single plate to multiple line 8 MA unbalanced D.C.	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	50-20,000
A-26	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000 measured with non-inductive source
A-30	Audio choke, 250 henrys @ 5 MA 6000 ohms D.C., 65 henrys @ 10 MA 1500 ohms D.C. 450 henrys @ 0 MA			
A-32	Filter choke 60 henrys @ 15 MA 2000 ohms D.C., 15 henrys @ 30 MA 500 ohms D.C.			

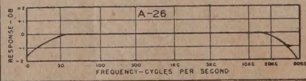


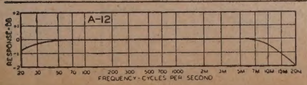


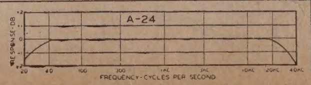


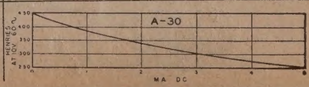












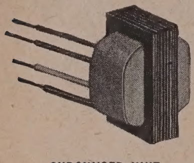
(Refer to Page N-35 for UTC Prices)

SUBOUNCER UNITS

FOR HEARING AIDS...VEST POCKET RADIOS...MIDGET DEVICES

UTC Sub-Ouncer units fulfill an essential requirement for miniaturized components having relatively high efficiency and wide frequency response. Through the use of special nickel iron core materials and winding methods, these miniature units have performance and dependability characteristics far superior to any other comparable items. They are ideal for hearing aids, miniature radios, and other types of miniature electronic equipment.

The coils employ automatic layer windings of double Formex wire . . . in a molded Nylon bobbin. All insulation is of cellulose acetate. Four inch color coded flexible leads are employed, securely anchored mechanically. No mounting facilities are provided, since this would preclude maximum flexibility in location. Units are vacuum impregnated and double (water proof) sealed. The curves below indicate the excellent frequency response available. Alternate curves are shown to indicate operating characteristics in various typical applications.

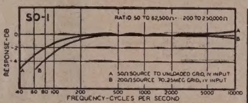


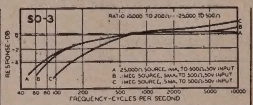
SUBOUNCER UNIT

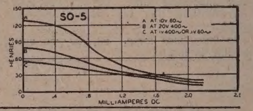
Dimensions .... 9/16" x 5/8" x 7/8"
Weight ....03 lb.

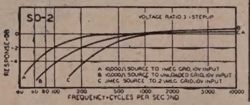
Type	Application	Level	Pri. Imp.	D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	16	2650
SO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000	225	1850
*SO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500	1300	30
SO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50	1800	4.3
SO-5	Reactor 50 HY at 1 mil. D.C. 3000 ohms D.C. Res.						
SO-6	Output	+ 20 V.U.	100,000	.5 mil.	60	3250	3.8

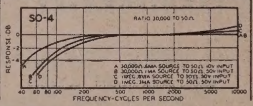
*Impedance ratio is fixed, 1250:1 for SO-1, 1:50 for SO-3. Any impedance between the values shown may be employed.

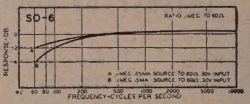








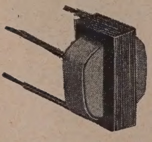




SUB-SUBOUNCER UNITS

FOR HEARING AIDS AND ULTRA-MINIATURE EQUIPMENT

UTC Sub-SubOuncer units have exceptionally high efficiency and frequency range in their ultra-miniature size. This has been effected through the use of specially selected Hiperm-Alloy core material and special winding methods. The constructional details are identical to those of the Sub-Ouncer units described above. The curves below show actual characteristics under typical conditions of application.

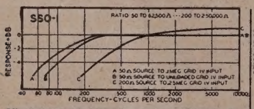


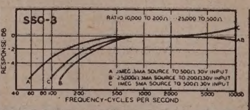
SUB-SUBOUNCER UNIT

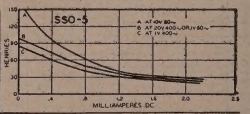
Dimensions .... 7/16" x 3/4" x 5/8"
Weight ....02 lb.

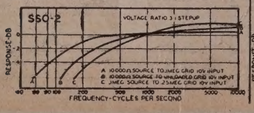
Type	Application	Level	Pri. Imp.	D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SSO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	13.5	3700
SSO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000	750	3250
*SSO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500	2600	35
SSO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50	2875	4.6
SSO-5	Reactor 50 HY at 1 mil. D.C. 4400 ohms D.C. Res.						
SSO-6	Output	+ 20 V.U.	100,000	.5 mil.	60	4700	3.3

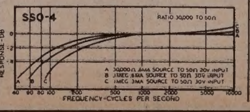
*Impedance ratio is fixed, 1250:1 for SSO-1, 1:50 for SSO-3. Any impedance between the values shown may be employed.

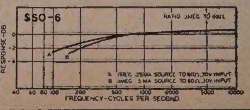












OUNCER AUDIO UNITS

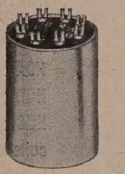
STANDARD AND PLUG-IN TYPES

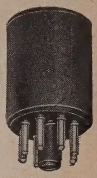
UTC OUNCER components represent the acme in compact quality transformers. These units, which weigh one ounce, are fully impregnated and sealed in a drawn aluminum housing ⅞″ diameter . . . mounting opposite terminal board.

Ouncer items are ideal for portable broadcast, hearing aid, aircraft, concealed service, and similar applications. High fidelity characteristics are provided, uniform from 40 to 15,000 cycles, except for 0-14, 0-15, and units carrying DC which are intended for voice frequencies from 150 to 4,000 cycles. Maximum level 0 DB.

"P" series units are identical to the UTC OUNCER units but are sealed in bakelite housings with plug-in base to fit standard octal socket. While of submersion proof design, these units weigh but two ounces. Oversize pins in the base make it impossible to dislodge these units from their sockets.

OUNCER Type No.	Application	Pri. Imp.	Sec. Imp.	PLUG-IN Type No.
0-1	Mike, pickup or line to 1 grid	50, 200/250, 500/600	50,000	P-1
0-2	Mike, pickup or line to 2 grids	50, 200/250, 500/600	50,000	P-2
0-3	Dynamic mike to 1 grid	7.5/30	50,000	P-3
0-4	Single plate to 1 grid	15,000	60,000	P-4
0-5	Single plate to 1 grid, D.C. in Pri.	15,000	60,000	P-5
0-6	Single plate to 2 grids	15,000	95,000	P-6
0-7	Single plate to 2 grids, D.C. in Pri.	15,000	95,000	P-7
0-8	Single plate to line	15,000	50, 200/250, 500/600	P-8
0-9	Single plate to line, D.C. in Pri.	15,000	50, 200/250, 500/600	P-9
0-10	Push pull plates to line	30,000 ohms plate to plate	50, 200/250, 500/600	P-10
0-11	Crystal mike or pick-up to line	50,000	50, 200/250, 500/600	P-11
0-12	Mixing and matching	50, 200/250	50, 200/250, 500/600	P-12
0-13	Reactor, 300 Hys.—no D.C.; 50 Hys.—3 MA. D.C., 6000 ohms			P-13
0-14	50:1 mike or line to 1 grid	200	½ megohm	P-14
0-15	10:1 single plate to 1 grid	15,000	1 megohm	P-15



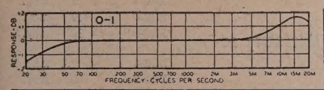


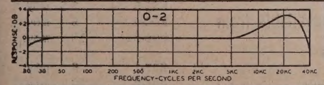
OUNCER CASE

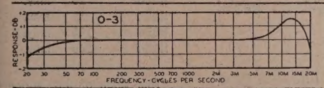
Dia.	⅞″
Ht.	1 3/16″
Mtg.	11/16″
Scr.	2-56
Wt.	1 oz.

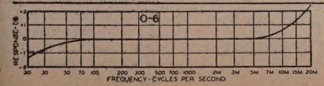
PLUG-IN CASE

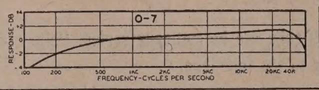
Dia.	1 3/32″
Ht.	1 15/32″
Skt.	St. Oct.
Wt.	2 oz.

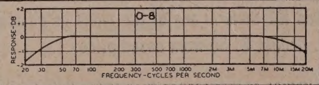


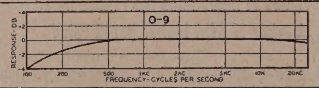


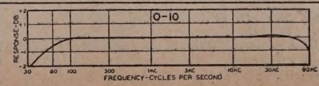


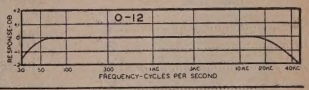


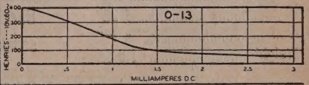


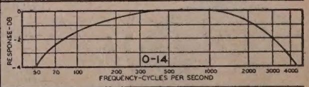


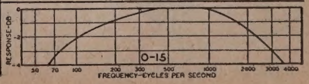




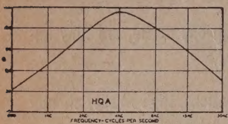


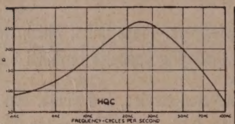


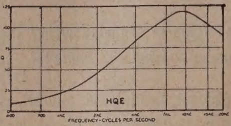


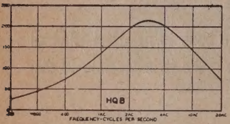


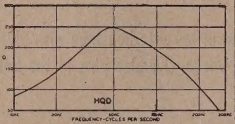
HIGH Q TOROID INDUCTORS

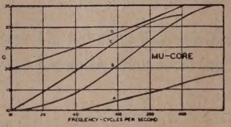


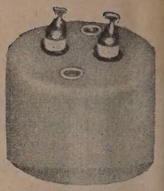






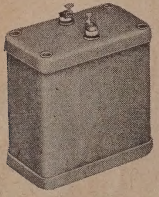






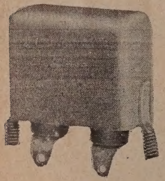
HQA, HQC, HQD CASE

Diameter	1¹³⁄
Height	1³⁄
Mounting	1¹⁄
Screws	6-
Cutout	⁹⁄₁₆" x 1³⁄
Weight	5



HQB CASE

Length	2⅝"
Width	1⅝"
Height	2⅝"
Mounting	1¹¹⁄₆₄" x 2¹¹⁄₆₄"
Screws	6-32
Cutout	⁹⁄₁₆" x 1⅛"
Unit Weight	14 oz.



HQE CASE

Length	1⁵⁄₁₆"
Width	½"
Height	1³⁄₁₆"
Mounting	1³⁄₁₆"
Screws	6/32"
Cutout	⁷⁄₁₆" x ⅞"
Unit Weight	1.5 oz.

UNCASED HIGH Q TOROIDS

There are many applications in the audio, carrier, and supersonic fields requiring inductors of high Q and great stability. The HQ series of permalloy dust toroid units developed for these applications have remarkable characteristics.

HQA coils have maximum Q (100) at approximately 5,000 cycles. **HQB** coils have maximum Q (200) at approximately 4,000 cycles. **HQC** coils have maximum Q (200) at approximately 30 Kc. **HQD** coils have maximum Q (200) at approximately 60 Kc. The stability is excellent and types are available for all high Q applications from 300 cycles to 300 Kc.

Stability is excellent. For the HQA-7 coil illustrated inductance change is less than 1% for applied voltages from .1 to 25 volts. For the HQB-5 coil illustrated the inductance change is less than 1% for applied voltage from .1 to 50 volts. DC is permissible through the coil. Inductance is virtually independent of frequency, temperature, and vibration.

Hum pickup is extremely low due to the toroidal winding structure . . . 70 microvolts per gauss for the HQA, 140 microvolts per gauss for the HQB. The cased toroid structure permits close spacing of units, effecting a coupling attenuation of approximately 80 DB.

All HQ coils are **hermetically sealed.** Units are laboratory adjusted to **1% tolerance.**

Uncased HQ Coils in any of the types listed are available from stock. Deduct $1.50 from cased price.

Other Values of Inductance than those listed available on special order at price of next higher listed value.

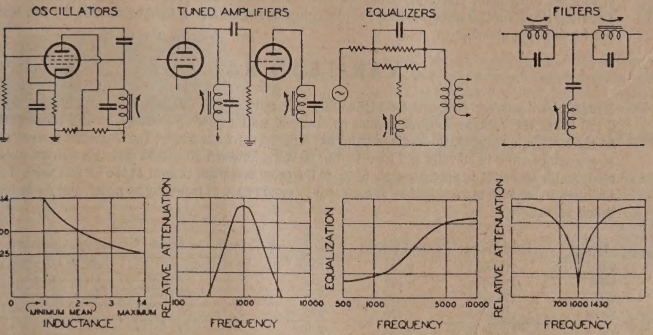
Mu-Core Coils employ special laminated core structures for good stability and low external field. The curves shown indicate approximate Q obtainable at any specific frequency by designing for that frequency.

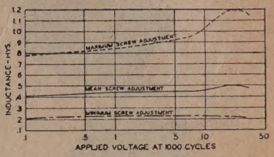
Type No.	Inductance Value	*DC Max
HQA-1	5 mhy.	40
HQA-2	12.5 mhy.	26
HQA-3	20 mhy.	20
HQA-4	30 mhy.	16
HQA-5	50 mhy.	13
HQA-6	80 mhy.	10
HQA-7	125 mhy.	8
HQA-8	200 mhy.	6
HQA-9	300 mhy.	5
HQA-10	.5 hy.	4
HQA-11	.75 hy.	3
HQA-12	1.25 hy.	2
HQA-13	2. hy.	2
HQA-14	3. hy.	1
HQA-15	5. hy.	1
HQA-16	7.5 hy.	1
HQA-17	10. hy.	
HQA-18	15. hy.	
HQB-1	10 mhy.	41
HQB-2	30 mhy.	24
HQB-3	70 mhy.	17
HQB-4	120 mhy.	12
HQB-5	.5 hy.	6
HQB-6	1. hy.	4
HQB-7	2. hy.	3
HQB-8	3.5 hy.	2
HQB-9	7.5 hy.	1
HQB-10	12. hy.	1
HQB-11	18. hy.	
HQB-12	25. hy.	
HQC-1	1 mhy.	
HQC-2	2.5 mhy.	
HQC-3	5 mhy.	
HQC-4	10 mhy.	
HQC-5	20 mhy.	
HQD-1	.4 mhy.	
HQD-2	1. mhy.	
HQD-3	2.5 mhy.	
HQD-4	5 mhy.	
HQD-5	15 mhy.	
HQE-1	5 mhy.	
HQE-2	10 mhy.	
HQE-3	50 mhy.	
HQE-4	100 mhy.	
HQE-5	200 mhy.	

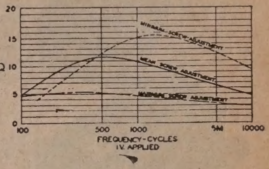
*This value of D.C. will drop th coil inductance 5%. Values of D. below this will show proportic ately (linear) less inductance drc For example HQA-8 will drop ½ in L with 6.5MA.

(Refer to Page N-35 for UTC Prices)

UTC VARIABLE INDUCTORS



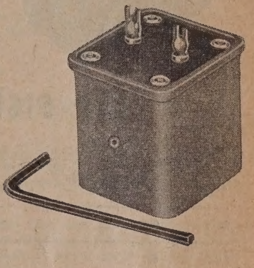




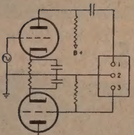
Type	Mean Hys.	Type	Mean Hys.
VI-C1	.0085	VI-C12	1.3
VI-C2	.013	VI-C13	2.2
VI-C3	.021	VI-C14	3.4
VI-C4	.034	VI-C15	5.4
VI-C5	.053	VI-C16	8.5
VI-C6	.084	VI-C17	13.
VI-C7	.13	VI-C18	21.
VI-C8	.21	VI-C19	33.
VI-C9	.34	VI-C20	52.
VI-C10	.54	VI-C21	83.
VI-C11	.85	VI-C22	130.

UTC type VIC variable inductors offer a revolutionary approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, an inductance value of +90%, −50% from mean value is obtainable. Setting is positive. Effective Q for a wide frequency range and variation of inductance with applied AC voltage are shown on the illustrated curves, for a typical VIC unit.

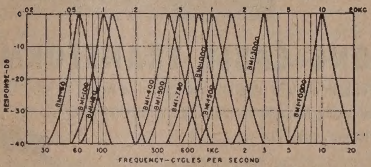
The VIC inductor is housed in a rugged die cast case $1\frac{11}{32}$" long, $1\frac{1}{4}$" wide and $1\frac{7}{16}$" high with mounting centers on terminal board side $1\frac{3}{16}$" by $\frac{29}{32}$". Weight is $5\frac{1}{2}$ oz.

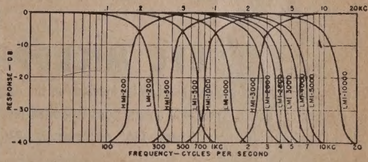


UTC INTERSTAGE AND LINE FILTERS



INTERSTAGE FILTER CONNECTIONS





STOCK FREQUENCIES

(Number after letters is frequency)

BMI-60
BMI-100
BMI-120
BMI-400
BMI-500
BMI-750
BMI-1000
BMI-1500
BMI-3000
BMI-10000
HMI-200
HMI-500
HMI-1000
HMI-3000
LMI-200
LMI-500
LMI-1000
LMI-2000
LMI-3000
LMI-5000
LMI-10000
BML-400
BML-1000
HML-200
HML-500
LML-1000
LML-2500
LML-4000
LML-12000

UTC standardized filters have been designed to take care of many present day filter requirements through stock units. The interstage type filters have a nominal impedance of 10,000 ohms, and lend themselves to effecting gain simultaneously with their frequency discrimination.

BMI units (Band Pass) have 2:1 gain. They are sharply peaked, having approximately 2 DB attenuation at plus or minus 3% from center frequency and attenuation of 40 DB per octave as shown.

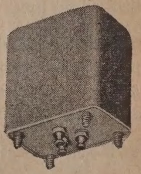
HMI units (High Pass) have a loss of less than 6 DB at cutoff frequency.

LMI units (Low Pass) have a loss of less than 6 DB at cutoff frequency, and an attenuation of 35 DB at 1.5 cutoff frequency.

BML (Band Pass), **HML** (High Pass), and **LML** (Low Pass) filters are similar to the interstage filters, in all characteristics, except that they are intended for an input and output impedance of 500/600 ohms.

All of the standard filters are housed in **hermetically sealed** cases, shielded to reduce hum pickup to 150 MV per gauss at 60 cycles.

In addition to the stock filters listed, any of the six types are available as **special units** for any frequency from 200 to 10,000 cycles. Order by type followed by frequency, as LMI-2500, designating low pass interstage filter—2500 cycles cutoff frequency. These special units are priced at $35.00 net.



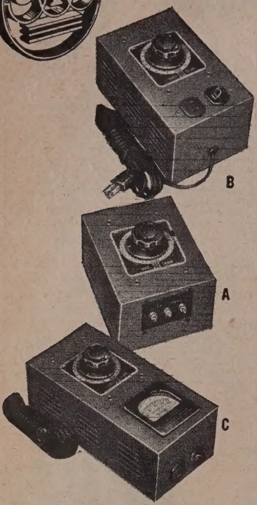
FILTER CASE M

Base	$1\frac{3}{16}$" x $1\frac{11}{16}$"
Mtg.	¾" x 1¼"
Mtg. Screws	6-32
Cutout	⅞" dia.
Height, BMI, LMI, BML	1⅝"
Height, HMI, HML, LML	2½"
Weight	6 oz. and 9 oz.

(Refer to Page N-35 for UTC Prices)

UTC VARITRAN CONTROL UNITS

For controlling: Rectifier output . . . motors . . . heaters . . . lights . . . line voltage



The UTC Varitran is a simple autotransformer whose turns are arranged on one layer with the insulation removed so that every exposed turn may be used as a tap of the winding. A special non-fusing contact can be moved to any position on the winding, permitting the exact voltage desired to be obtained. The regulation and efficiency are excellent and no distortion of wave form occurs. The output voltage is independent of load. In addition to its many laboratory uses, the Varitran is widely employed for controlling electric ovens, fans, soldering irons, furnaces and heaters, for photographic and enlarging lighting control, for life tests of lamps and for dimming illumination.

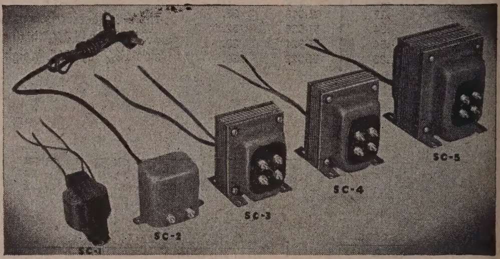
VARITRAN RATINGS

Standard Varitrans are designed for 115 or 230 volt service. The respective output voltages are 0-130 and 0-260 volts. The Varitran autotransformer current and wattage rating is based at 115 volts (115V. models). As the voltage is reduced, the wattage output is reduced correspondingly. The maximum current can be taken at any point from 0 to 20 volts and from 95 to 130 volts. Between 20 and 95 volts the current capacity tapers off from the two ends to approximately 60% of the rated maximum current at the 65 volt point. The mounting facilities are at both top and bottom of each unit to assure ease of mounting on panel, chassis or for laboratory bench service.

Type	Input Voltage	Output Voltage	Watts	Max. Amps.	Figure	Approx. Dimensions	Weight
V-0	115 volts	0-130	230	2	A	4¼ x 6½ x 4½	10
V-0-B	230 volts	0-260	230	1	A	4¼ x 6½ x 4½	11
V-1	115 volts	0-130	570	5	B	4⅞ x 8 x 3⅝	12
V-1-M	115 volts	0-130	570	5	C	4⅞ x 9⅞ x 3⅝	14
V-2	115 volts	0-130	570	5	A	4⅞ x 7½ x 3¾	13
V-2-B	230 volts	0-260	570	2.5	A	4⅞ x 7½ x 3¾	16
V-3	115 volts	0-130	850	7.5	A	4⅞ x 7½ x 3¾	16
V-3-B	230 volts	0-260	850	3.75	A	5½ x 7½ x 5½	20
V-4	115 volts	0-130	1250	11	A	6¼ x 10¾ x 5	34

UTC SIGNALLING AND CONTROL TRANSFORMERS

TYPE	SECONDARY VOLTS	WATTS	OVERALL DIMENSIONS	WEIGHT LBS.
SC-1	6.1	20	1⅞x3⅛x2	1½
SC-2	6.1	20	2½x3¼x2¼	1½
SC-3	4, 8, 12, 16, 20, 24	50	3 x3¾x3½	4
SC-4	4, 8, 12, 16, 20, 24	100	3¼x4½x4	5½
SC-5	4, 8, 12, 16, 20, 24	250	4 x5 x4¾	10½



UTC MICROPHONE CABLE TRANSFORMERS

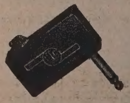
UTC cable transformers are designed to be inserted in the cable circuit, and are ruggedly constructed to withstand mechanical abuse. The cable connections (supplied less cable) are made through spring strain relief to terminal boards inside the end caps. 1½" diameter . . . 2½" long . . . ½ lb.

UTC MICROPHONE
CABLE TRANSFORMERS

Type MC-1—primary tapped 30/50 and 200/250 ohms, secondary to grid, standard fidelity.

Type MC-2—primary tapped 30/50 and 200/250 ohms, secondary to grid, high fidelity.

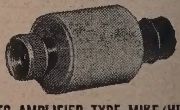
UTC Telephone type MIKE/HIGH IMPEDANCE ADAPTOR is designed to match low impedance sources to an amplifier having high impedance input. Will match any source from 50 to 600 ohms, effecting a 15:1 step up ratio (225:1 impedance ratio). The plug on MA-1 goes into jack on amplifier . . . the plug from mike goes into jack on MA-1. Flat 40-10,000 cycles. Rugged die casting ⅞x1⅛x2⅛.



UTC Telephone type MIKE/HIGH IMPEDANCE
ADAPTOR

Type MA-1—primary 50 to 500 ohms . . . 15:1 ratio . . . jack input . . . plug output.

UTC Amplifier type mike/high impedance adaptor is identical to MA-1 in electrical characteristics. The high impedance side employs a connector similar to Amphenol 75-MC1F. This single conductor connector screws unit on to corresponding male plug connector usually found on amplifiers. The low impedance side employs a connector similar to Amphenol 91-MC3M . . . the usual 3 contact recessed male connector to which standard quality microphone plugs will mate.



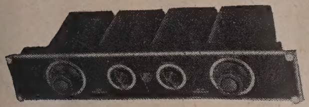
UTC AMPLIFIER TYPE MIKE/HIGH
IMPEDANCE ADAPTOR

Type MB-1—Primary 50 to 500 ohms . . . 15:1 ratio.

(Refer to Page N-35 for UTC Prices)

BROADCAST AND RECORDING EQUALIZERS AND FILTERS*

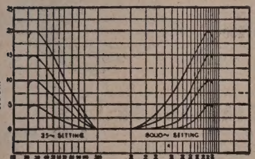
* 500/600 ohms



3AX UNIVERSAL EQUALIZER

The universal characteristics of the UTC 3AX equalizer have made it the most popular item for broadcast and recording equalization. This unique unit, with which most communications engineers are already familiar, is an accurately calibrated, quickly adjustable, combined low and high frequency equalizer. The low frequency controls include a switch for adjusting the maximum equalization frequency to 25, 50, or 100 cycles and a calibrated T-pad for exact adjustment of the amount of equalization. The high frequency portion of this unit includes a switch to set maximum equalization point at 4000, 6000, 8000, 10,000 or 15,000 cycles, and a similar calibrated control reading directly in DB. **Equalization up to 25 DB** available at any frequency selected.

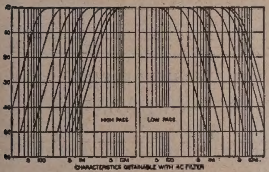
Through a unique arrangement of compensating pads, changes in adjustment of the 3AX equalizer do not affect the insertion loss (50 DB). This permits rapid changes in tone color, with negligible change in volume. Where rapid changeover is required in service from one line to another, or from recording to play back, it is merely necessary to predetermine the required setting. The actual adjustment of the controls can be taken care of almost instantaneously. The construction is of the depressed chassis, etched panel, rack mount type. Thoroughly shielded against inductive pickup with UTC Trialloy Shielding. Dimensions of panel 3½" x 19". Depth 7½". Weight 15 lbs.



TYPICAL CURVES OBTAINABLE WITH 3A OR 3AX EQUALIZER

3A UNIVERSAL EQUALIZER

The 3A equalizer is identical to the 3AX described above, except that it does not incorporate the compensating pads for constant insertion loss. The insertion loss is roughly proportional to the amount of equalization employed. All other characteristics identical with the 3AX unit, this item weighs 10 lbs.



CHARACTERISTICS OBTAINABLE WITH 4C FILTER

4C SOUND EFFECTS FILTER

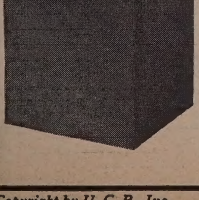
The use of filters to obtain unusual sound effects is now finding wide application in broadcast technique. The **Model 4C** Filter was originally developed for one of the large broadcast chains, and is now used extensively by most broadcast stations. Two controls are provided on the 5¼" x 19" panel, which is similar in appearance to the 3AX unit. The weight of the 4C unit is 20 lbs.

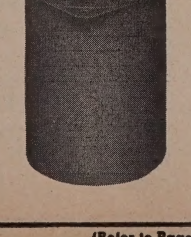
The **low pass** switch can be set for cutoff frequencies of **100, 250, 500, 1000, 2000, 3000, 4000, or 5000 cycles. The high pass** switch has identical frequency points. The great number of cutoff frequencies provides for a wide latitude of tone control. If desired, though not normally necessary, external potentiometers may be inserted in the circuit for attenuation control.

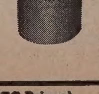
HERMETICALLY SEALED COMPONENTS

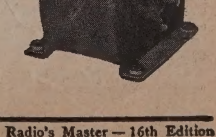
During World War II the United Transformer Company was the largest supplier of transformers to the Armed Services. This same leadership continues in the UTC production of hermetic sealed components for present military applications. Extensive experience in supplying these components for the variety of equipment involved permits us to quickly resolve manufacturers' application problems. A wide range of tools and facilities are available for both standard and miniature types of hermetic sealed units. Standardized cases and terminals specifically designed for military service are available from stock.

For some aircraft and other light weight applications the elimination of the hermetic sealed case is essential. For these designs UTC units are Fosterite impregnated under Westinghouse license



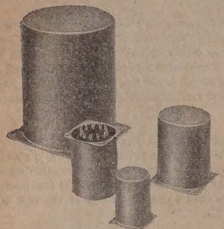






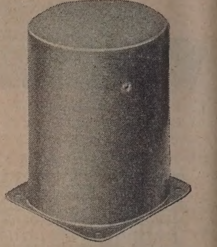
(Refer to Page N-35 for UTC Prices)

COMMERCIAL GRADE COMPONENTS



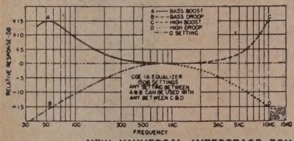
The commercial grade series of transformers incorporate conservative design and rugged construction to assure dependability under continuous service operation in industrial and commercial grade communication equipment. These units are mounted in uniform drawn cases finished in light grey enamel, and intended for chassis mounting. All items are poured with special sealing compound in addition to vacuum impregnation of coil structures. Type numbers are identical with the PA units except for the prefix "CG."

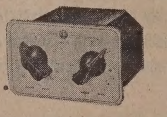
CG-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. All audio components are linear. ± 1½ DB from 40 to 10,000 cycles (no unbalanced D.C.), except CVL and CVM units . . . 40 to 6000 cycles. Parallel feed low level interstage units with 50,000 ohms and .25 mfd. 200 ohm windings on input transformers are balanced and may be used for 150 to 250 ohm circuits.



INPUT, INTERSTAGE, MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

Type No.	Application	Primary Impedance Ohms	Secondary Impedance Ohms	Case No.
CG-131	1 plate to 1 grid	15,000	135,000 3:1 ratio	**RC-50**
CG-132	1 plate to 2 grids	15,000	135,000 centertapped 3:1 ratio overall	**RC-62**
CG-133	2 plates to 2 grids	30,000 P to P	80,000 overall 1.6:1 ratio overall	**RC-75**
CG-134	Line to 1 grid hum-bucking	50, 200, 500	80,000	**RC-50**
CG-135	Line to 2 grids hum-bucking	50, 200, 500	120,000 overall	**RC-50**
CG-235	Line to 1 or 2 grids, hum-bucking; multiple alloy shielded for low hum pickup	50, 200, 500 ohms	80,000 overall	**RC-75**
CG-136	Single plate and low impedance mike or line to 1 or 2 grids hum-bucking	15,000, 50, 200	80,000 overall	**RC-62**
CG-233	PP 6C5, 12AU7, similar triodes to AB 45's, 2A3's, 6L6's, etc.	30,000 P to P	25,000 overall .9:1 ratio overall	**RC-87**
CG-333	PP 6C5, 12AU7, similar triodes to fixed bias 6L6's	30,000 P to P	5,000 overall .4:1 ratio overall	**RC-87**
CG-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000 P to P	1,250 overall .5:1 ratio overall	**RC-100**
CG-137	Mixing	50, 200, 500	50, 200, 500	**RC-50**
CG-140	Triode plate to line	15,000	50, 200, 500	**RC-50**
CG-141	PP triode plates to line	30,000 P to P	50, 200, 500	**RC-50**





NEW UNIVERSAL INTERSTAGE EQUALIZER—CGE-1A

The UTC CGE-1A is the ideal device for any application where frequency response control is desired. Incorporating the latest developments in design and manufacture, this new unit provides the ultimate in control and flexibility. This equalizer is not a simple R-C tone control, but employs resonant circuits in a unique arrangement providing equalization characteristics unobtainable by conventional circuits. Designed to work from a low or medium impedance source (0 to 20,000 ohms) to a high impedance (500,000 ohms or open grid), the CGE-1A affords continuously variable equalization over a 30 DB range at either end of the spectrum, while introducing only 18 DB total insertion loss. (See curve above). Complete independence of high frequency and low frequency controls permits a wide variety of settings without affecting the over-all volume level. Because of its low insertion loss, this unit may be incorporated directly in many amplifiers. If existent gain is low, a single medium-mu triode stage will provide both proper gain and source impedance. (See circuit on centerfold, page C.) The mechanical construction permits mounting with case on panel directly behind controls, or with case separated from controls and panel. An etched, calibrated panel is provided.

CGE-1A Panel Dim. 2⅜" x 3½". Wt. 2 Lbs.

DYNAMIC NOISE SUPPRESSION-INDUCTOR

Incorporates two accurate High Q coils [.8 hy. and 2.4 hy.] for use in dynamic noise suppression circuits. Excellent circuit accompanies unit.

Type CG-50 RC-62 Case

COMMERCIAL GRADE CASE

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Height	Cutout Dia.	Unit Weight (Lbs.)
RC-50	1⅝	1-5/16	2¼	1½	½
RC-62	1-13/16	1½	2½	1½	1
RC-75	2-3/16	1-13/16	2⅞	1⅞	1½
RC-87	2-9/16	2-3/32	3¼	2	2½
RC-100	3	2⅜	3¾	2⅝	3½
RC-112	3-7/16	2-11/16	4⅛	2⅞	5
RC-125	3¾	3	4½	3	6½
RC-150	4½	3-9/16	5½	3¾	11
RC-152	5⅛	4⅛	5½	4	15½
RC-175	5¾	4⅞	7⅛	4	22

OUTPUT TRANSFORMERS

Secondary Impedances: 500, 200, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P.P. Ohms, Overall	Typical Tubes	Max. Watts	Case No.
CG-15	8,000	45, 6F6 triode, 6V6	20	**RC-100**
CG-16	3,000/5,000	2A3, 6A3, 6B4, 6AS7G, 6L6	20	**RC-100**
CG-19	6,000/10,000	6N7, 6F6, 6V6	20	**RC-100**
CG-710	14,000/20,000	6K6, 7B5	20	**RC-100**
CG-2L6	9,000	6L6's, AB1	30	**RC-125**
CG-4L6	3,800/4,500	2-6L6's, AB2 or 4-6L6's AB1	55	**RC-150**

CG VARIMATCH OUTPUTS FOR P. A.

Universal units designed to match **any tubes** within the rated output power, to line or voice coil. Output impedance 500, 200, 50, 16, 8, 5, 3, 1.5 ohms. Primary impedance 3000, 5000, 6000, 7000, 8000, 10,000, 14,000 ohms.

Type No.	Audio Watts	Typical Tubes	Case No.
CVP-1	12	45, 2A3, 6F6, 25L6, 6V6, 6B4	**RC-100**
CVP-2	30	45, 2A3, 6L6, 6V6	**RC-125**
CVP-3	60	50's, 300A's, 6L6's, 801, 807, 1614	**RC-150**
CVP-4	125	800's, 801's, 807's, 4-6L6's, 845's, 4-1614's	**RC-152**
CVP-5	300	211, 242A's, 203A's, 838's, 4-845's, ZB-120's	**RC-175**

CG VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line. More than 50 voice coil combinations can be obtained, as follows:

.2, .4, .5, .62, 1, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5,
5, 5.5, 6, 6.25, 6.6, 7, 7.5, 3, 9, 10, 11, 12, 14, 15,
16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75.

Where speakers are to be connected in groups to one transformer, it is preferable that parallel connection be used to eliminate the possibility of multiple resonance. If two speakers of different impedances are connected in parallel, the lower impedance speaker will develop greater power. If connected in series, the higher impedance speaker will develop greater power.

Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.
CVL-1	15	500 ohms	.2 to 75 ohms	**RC-87**
CVL-2	40	500 ohms	.2 to 75 ohms	**RC-125**
CVL-3	75	500 ohms	.2 to 75 ohms	**RC-150**

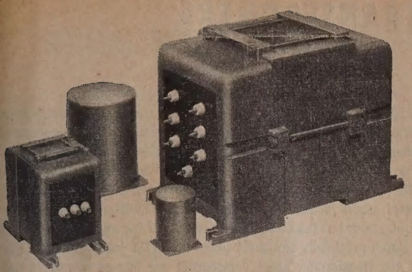
CG VARIMATCH LINE AUTOFORMERS

UTC Varimatch Line Autoformer will match one to ten 500 ohm lines or CVL windings to the 500 ohm output of an audio amplifier. The CVL-10 to 12 autoformers have impedances of 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms.

Type No.	Audio Watts	Case No.
CVL-10	15	**RC-87**
CVL-11	30	**RC-125**
CVL-12	60	**RC-150**

COMMERCIAL GRADE COMPONENTS

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases



CG VARIMATCH MODULATION UNITS

ill match any modulator tubes to any RF load.
ne ever increasing number of vacuum tubes available for audio and RF applications s increased the difficulty of obtaining transformers suitable for matching to the rious correct tube loads. If a standard transformer having a limited impedance nge is purchased and used for a specific purpose as the "nearest thing" available, mparatively high distortion is inevitable. While a 20% mismatch caused by such occurrence does not represent a serious loss in power, it greatly reduces the ndistorted power available from a class B modulator because optimum plate load not reflected to the tubes. The UTC Varimatch transformer eliminates this diffi-lty through the use of a combination of tapped windings affording an extremely de range in impedance matching. Designs provide that for any load impedance nployed, full class C plate current can be carried by secondary winding.

Primary impedances from 500 to 20,000 ohms
Secondary impedances from 30,000 to 300 ohms

pe No.	Max. Audio Watts	Max. Class C Input	Typical Modulator Tubes	Case No.
'M-0	12	25	2A3, 6B5	RC-100
'M-1	30	60	6V6, 2A3, 6L6, 210	RC-125
'M-2	60	125	801, 6L6, 809, 4-46, T-20, 1608	RC-150
'M-3	125	250	800, 807, 845, TZ-20, RK-30, 35-T	RC-152
'M-4	300	600	50-T, 203A, 805, 838, T-55, ZB-120	RC-175
'M-5	600	1200	805, HF-300, 204A, HK-354, 250TH	7x12x9H 60 lbs.

G VARIMATCH DRIVER TRANSFORMERS

pe No.	Primary	Typical Output Tubes	Case No.
-51AX	All single tubes like: 6C5, 6C4, 12AU7, 45, 2A3	2A3, 45, 6L6	RC-87
-53AX	P. P. tube like: 45, 2A3, 6L6, 6B4	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 838, 805, 50T, 830B	RC-112
-59AX	50, 200, 500 ohm line	805, 838, 203A, ZB-120, 100TH, 800, 55T, RK-18	RC-112
-238AX	4-2A3, 4-45, 4-50, 2-211A, 2-845	4-805's, 4-838's, 4-203A's, 2-204's, 2-849's, 2-HF300's, 2-HF200's, 2-250TH's, 2-450TH's	RC-150
-512	50, 200, 500 ohm line	2-250TH, 2-450TH, 2-HF200, 2-HF300, 2-204A, 2-849	RC-150

VARIPOWER AUTO-FORMERS

pe).	Watts Output	Case No.
\-1	150	RC-112
\-2	250	RC-125
\-3	500	RC-150
\-4	1000	RC-152
\-5	2000	RC-175

Designed for line voltage control, filament control and reduced power operation. Output voltage from 0 to 130 volts, 50/60 cycles. Varipower units permit control of filament voltage at the tube socket to within 2½% of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 130 volts in 5 volt steps.

POWER AND BIAS TRANSFORMERS

Primary 115 volts 50/60 cycles

e .	High Voltage	DC MA.	Fil. 1	Fil. 2	Fil. 3	Fil. 4	Case No.
422	435-365-0-365-435 125-0-125	125 25	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	RC-150
428	500-0-500 80-0-80	250 100	5V-3A	5V-2A	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152
429	600-525-0-525-600	250	5V-3A	6.3 VCT-3-A	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152
431	500-400-0-400-500 80-0-80	500 100	5V-6A	5V-2A	6.3 VCT-5A	6.3 VCT-3A	RC-175
115	Tapped for any DC voltage from 15 to 100 volts within 6% — 250 MA						RC-125
116	Tapped for any DC voltage from 75 to 400 volts within 6% — 250 MA						RC-152

CG PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power, secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V. Pri. is used on 110 volts. Secondary voltage is simultaneously halved.

Type No.	High Voltage	DC Voltage	DC MA	Case No.
CG-300	625-515-0-515-625	500/400	200	RC-150
CG-301	580-530-300-0-300-530-580	475/425/250	420	RC-152
CG-302	950-750-0-750-950	760/610	360	RC-175
CG-303	1500-1235-400-0-400-1235-1500	1250/1000 300	260* 175	RC-175

* 300MA, if used without load on low voltage winding.

TYPE EC CASE UNITS

Type No.	High Voltage	DC Voltage	DC MA	L	W	H	Wt. Lbs.
CG-304	1500-1235-0-1235-1500	1250/1000	800	15	8½	10⅜	100
CG-305	2400-1750-0-1750-2400	2000/1500	300	10½	4¾	6⅞	50
CG-306	2400-1750-0-1750-2400	2000/1500	500	15	8½	10⅜	100
CG-307	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	300	14½	8½	10⅜	90
CG-308	3500-3000-2400-0 2400-3000-3500	3000/2500 2000	500	16½	8½	10⅜	125
CG-309	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	1000	21	10	13¼	185
CG-310	4600-4050-3500-0-3500-4050-4600	4000/3500 3000	600	19	10	13¼	150
CG-311	1500-1235-0-1235-1500	1250/1000	500	10½	4¾	6⅞	50
CG-312	1800-1500-0-1500-1800	1500/1250	400	10½	4¾	6⅞	50

FILTER CHOKES

INDUCTANCE SHOWN IS AT RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-40	10	200	110	1750	RC-112
CG-41	4-20	200	110	1750	RC-112
CG-44	30	100	400	1750	RC-100
CG-45	250	15	5000	1750	RC-87
CG-48C	75	50	2200	1750	RC-87
CG-100	12	150	110	2500	RC-125
CG-102	12	250	100	3000	RC-150
CG-104	10	350	90	5000	RC-152
CG-108	10	500	52	7000	RC-175
CG-1S	10	1000	40	9000	11½x4¾x 6⅞ H, 60 lb.

SWINGING INPUT CHOKES

INDUCTANCE SHOWN IS FROM 100% TO 10% OF RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-101	5-25	150	110	2500	RC-125
CG-103	5-25	250	100	3000	RC-150
CG-105	5-25	350	90	5000	RC-152
CG-109	5-25	500	52	7000	RC-175
CG-1C	5-25	1000	40	9000	11½x4¾x 6⅞ H, 60 lb

FILAMENT TRANSFORMERS

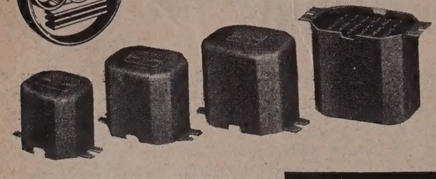
Primary for 105, 115, 220, 230 volts, 50/60 cycles. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

* Two Windings.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Test Voltage	Case No.
CG-33	6.3	4	500	2000	RC-75
CG-34	2½	10	2500	6000	RC-112
CG-120	2½	10	5000	11000	RC-125
CG-121	5	25	5000	11000	RC-150
CG-122	7.5/6.3	10	1500	4000	RC-125
CG-124	10	10	1500	4000	RC-150
CG-125	14/12/11	10	1500	4000	RC-150
CG-126	*14/11/10 14/11/10	10 10	1500	4000	RC-152

(Refer to Page N-35 for UTC Prices)

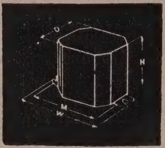
SPECIAL SERIES AUDIO TRANSFORMERS



UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated—compound filled.

CASE SIZES

Type No.	H	W	D	M	Wt. Lbs.
G-1	1⅞	2-13/16	1¾	2⅜	1
G-2	2-5/16	3⅜	1-15/16	2⅞	1½
G-3	2½	3¾	2-5/32	3¼	2
G-4	2-15/16	4⅛	2-5/16	3⅝	3



CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	3½:1	G-2
S-2	1 plate* to 2 grids	2:1 4:1	G-2
S-3	1 plate* to 1 or 2 grids compact type	2:1	G-1
S-4	1 plate* to 2 grids wide range response	1:1	G-3
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1
S-7	Single plate* and carbon mike to one or two grids	3:1 16:1	G-2

* Will match tubes like 6J5, 6C4, 12AU7, etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS

(See Modulator chart for tube types)

Type No.	Application	Case
S-8	Single driver plate to pushpull grids	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output	G-4
S-10	Pushpull 56, 6C6 triode, 6C5, or similar plates to 45's, 2A3's or 6L6's, self or fixed bias	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 6J5, 6C4, 12AU7 or similar tube to line	15,000	200/500	G-2
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

(Secondary Impedances: 500, 15, 8, 2 ohms)

Type No. Max. Watts	Primary Impedance	Typical Tubes	Class	Case
	Single Tubes:			
	2500 ohms	2A3, 6A3, 6A5, 6B4, 6L6, 6Y6, 25L6, 35L6	A	G-2
S-14	4000 ohms	45, 6V6, 12A6	A	
10 W.	7000 ohms	42, 47, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	
	10,000 ohms	37, 38, 41, 1G5, 3C5, 6A4, 6N7	A	
	P. P. Tubes:			G-2
	4000 ohms	6Y6, 25L6	AB	
S-15	5000 ohms	45, 2A3, 6A3, 6A5, 6B4, 6AS7	AB	
12 W.	10,000 ohms	1H4, 6AC5G, 6B5, 19, 6A6, 6N6, 6N7, 6Y7	AB B	
S-16	3000 ohms	45, 2A3, 6A3, 6A5, 6B4, 25L6	AB	G-4
30-W.	6000 ohms	2A5, 6F6 triodes, 6AS7, 46, 6A6, 6N7	AB B	
	9000/10000 ohms	45, 2A5, 6AC5, 6B5, 6F6, 6L6, 6V6, 807-triode	AB	
S-17	3800 ohms	6L6's	AB2	G-5
55 W.	4500/5000 ohms	4—6L6's 46, 1608, 809	AB1 B	

UNIVERSAL MODULATION TRANSFORMERS

Secondary carries class C current
Any modulator tubes to any RF load. (See chart)

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

TYPICAL MODULATOR COMBINATIONS

S-18—12 WATTS MAX.

DRIVER TUBES: In the combinations shown below, typical suitable driver tubes are: 6C5, 6E6, 6N7, 6J5, 6C4, 12AU7, 6P5, 6J7-TR, 6SJ7-TR.

DRIVER		MODULATOR STAGE				
Transf.	Sec. Term.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
S-2	G-G	6E6	1.6	14,000	250	27
S-8	G-G	19, 1J6G	2.1	10,000	135	0
S-8	G-G	49	3.5	12,000	180	0
S-2	G-G	25L6	4	4,000	110	7.5
S-8	G'-G'	6Z7G	4.2	12,000	180	0
S-2	G-G	6Y6G	7	4,000	135	13.5
S-8	G-G	6Y7G	8	14,000	250	0
S-8	G'-G'	6AC5G	8	10,000	250	0
S-8	G'-G'	6A6, 6N6, 6N7	10	10,000	300	0
S-2	G-G	2A3, 6A3, 6A5G, 6B4G	10	5,000	325	750 ohms
S-8	G-G	45	10	5,000	275	770 ohms
S-2	G-G	6AS7G	10	5,000	250	1,250 ohms
		SINGLE TUBES				Pri. Load
S-1	F-G	43, 45, 71A, 25A6, 25A7 46, 6V6 42, 46, 47, 49, 2A5, 6F6, 6B5 10, 41, 32, 6G6, 6K6 38, 12A7				4,000 ohms 6,000 ohms 7,000 ohms 10,000 ohms 14,000 ohms

S-19—30 WATTS MAX.

(6J5, 6C4, 12AU7, etc. may be substituted for 6C5 tubes)

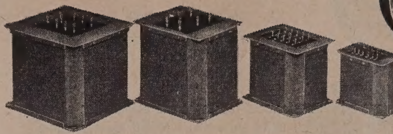
	DRIVER		MODULATOR STAGE				
Tube or Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
6C5	S-10	G-G	6V6	13	8,000	300	20
6C5	S-10	G-G	2A3, 6A3, 45, 6A5G, 6B4G	15	3,000	325	68
6C5	S-10	G-G	2A5, 6F6 Pentode AB	10	10,000	375	340 ohms
2A5	S-8	G-G	2A5, 6F6, triode AB	18	6,000	350	38
89	S-8	G'-G'	6A6, 6N6, 6N7	19	5,000	300	0
45	S-8	G-G	10, 1602	25	8,000	425	50
45	S-8	G'-G'	46	25	6,000	425	0
45	S-8	G'-G'	841	28	7,000	425	5
6C5	S-10	G-G	6L6 self bias	30	9,000	400	2

S-20—55 WATTS MAX.

	DRIVER				MODULATOR STAGE				
P.P. Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts O'tp't	P.P. Load	Plate Volts	Plate Tr'sf.	Bias Volts	Bias Trsf.
2A3	S-9	1-1	801	45	10000	600	S-45	75	S-5
2A3	S-9	3-3	1608	50	5000	425	S-44	15	S-5
2A3	S-9	1-1	T-20	50	8000	600	S-45	30	S-5
Single 45	S-8	G'-G'	4-46, 59	56	3000	425	S-44	0	
6C5	S-10	G-G	6L6, AB2	60	3800	400	S-39	25	S-5
6C5	S-10	G-G	4-6L6	60	4500	400	S-40	23	
2A3	S-9	3-3	809	60	5000	500	S-41	0	

SPECIAL SERIES POWER EQUIPMENT

UTC Special Series power supply components are designed specifically for amateur and popular-priced PA service. The ratings are based on such applications and recommended for ICAS intermittent use. For commercial application, GG or LS grade components should be employed. Tapped coil structures on power and bias supply transformers afford maximum flexibility, permitting a given transformer to be used with many circuits and types of tubes. Stand by service should not be obtained by interrupting high voltage center tap.



S-21—115 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
2-2	TZ-20	70	12000	800	S-46	0	
1-1	T-20	70	12000	800	S-46	40	S-51
*	845	75	4600	1000	S-47	175	S-52
1-1	807	80	6600	600	S-45	30	S-51
1-1	800, RK-30	100	12000	1000	S-47	55	S-51
3-3	809	100	8400	750	S-45	5	S-51
2-2	825	100	6600	850	S-46	30	S-51
2-2	TZ-40	100	6000	750	S-45	0	
2-2	T-756	100	7000	850	S-46	30	S-51
1-1	50-T	100	8000	1000	S-47	90	S-51
2-2	RK-18	100	12000	1000	S-47	50	S-51
1-1	HK-354	100	15000	1000	S-47	60	S-51
*	845	105	8800	1250	S-47	225	S-52
3-3	RK-31	110	14000	1000	S-47	0	
1-1	4-6L6	110	2000	400	S-44	25	S-51
2-2	35-T	115	11000	1000	S-47	30	S-51

* Reverse S-9 transformer using terminals 1-1 for plates and P.P. for grids.

S-22—250 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
3-3	RK-31	140	17000	1250	S-47	0	
*	50 T	250	20000	2000	S-50	180	S-52
*	50 T	160	17000	1500	S-49	140	S-52
2-2	TZ-40	175	6800	1000	S-47	0	
1-1	T-55	175	6900	1000	S-47	40	S-51
1-1	T-55	225	9400	1250	S-47	50	S-51
2-2	HF-100	250	12000	1500	S-49	52	S-51
2-2	100 TH	250	7200	1250	S-47	0	
§	100 TL	230	7200	1250	S-47	112	S-52
2-2	ZB-120	150	4800	750	S-45	0	
2-2	ZB-120	245	9000	1250	S-47	0	
*	HK-154	225	11400	1250	S-47	210	S-52
1-1	203 A	250	9000	1250	S-47	45	S-51
3-3	203 Z	200	6900	1000	S-47	0	
1-1	211	200	6900	1000	S-47	77	S-51
1-1	211	250	9000	1250	S-47	100	S-51
1-1	HK-354	220	15000	1500	S-49	100	S-51
2-2	808	190	12700	1250	S-47	15	S-51
2-2	830 B	175	7600	1000	S-47	35	S-51
2-2	838	250	9000	1250	S-47	0	

* Reverse S-9, using 2-2 for plates and P-P for grids.
§ Reverse S-9, using 1-1 for plates and P-P for grids.

FILAMENT TRANSFORMERS

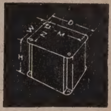
Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Insulation	Case No.
S-53	2.5 VCT	10 A.	1500 V.	G-3
S-54	5 VCT	4 A.	2500 V.	G-3
S-55	6.3 VCT	3 A.	1500 V.	G-3
S-56	7.5 VCT	3 A.	1500 V.	G-3
S-57	2.5 VCT	10 A.	10,000 V.	G-5
S-58	2.5 VCT	20 A.	10,000 V.	G-5
S-59	5 to 5.25 VCT	13 A.	5000 V.	G-5
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7
S-61	7.5 VCT tapped 6.3 VCT	10 A.	3000 V.	G-5
S-62	10 VCT	10 A.	3000 V.	G-5
S-63	14 VCT tapped 12 Vct and 11 VCT	10 A.	5000 V.	G-7

Type No.	Fil. 1	Fil. 2	Fil. 3	Insulation	Case No.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3000 V.	G-5
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3000 V.	G-5
S-66	2.5 VCT-10A	7.5 VCT-6.5A		3000 V.	G-5
S-67	5 VCT-6A	6.3 VCT-5A		3000 V.	G-5
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	3000 V.	G-5
S-69	6.3 VCT-3A	7.5 VCT-6.5A		3000 V.	G-5
S-70	6.3 VCT-5A	6.3 VCT-5A		3000 V.	G-5
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10000 V.	G-7
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	5000 V.	G-5

CASE SIZES

Type No.	H	W	D	M	N	Wt. Lbs.
G-5	3¾	3⅛	4½	3⅞	2-7/16	4½
G-7	4⅝	4⅝	5½	4-27/32	3-25/32	8
G-8	4⅝	5⅜	5⅜	4-25/32	4¾	12
G-9	5⅞	5⅜	6¾	6-3/32	4-19/32	21
G-10	5⅞	6⅛	6⅝	5-15/16	5-13/32	24
G-11	5⅞	6½	7⅜	6-21/32	5-29/32	31
G-12	10¼	7⅜	9¼	8½	6⅝	52



COMBINED PLATE AND FILAMENT UNITS

Primary 115 V.—50/60 Cycles

Type No.	Voltage	D.C. Voltages*	Rectifier Fil.	Fil. No. 1	Fil. No. 2	Case No.
S-39	490-400-0-400-490 175 Ma.	400/310	5 V.-3A	2.5 V.C.T. -6A	6.3 V.C.T. 4A	G-7
S-40	525-425-0-425-525 250 Ma.	400/310	5 V.-3A	6.3 V.C.T. -3A	6.3 V.C.T. 3A	G-7
S-41	600-0-600 200 Ma.	475	5 V.-3A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 2A	G-7
S-42	600-525-0-525-600 300 Ma.	480/400	5 V.-6A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 3A	G-8
S-43	525-0-525 450 Ma. 40-0-40, 200 Ma.	400	5 V.-3A 5 V.-6A	6.3 V.-3A -2A	6.3 V.C.T. 5A	G-9

* Based on two section filter, choke input.

PLATE TRANSFORMERS — BIAS TRANSFORMERS

Primary 115 V.—50/60 Cycles

Type No.	High Voltage	DC Voltages*	DC Current	Case No.
S-44	575-525-0-525-575	470/430	500 Ma.	G-9
S-45	900-750-0-750-900	750/620	200 Ma.	G-8
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9
S-74	1175-500-0-500-1175 Duplex rectifier	1000 400	†150 Ma. ‡150 Ma.	G-10
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-12
S-51	Will supply any bias voltage from 15 to 100 volts DC within approximately 6% of desired value.		200 Ma.	G-5
S-52	Will supply any bias voltage from 75 to 400 volts DC within approximately 6% of desired value.		200 Ma.	G-7

* Based on two section filter for 200 Ma. and 300 Ma. units, single section filter for 500 Ma. units, both choke input.
† 200 Ma. if used alone ‡ 300 Ma. if used alone

FILTER, SWINGING, AND AUDIO CHOKES

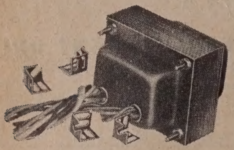
Type No.	Service	Inductance	Current	Resistance	Insulation	Case No.
S-23	Audio	450 Hy.	5 Ma.	5000 ohms	1500 V.	G-2
S-24	P.P. Choke	500 Hy. C.T.	3 Ma.	400 ohms	1500 V.	G-2
S-25	Filter	30 Hy.	30 Ma.	800 ohms	1500 V.	G-2
S-26	Filter	15 Hy.	60 Ma.	250 ohms	1500 V.	G-2
S-27	Filter	30 Hy.	75 Ma.	350 ohms	1500 V.	G-4
S-28	Filter	20 Hy.	100 Ma.	350 ohms	1500 V.	G-4
S-29	Filter	10 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-30	Swinging	5 25 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-31	Filter	20 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-32	Swinging	5/25 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-33	Filter	20 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-34	Swinging	5 25 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-35	Filter	20 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-36	Swinging	5 25 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-37	Filter	20 Hy.	550 Ma.	60 ohms	6000 V.	G-8
S-38	Swinging	5/25 Hy.	550 Ma.	60 ohms	6000 V.	G-8

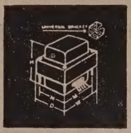
REPLACEMENT TYPE COMPONENTS

(PREVIOUS POWER TRANSFORMERS TYPE R-1 THRU R-13 AND R-54 WILL BE AVAILABLE UNTIL 1951)

The UTC replacement type transformers represent the culmination of years of development in this field. All units are vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells and brackets are finished in attractive high lustre black enamel.

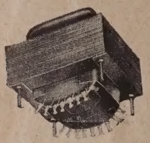
The UTC shells and universal brackets employed make possible a latitude in mounting dimensions never approached heretofore. A minimum number of transformers have been developed to cover any requirement in the replacement field. Pri. 117V. 50/60 cycles.

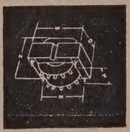




DOUBLE SHELL TYPE

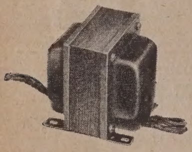
The universal feet may be used for upright or horizontal mounting, or eliminated for flush mounting.

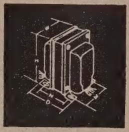




SINGLE SHELL TYPE

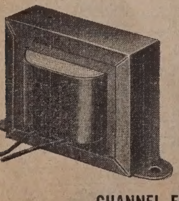
UTC flush type transformers are husky units designed for low temperature rise and good regulation. The rugged solder terminals permit ease of circuit change for the experimenter.

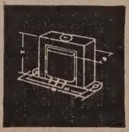




VERTICAL SHELL TYPE

UTC vertical power transformers are unusually attractive in appearance, having smooth drawn cases finished in high lustre black enamel.





CHANNEL FRAME TYPE

Channel frame chokes and audios are conservatively designed. Standard black enamel mounting channels are employed. Coils are tropic-sealed by vacuum-pressure method.

DOUBLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-101	275-0-275	50	5V-2A.	6.3V CT-2.7A	3	2½	2¾	2½	2-1/16	2½
R-102	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅜	2½	2-1/16	3½
R-103	350-0-350	90	5V-3A.	6.3V CT-3.5A.	3⅜	2⅞	3⅜	2-13/16	2¼	4½
R-104	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅜	3⅛	2½	5½
R-105	385-0-385	160	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅞	3⅛	2½	7

SINGLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-106	300-0-300	50	5V-2A.	6.3V CT-2.7A	3	2½	3	2½	2-1/16	2½
R-107	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅝	2½	2-1/16	3½
R-108	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅝	3⅛	2½	5½
R-109	400-0-400	200	5V-3A.	6.3V CT-6A.	4½	3¾	4	3¾	3	8

VERTICAL SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-110	300-0-300	50	5V-2A.	6.3V CT-2.7A	2½	2½	3¼	2	1¾	2½
R-111	350-0-350	70	5V-3A.	6.3V CT-3A.	2½	3⅛	3¼	2	2⅜	3½
R-112	350-0-350	120	5V-3A.	6.3V CT-5A.	3¼	3⅝	4	2½	2½	5½
R-113	400-0-400	200	5V-3A.	6.3V CT-6A.	3⅞	4¼	4⅝	3	3⅛	8

CHANNEL FRAME FILTER CHOKES

Inductance Shown Is at Rated D.C.M.A.—Insulation Test: 1750 Volts

Type No.	Induct. Hys.	Current	Resistance Ohms	Dimensions, Inc. W	D	H	M	Lbs.
R-55	6	40MA	300	2½	1⅜	1⅜	2	½
R-14	8	40MA	250	2⅞	1⅜	1-11/16	2⅜	¾
R-15	12	30MA	450	2⅞	1⅜	1-11/16	2⅜	¾
R-16	15	30MA	630	2⅞	1⅜	1-11/16	2⅜	¾
R-17	20	40MA	850	3-5/16	1⅝	2	2-13/16	1
R-18	8	80MA	250	3-5/16	1⅝	2	2-13/16	1
R-19	14	100MA	450	3¾	1¾	2-5/16	3⅛	1½
R-20	5	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-21	3/15	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-22	120	5MA	4000	3-5/16	1⅝	2	2-13/16	1

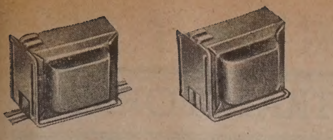
FILAMENT TRANSFORMERS

CHANNEL FRAME TYPE

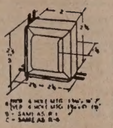
Pri. 115 V. 50/60 Cycles—1500 V. Breakdown

Type No.	Secondary	Dimensions, Inches W	D	H	M	Wt. Lbs.
FT-1	2.5 V.C.T.-3A	2⅞	1⅜	1-11/16	2⅜	¾
FT-2	6.3 V.C.T.-1.2A	2⅞	1⅜	1-11/16	2⅜	¾
FT-3	2.5 V.C.T.-6A	3-5/16	1⅝	2	2-13/16	1
FT-4	6.3 V.C.T.-2.5A	3-5/16	1⅝	2	2-13/16	1
FT-5	2.5 V.C.T.-10A	3¾	1¾	2-5/16	3⅛	1½
FT-6	5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-7	7.5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-8	6.3 V.C.T.-6A	4⅛	2¼	2⅝	3-9/16	2½
FT-9	2.5V CT-10A. 10000V. Test	4⅛	2¼	2⅝	3-9/16	2½
FT-10	24V CT-2A. or 12V-4A.	4⅛	2¼	2⅝	3-9/16	2½

(Refer to Page N-35 for UTC Prices)



Varitap Duplicate audio units are extremely attractive, the double shells and universal mounting brackets being finished in high lustre black enamel. The figure A units use the UTC universal bracket. This bracket makes possible four hole horizontal or vertical mounting and two hole, channel type, horizontal or vertical mounting. The coils of these units, in addition to efficient design and mechanical shielding, are vacuum impregnated and sealed with a special compound to assure complete protection against adverse climatic conditions.



SHIELDED UNIVERSAL MOUNTING AUDIO TRANSFORMERS AND FILTER CHOKES

Type No.	Application	Description	Fig.	Wt. Lbs.
R-23	1 plate* to 1 grid	3½:1 ratio	A	1
R-24	1 plate* to 2 grids	2:1 ratio	A	1
R-25	2 plates* to 2 grids	1.5:1 stepup for class A triodes, 1.5:1 stepdown for 6L6's, 2A3's, 2A5's, etc.	A	1¼
R-26	Driver, 1 plate to 2 grids	Single 42, 2A5, 6F6, 45, 46	A	1¼
R-27	15 watt Universal Output	All tubes up to 15 watts to any voice coil from .1 to 30 ohms	A	1¼
R-28	35 watt Universal Output	All tubes up to 35 watts to any voice coil from .1 to 30 ohms	B	2½
R-29	Mike to grid	Single or double button mike or line to 1 grid	A	1¼
R-30	Filter choke	13 Hys—250 MA—100 ohms	C	7
R-31	Filter choke	10 Hys— 80 MA—250 ohms	A	2½
R-32	Filter choke	10 Hys—150 MA—100 ohms	B	2¼

* Will match tubes like 27, 37, 56, 6C6 triode, 6C5. Can be used with high mu triodes with loss in low frequencies.

CHANNEL FRAME AUDIO TRANSFORMERS

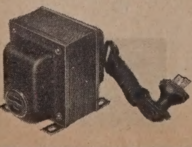
Type No.	Application	Description	Dimen., Ins. W	D	H	M	Wt. Lbs.
R-33	1 plate* to 1 grid	4:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-34	1 plate* to 2 grids	2:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-35	Mike to 1 grid	17:1 ratio Pri. C.T.	2⅞	1⅜	1-11/16	2⅜	¾
R-90	Intercomm. speaker to grid	4 ohm to 40,000 ohm grid	2½	1⅜	1⅜	2⅛	½
R-53	Plate & mike to grid	3:1 and 17:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-56	1 plate to 2 grids	2:1 ratio	3-5/16	1⅝	2	2-13/16	1
R-57	1 plate to 2 grids	2½:1 ratio	4⅛	2	2⅝	3-9/16	2½
R-36	Driver	30, 49, etc. to class B 19, 49, 79, 89 grids	2⅞	1⅜	1-11/16	2⅜	¾
R-37	R.F. Output	Class B 19, 49, 79, 89 plates to 3500 and 5,000 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-58	5 watt Universal output	Any single tube to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-38A	6 watt Universal	Any tubes up to 6 watts to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-59	10 watt Universal	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-60	15 watt Universal	Any tubes up to 15 watts to any voice coil, .1 to 30 ohms	3-5/16	1⅝	2	2-13/16	1
R-39	10 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-40	25 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	4⅛	2¼	2⅝	3-9/16	2½

* Will match tubes like 27, 37, 56, 6C6 triodes, 6C5. Can be used with high mu triodes with loss in low frequencies.

STEP DOWN AUTO-TRANSFORMERS

With 6 foot cord and female receptacle 220-240 to 110-120 Volts—50/60 Cycles

Type No.	Application	Wgt. Lbs.
R-41	85 watt capacity	4
R-42	125 watt capacity	5
R-43	175 watt capacity	5½
R-44	250 watt capacity	6½
R-45	500 watt capacity	12
R-46	1200 watt capacity	18
R-64	2500 watts, no cord	30

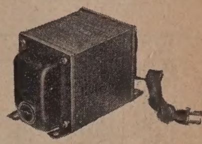


ISOLATION TRANSFORMERS

Ideal for isolating line noise, AC-DC sets, etc Excellent electrostatic shielding. 1500 volt breakdown test. Six foot cord and female receptacle.

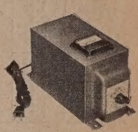
Primary 110-120 volts, 50/60 cycles—Secondary 110-120 volts

Type No.	Rating	Wgt. Lbs.
R-72	40 watts	4
R-73	100 watts	6
R-74	250 watts	12
R-75	600 watts	20
R-76	1200 watts	30
R-77	2500 watts (no-cord)	70



LINE VOLTAGE ADJUSTERS WITH METER

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage.



These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine tap switch provides for line voltages of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output models.

All units are designed for 50/60 cycle service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts	Wt. Lbs.
R-78	60, 70, 80, 90, 100, 110, 120, 130, 140	115	150	6
R-79	60, 70, 80, 90, 100, 110, 120, 130, 140	115	300	9
R-80	60, 70, 80, 90, 100, 110, 120, 130, 140	115	600	13
R-81	60, 70, 80, 90, 100, 110, 120, 130, 140	115	1200	21
R-83	160, 170, 180, 190, 200, 210, 220, 230, 240	230	150	6
R-84	160, 170, 180, 190, 200, 210, 220, 230, 240	230	300	9
R-85	160, 170, 180, 190, 200, 210, 220, 230, 240	230	600	13
R-86	160, 170, 180, 190, 200, 210, 220, 230, 240	230	1200	21

EXPORT VOLTAGE ADAPTER

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115. Similar in appearance to above but without meter.

Type No.	Rating	Wgt. Lbs.
R-47	85 watts	4½
R-48	150 watts	5½

PHOTO FLASH TRANSFORMERS

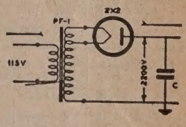
Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash bulbs. Circuit details included with transformer.

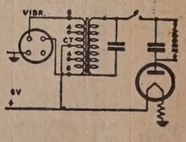
PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 case 2⅛ x 2¾ x 2½ inches high. Weight 2 Lbs.

PF-2 For portable service. Primary tapped for 4 volt or 6 volt battery (full wave vibrator). Secondary for power supply delivering 2200 volts DC to condenser up to 60 Mfd. Compound sealed in G-3 case. Weight 2 Lbs.

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D. x 3" long. Weight 2 Oz.

PF-4 Dual Pri. for either 4V battery or 115V 50/60 cycles. Secondary for power supply delivering 900 volts DC to condenser up to 150 Mfd. G-3 case, 2 Lb.





TELEVISION TRANSFORMERS

These components are quality designs, vacuum impregnated and fully compound sealed in heavy steel cases affording a high degree of shielding.

Type No.	Application	Case	Wt. Lbs.
R-91	Horizontal oscillator (15750 cycles)	RC-50	1
R-92	Vertical oscillator (60 cycles)	RC-50	1
R-93	Vertical output, tapped for different tubes	RC-100	4
R-94	Horizontal output (special core), tapped for adjustment	RC-100	4
R-95	2800 vac (4000V-2MA DC) 2.5V-1.8A., 6.3V-.6A tapped 2.5V-2.1A. 7000 V test	RC-125	5

(Refer to Page N-35 for UTC Prices)

HALLDORSON *Vacuum Sealed* TRANSFORMERS

4500 RAVENSWOOD AVENUE
CHICAGO, ILLINOIS, U. S. A.

CHOKES

Item No.	Dealer Net	D.C. Res.	Henries	M.A. D.C.	Mtg. Type	Wt. Lbs.
A4-838	$1.68	5000	300	5	A4	1
T-1225	1.89	3000	60	16	B8	1⅛
T-341	1.23	400	12	30	D4	6 oz.
T-343	.96	200	5.5	35	D4	6 oz.
T-1001	1.23	400	12	40	A4	10 oz.
B4-837	1.59	400	15	40	B4	1
T-1002	1.29	300	8	50	A4	10 oz.
T-334	1.23	250	5	50	A4	10 oz.
C4-968	2.31	1400	50	60	C4	1½
B4-839	1.59	275	10	60	B4	1
C4-967	2.13	350	20	80	C4	1⅓
C4-966	2.31	250	8	85	C4	1½
B4-842	1.80	300	5	100	B4	1
E-1030	2.79	250	23	110	E	2½
E-1034	3.78	100	8	130	E	2½
S-246	3.69	100	4	175	S	3½
E-1033	4.59	125	8	200	E	3¾
S-240	5.67	150	15	200	S	5½
S-243	5.46	70	4	250	S	5
S-244	7.62	75	7	300	S	8½
S-242	10.05	150	15	350	S	11
S-241	11.70	60	8	400	S	13
S-252	3.99	130	5-10	150	S	3
S-251	5.31	65	5-8	250	S	3½
C4-216	2.13	200	2	60	C4	1½

TELEVISION TRANSFORMERS

Item No.	Dealer Net	Plate A.C. Load V.	D.C. M.A.	Filament Volt	Filament Amp.	Filament Volt	Filament Amp.	Mtg. Type	Wt. Lbs.
L-211	14.19	365-O-365	250	5	2	5	3	L2	13½
						6.3	.8		
						6.3	6		
L-212	17.16	365-O-365	295	5	2	5	6	L2	17
						12.6	5 C.T.		
L-218	6.42	230-O-230	90	5	2	6.3	5.3	L	4½
L-219	15.09	365-O-365	195	5	3	6.3	.6	L3	11½
		229-O-229	105	5	2	6.3	8.25		
				5	2				
L-221	10.89	375-O-375	205	5	3	6.3	5.6 CT	L	9
				5	2				
L-225	15.00	360-O-360	250	5	2	6.3	2.7	L	14
				5	3	6.3	9		
S-227	9.90	335-O-335	175	5	2	6.3	1.2	S	8
						6.3	7		
L-228	15.00	400-O-400	220	5	3	6.3	2.6	L	15
		212-O-212	90	5	3	6.3	10		
				5	2				
L-232*	16.50	332-O-332	180	5	3	6.3	1.2	L	12
		207-O-207	70			6.3	9		
L-233*	13.50	360-O-360	180	5	3	6.3	9	L	8
S-90	8.73	330-O-330	200	5	3	6.3	5.0 CT	S	10
L-68	6.90	350-O-350	120	5	3	6.3	4.5 CT	L	6½
J-96	4.29	Vertical Output Trans.						J	2¾
D4-611	2.04	Hor. Block. Oscillator Trans.						D4	½
D4-612	1.83	Vert. Block. Oscillator Trans.						D4	½
N-613	2.13	Vert. Block. Oscillator Trans.						N5	½
D4-617	1.20	Pri.—7600 Sec. 3.2 Output—5 Watts						D4	¾
T-1005	2.04	1 hy. @ 300 M.A. 45 ohms D.C.R.						C4	1¾
T-1006	1.86	2.3 hy. @ 150 M.A. 60 ohms D.C.R.						B4	1
T-1007	1.83	2.5 hy. @ 130 M.A. 100 ohms D.C.R.						B4	1
TV-10	7.83	"Flyback" for R.C.A. 211T1 Type sets							2½
TV-14	7.05	"Flyback" for G.E. 77J1 Type sets							2½

* Includes Rectifier Tube Socket.

POWER TRANSFORMERS

Item No.	Dealer Net	Plate A.C. Load Volts	D.C. M.A.	Rect. Fil. Volt	Rect. Fil. Amp.	Amp. Fil. Volt	Amp. Fil. Amp.	Mtg. Type	Wt. Lbs.
L-48	$3.72	325-O-325	40	5	3	2.5	1.75	L	2½
						2.5	3.5		
L-476X	4.59	250-O-250	40	5	2	6.3	1.6 C.T.	L	2½
M-44	4.59	225-O-225	40	5	2	6.3	1 C.T.	M	2½
S-49	4.20	325-O-325	40	5	2	2.5	5.2 C.T.	S	2½
L-85	4.80	280-O-280	50	5	3	6.3	1.5	L	3½
						6.3	.6		
L-60	6.18	325-O-325	50	5	3	2.5	1.75 C.T.	L	5
						2.5	5.25		
S-66	4.80	325-O-325	50	5	3	6.3	2 C.T.	S	3¾
S-660	5.22	325-O-325	50	5	3	2.5	1.75 C.T.	S	3½
						6.3	1.9 C.T.		
						2.5	5.25 C.T.		
L-45A	5.76	300-O-300	60	6.3	.6	6.3	2.8 C.T.	L	3½
L-46	5.94	300-O-300	60	5	3	2.5	7.5 C.T.	L	4½
						6.3	2.5 C.T.		
M-21	4.80	250-O-250	60	5	2	6.3	2 C.T.	M	2½
P-2067	4.32	240-O-240	60			6.3	2.75 C.T.	P	2.5
S-61	5.82	350-O-350	60	5	3	2.5	7.0 C.T.	S	5

POWER TRANSFORMERS—Continued

Item No.	Dealer Net	Plate A.C. Load Volts	D.C. M.A.	Rect. Fil. Volt	Rect. Fil. Amp.	Amp. Fil. Volt	Amp. Fil. Amp.	Mtg. Type	Wt. Lbs.
L-20	$5.31	350-O-350	70	5	3	6.3	2.5 C.T.	L	4½
S-51	5.88	350-O-350	70	5	3	2.5	10 C.T.	S	5
L-82	6.54	265-O-265	70	5	3	5	.5 C.T.	L	5
						2.5	11 C.T.		
S-67	5.58	350-O-350	70	5	3	6.3	3 C.T.	S	5
S-67A	5.94	275-O-275	70	5	3	6.3	3 C.T.	S	5
S-57	5.61	300-O-300	80	5	3	5	½ C.T.	S	5
						2.5	10.5 C.T.		
S-56	7.26	350-O-350	90	5	3	2.5	3.5 C.T.	S	7¼
						2.5	8.75 C.T.		
S-87	6.48	350-O-350	90	5	3	6.3	3.5 C.T.	S	5¼
S-58	7.26	350-O-350	100	5	3	6.3	5 C.T.	S	7½
S-76	7.59	350-O-350	100	5	3	2.5	2.0 C.T.	S	6
						2.5	3.0 C.T.		
						1.5	5		
						1.5	1		
S-53	8.13	350-O-350	110	5	3	2.5	12.5 C.T.	S	9
L-83	8.43	350-O-350	120	5	3	2.5	4 C.T.	L	7¼
						2.5	9.5		
S-59	8.58	400-O-400	120	5	3	2.5	3.5 C.T.	S	9
						2.5	14.5 C.T.		
S-40	6.12	290-O-290	125	5	3	6.3	4.5 C.T.	S	5
S-74	8.64	372-O-372	145	5	3	6.3	5 C.T.	S	9
L-31	8.46	375-O-375	150	5	3	6.3	5 C.T.	L	7
						50-24-18V—25W			
S-75	8.43	375-O-375	180	5	3	2.5	6 C.T.	S	8
						6.3	3.5 C.T.		
S-77	9.93	400-O-400	200	5	4	6.3	5.5 C.T.	S	9

SPECIAL APPLICATION—HIGH VOLTAGE PLATE AND FIL. SUPPLY TRANSFORMERS

Item No.	Dealer Net	Plate A.C. Load Volts	D.C. M.A.	Rect. Fil. Volt	Rect. Fil. Amp.	Amp. Fil. Volt	Amp. Fil. Amp.	Mtg. Type
P-1850	$10.53	320-O-320	150	5	3	6.3	3	S
						6.3	1	
						6.3	8	
P-1930A	10.53	1600	2	2.0	1.75	6.3	.3	S
				1.25		6.3	.3	
P-1931A	11.49	2700	2	2.0	1.75	6.3	.3	S
				1.25		6.3	.3	

The above units are designed for 117 Volts 50-60 Cycle.

6 VOLT-VIBRATOR TRANSFORMERS

Item No.	Dealer Net	Sec. D.C. V. to Filter	Sec. M.A.	Mtg. Type	Wt. Lbs.
J-95	$3.12	150	40	C5	1¼
J-90	3.57	225	40	C5	1½
J-91	3.63	250	50	J	2¼
N-91	4.89	250	50	N3	3
J-92	4.17	250	60	J	2
J-93	4.29	250	70	J	2½
J-94	4.74	285	75	J	2¾
N-96	4.14	265	55	N3	2½
N-97	4.29	270	60	N3	2¼
N-98	4.50	280	65	N3	2¼

6 VOLT D. C. OR 115 VOLT A. C. VIBRATOR TRANS.

S-500	$9.15	350 Fil. 6.3 V. C.T.	135 4.75 Amp.	S	10

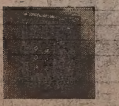
ISOLATION TRANSFORMERS

Item No.	Dealer Net	Pri. V	Sec. V	Watts	Mtg. Type	Wt. Lbs.
P-2042	$6.18	115	115	50	S2	6
P-1596	11.10	115	115	100	S2	7½
P-1596B	11.97	115	115	150	S2	8.5
P-1596A	23.25	115	115	250	S2	13½

STEP-DOWN AUTO TRANSFORMERS

P-1964	$5.70	220	110	65	S2	2½
P-612	6.96	220	110	100	S2	3½
P-610	7.86	220	110	160	S2	5
P-613	10.23	220	110	250	S2	7½
P-614	12.81	220	110	500	S2	12
P-2040	29.37	220	110	1000	S2	25

G



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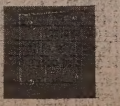
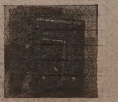


A5, Etc. Vert.
A4, Etc. Hor.

N2

S2



A7, Etc. Vert.
A8, Etc. Hor.

HALLDORSON *Vacuum Sealed*

TRANSFORMERS

HIGH FIDELITY TRANSFORMERS

± ONE DB FROM 30 to 20,000 CYCLES

Item No.	Dealer Net	Application	Primary Imp.	Secondary Imp.	Mtg. Type
Y-1	$13.74	S.Plate to P.P. Gr.	8,000 to 15,000	60,000 C.T.	Y
Y-2	15.51	Low L. Output to Line	8,000 to 15,000 in Two Sections	50-125-200-250-333-500	Y
Y-3	15.51	Low Level Input	500-333-250-200-125-50	50,000 In Two Sections	Y
Y-4	12.87	Bridging Trans.	20,000	50,000	Y
Y-5	14.07	Repeat Coil	500/600	500/600	Y

HIGH FIDELITY OUTPUT TRANSFORMERS

± TWO DB FROM 20 TO 20,000 CYCLES

Item No.	Dealer Net	Pri. Imp.	Sec. Imp.	Max. Watts	Mtg. Type	Wt. Lbs.
Y-20	$13.20	8500	500	15	N2	3
Y-21	23.40	5400	4-8-15-125-250-500	35	N2	4¾
Y-22	35.40	3800	4-8-15-125-250-500	50	N2	6¼

DRIVERS (Class AB and B AUDIO)

Item No.	Dealer Net	Class	Ratio Pri. ½ Sec.	D.C. M.A.	Mtg. Type	Wt. Lbs.
E-1029	$4.29	AB2 AB1	5:1	80	E	2.7
B8-833	3.03	B	5:1	15	B8	1
A4-763	2.16	B	4:1	15	A4	10 oz.
B8-830	2.91	AB	3:1	30	B8	1
E-1045	3.99	AB	3:1	40	E	2½
E4-1025	4.17	AB	2.8:1	15	E4	2½
A4-762	1.68	B	2.5:1	15	A4	10 oz.
A4-764	1.89	AB	2:1	15	A4	10 oz.
S-3021	5.31	A	2:1	90	S	3.7

AUDIO INTERSTAGE, CLASS A

Item No.	Dealer Net	Applic.	Impedance Pri.	Impedance Sec.	D.C. M.A.	Ratio	Mtg. Type	Wt. Lbs.
A4-751	$1.80	Single	10,000	90,000	10	3:1	A4	10 oz.
E-1047	4.70	Single	10,000	90,000	15	3:1	E	2½
B4-805	2.04	Single	10,000	66,500	10	2.5:1	B4	1½
B4-810	2.19	PP	10,000	160,000	10	4:1	B4	1
A4-761	1.89	PP	10,000	122,500	10	3.5:1	A4	10 oz.
B4-893	2.40	PP	10,000	90,000	10	3:1	B4	1
A4-760	1.89	PP	10,000	90,000	10	3:1	A4	10 oz.
A4-703	1.92	PP	10,000	40,000	10	2:1	A4	10 oz.
B4-811	2.73	PP to PP	20,000	45,000	10	1.5:1	B4	1
B4-818	2.85	PP to PP	10,000	90,000	10	3:1	B4	1
C4-918	3.33	PP to PP	10,000	90,000	10	3:1	C4	2

MICROPHONE, LINE AND MIXER, ETC.

Item No.	Dealer Net	Application	Impedance Pri.	Impedance Sec.	Mtg. Type	Wt. Lbs.
E-1040	$5.01	Mic. L. or Mix. to G.	*500 C.T., 250 *200 C.T., 50	50,000	E	2½
B5-812	2.31	Double B to Grid	200 C.T.	125,000	B5	1
B5-821	2.04	Single B. to Grid	100	125,000	B5	1½
B8-835	3.60	1-2-3-4- Cir. Mix.	200-400-600-800	125,000	B8	1½
E-1041	5.46	Line to Line or Line to V.C.	*500 C.T., 250 *200 C.T., 50	4-8-15-500	E	2½
E-1035	6.84	Line to Line	500-333-200-125-50	500-333-200-125-50	E	2¾
C7-965	3.93	Line to V.C.	500	15-8-4-2.6-2-1.5-.7-	C7	2½
C7-964	4.71	Tube to Line	14,000-12,000-10,000-8,000	500	C7	2½
E-1036	5.46	Line to Crystal hd.	500	75,000	E	2¾
A4-753	2.16	Transceiver	200-5000	60,000	A4	7 oz.
D4-607	1.74	Intercom.	3-6	35,000	D4	½
D4-610	1.52	Mic. to Grid.	200 C.T.	35,000	D4	½

*Inductive and Capacitative Balance to Center Tap.

OUTPUT TRANSFORMERS

Item No.	Dealer Net	Impedance Primary	Impedance Secondary	Pri. M.A.	Watts	Mtg. Type	Wt. Lbs.
D4-608	$1.59	1500	3-6-8	50	4	D4	8 oz.
D4-605	1.05	2000	3 to 6	50	4	D4	8 oz.
D4-605A	1.32	2000	3 to 6	50	4	D4	8 oz.
B4-856	2.01	2500	4-8-15	60	10	B4	1
B5-857	2.19	3000	4-8-15	80	10	B5	1
S-72A	7.20	3800	4-8-15-125-200-333-500	250	50	S	5¾
B4-850	1.98	4000	4-8-15	40	10	B4	1
S-71	5.82	4300	2-4-8-15-500	250	50	S	5½

(Continued in next column)

OUTPUT TRANSFORMERS—Continued

Item No.	Dealer Net	Impedance Primary	Impedance Secondary	Pri. M.A.	Watts	Mtg. Type	Wt. Lbs.
S-86	$4.80	4000	4-8-15-500	70	10	S	2½
D4-601	1.08	4500	3 to 6	35	5	D4	8 oz.
B4-870	2.04	5000	4-8-15	50	8	B4	1
B5-871	2.16	5000	4-8-15	80	15	B5	1
B4-778	2.16	5000	4-8-15	100	18	B4	1½
E-1042	6.12	6000	4-8-15-500	150	30	E	2½
K4-800	.99	6000	3 to 6	5	2	K4	6 oz.
S-81	6.27	6600	4-8-15-500	150	35	S	4¾
B4-851	1.98	7000	4-8-15	40	10	B4	1
D4-600	1.08	7000	3 to 6	35	5	D4	8 oz.
A5-700	1.83	9000	2-4-8	80	8	A5	10 oz.
D4-609	1.29	9000	3 to 6	10	4	D4	10 oz.
B5-853	1.89	10000	4-8-15	80	12	B5	1
D4-602	1.08	10000	3 to 6	30	5	D4	8 oz.
B5-854	2.25	14000	4-8-15	30	15	B5	1
D4-606	1.14	16000	3 to 6	10	4	D4	8 oz.
B5-855	2.25	20000	4-8-15	25	15	B5	1
A4-775	1.47	25000	3 to 6	10	5	A4	10 oz.
A4-776	2.04	50000	3 to 6	20	8	A4	10 oz.

UNIVERSAL OUTPUTS

Item No.	Dealer Net	Application	Pri. M.A.	Watts	Mtg. Type	Wt. Lbs.
A5-772	$1.95	S. and P.P. Pls. (4, 7, 10, 14, 20 M) to V.C. 3 to 6	50	8	A5	10 oz.
E-603	5.00	P.P. Pls. (8, 10, 12, 14 M) to 4-8-15-500	50	10	E	2¼
D4-604	1.68	Single or P.P. Pls. (2500 to 14000 ohms) to V.C.	30	4	D4	8 oz.
B4-816	2.82	Single or P.P. Pls. (2500 to 14000 ohms) to V.C.	60	12	B4	1
B5-816-A	2.31	Single or P.P. Pls. (2500 to 14000 ohms) to V.C.	50	10	B5	1
B6-816-A	2.31	Single or P.P. Pls. (2500 to 14000 ohms) to V.C.	50	10	B6	1
A5-773	2.01	Single or P P. Pls. (8000 to 20000) to V.C.	10	5	A5	10 oz.
E5-1057	3.54	Single or P.P. Pls. (4000 to 13500) to V.C.	60	20	E5	3

SPEAKER MATCHING

T-4307	$2.73	500-1000-1500-2000 3.2 & 8	100	18	B5	1.2
B5-848	2.85	500-1000-1500-2000 8 ohms	80	12	B5	1
B5-849	2.70	2500-4000-6000-8000 8 ohms	80	12	B5	1
T-4274	1.68	500-1000-1500-2000 8 ohms	60	5	A5	10 oz.

PLATE SUPPLY TRANSFORMERS

Item No.	Dealer Net	Secondary A.C. Plate Voltage	D.C. M.A.	Pri. Volts	Mtg. Type	Wt. Lbs.
S-200	$ 8.34	600-500-O-500-600	250	117	S	9½
G-203	18.87	900-750-O-750-900	200	117	G	
G-204	23.97	1000-750-O-750-1000	300	117	G	
H-206	62.43	1500-1250-O-1250-1500	500	117	H	45

ADJUSTABLE IMPEDANCE MODULATION TRANS.

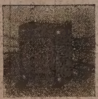
Item No.	Dealer Net	Adjustable Impedance	Pri. D.C. Per Side	Sec. D.C. Per Side	Watts	Mtg. Style	Wt. Lbs.
G-102	$7.98	Chart Supplied	.060	.060	15	G	3½
G-120	8.58	Chart Supplied	.080	.080	30	G	5
G-140	13.38	Chart Supplied	.200	.200	125	G	12
G-209	28.32	Chart Supplied	.225	.225	160	G	20

FILAMENT TRANSFORMERS

Item No.	Dealer Net	Pri. V.	Sec. V.	Sec. A.	Mtg. Type	Wt. Lbs.
A4-701	$2.16	117	2.5 C.T.	2.5	A4	10 oz.
B5-861	2.31	117	2.5 C.T.	6	B5	1
S-230	4.05	105-115-125	2.5 C.T.	10	S	9
B5-859	2.55	117	5.0 C.T.	3	B5	1
U5-900	3.78	107-117	5.0 C.T.	6	U5	2¾
N-231*	14.25	107-117	5.0 C.T.	22	N	13
A4-702	1.89	117	6.3 C.T.	1.5	A4	10 oz.
B5-860	2.46	117	6.3 C.T.	3	B5	1
U5-1153	4.14	107-117	6.3 C.T.	6	U5	2½
N-239*	12.36	117	6.3 C.T.	10	N	12
U5-1308	9.00	117	6.3 C.T.	20	U5	7½
B5-862	2.25	117	7.5 C.T.	2.5	B5	1
N-232*	13.44	105-115-125	10.0 C.T.	7	N	10
U5-1306	5.70	117	10.0 C.T.	8	U5	5
U5-1055	3.99	117	12.6 C.T.	3	U5	3½
S-25	5.76	117	5.0 C.T. 6.3 C.T.	3 6	S	3½

Y

U5



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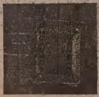

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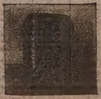
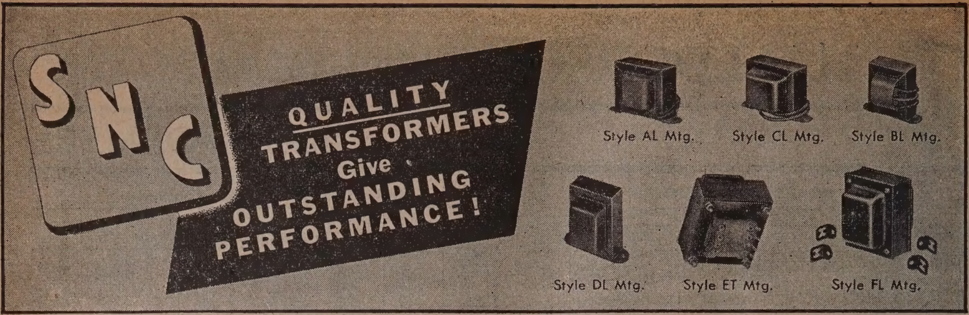
L and L2

N3





Skillful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

AUDIO TRANSFORMERS—THE "ONE" SERIES

AUDIO INPUT

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions				Net Wt.	List Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	D		
1P121	P.M. Speaker to Grid	4	100,000	0	1:158	−4.0	−1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63		−6.0	0	−2.0	−6.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.70
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45		−3.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.40
1P128	Sgl. or D.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	−2.0	−0.3	0	−0.7	−2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	5.40
1P136	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	1:28	−3.0	−0.4	0	−0.4	−1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	5.40
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	−3.5	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	−4.0	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P161	Line to Line	500	500*/125	0	2:1	−0.4	−0.1	0	−0.4	−1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.80

*Indicates Balanced Center Tap

AUDIO INTERSTAGE

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	−5.0	−1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.25
1P331	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−6.0	−2.0	0	0	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−3.0	−0.5	0	+0.1	+0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.90
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−2.5	−0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.05
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	−1.0	−0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.20
1P351	Universal	Universal		8	1:3	−2.0	−0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.15
3P363	Sgl. Type 30 to 19, 1J5 or P.P. 30 Class B	10,000	7,000 C.T.	8	2.4:1	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.80

TELEVISION REPLACEMENT (VERTICAL BLOCKING OSCILLATOR)

Type Number	Primary Inductance	Leakage Inductance	Turns Ratio	Mounting Style	Mounting	Dimensions				Net Wt.	List Price
						H	W	D	Ctrs.		
1P412	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Flange	1-7/8	2-5/16	1-1/2	1-15/16	.5	3.60
1P416	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Studs	1-5/8	1-3/16	1-3/16	1-13/64	.4	3.35

CHOKES AND REACTORS—THE "TWO" SERIES

AUDIO REACTORS

Type Number	D.C. Mils		Inductance				Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	List Price
	Nom.	Max.	0–D.C.	50% Nom. D.C.	Nom. D.C.	Max. D.C.				A	B	C	D	E		
2P123	5–0.5	15	550	–	300–500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	3.50
2P124	5–0.5	15	550	–	300–500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.90
2P126	35–15	45	65	–	25–35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.75
2P127	35–15	45	65	–	25–35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.25

FILTER AND SWINGING CHOKES

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	1.80
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	2.15
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	2.80
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	3.70
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	3.90
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	3.70
2P145	150	180	26	13	8	5.5	2000	190	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.2	5.05
2P147	200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P148	200–20	–	–	–	3–15	–	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P152	300–30	–	–	–	3–15	–	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20
2P156	500–50	–	–	–	3–15	–	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20

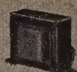
DRIVER TRANSFORMERS—THE "THREE" SERIES

Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6, 5.5, 5:1	60	−0.5	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P328	3,000 C.T. to 5,000 C.T.	25	6, 5.5, 5:1	60	−0.4	0	0	0	−0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P334	6,000 C.T. to 10,000 C.T.	25	4.5, 4, 3.5:1	60	−1.0	−0.3	0	+0.1	+0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.15
3P338	3,000 C.T. to 5,000 C.T.	25	4.5, 4, 3.5:1	60	−1.7	−0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.35
3P342	6,000 C.T. to 10,000 C.T.	25	3, 2, 1:1	60	−0.7	−0.1	0	+0.1	+0.4	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.75
3P347	3,000 C.T. to 5,000 C.T.	25	3, 2, 1:1	60	−0.8	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.60
3P353	6,000 C.T. to 10,000 C.T.	25	500 Ohms	60	−1.1	−0.3	0	0	+0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P358	3,000 C.T. to 5,000 C.T.	25	500 Ohms	60	−0.9	−0.1	0	−0.4	−1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P363	10,000	5	2.4:1	10	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2		.5	2.80

See Page N-57 for Dimensional Illustrations.

SNC

QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!


Style AL Mtg.

Style CL Mtg.

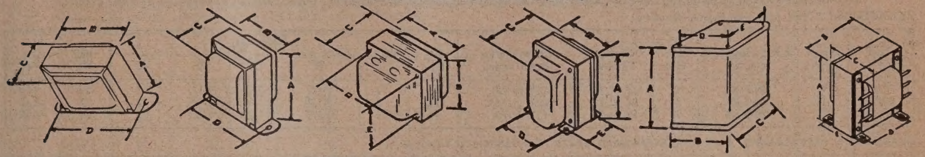
Style BL Mtg.

Style DL Mtg.

Style ET Mtg.

Style FL Mtg.

DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS—THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions A	B	C	D	Net Wt.	List Price
6P300	Single 2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P306	Single 4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P312	Single or P.P. 7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P316	Single or P.P. 10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P319	Push-Pull 15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P321	Push-Pull 20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P325	Push-Pull 25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions A	B	C	D	Net Wt.	List Price
6P165	Sgl. or P.P. 4M to 14M Plates	40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	2.80
6P166	Sgl. or P.P. 4M to 14M Plates	50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P167	Sgl. or P.P. 3M to 10M Plates	50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	3.50
6P169	Sgl. 1500 to 7M Plate	55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P172	P.P. 3500 to 12M Plates	60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.10
6P701	Single 2500 to 7500 Plate	45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.45
6P710	P.P. 7500 to 15M Plates	45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.05
6P714	Sgl. or P.P. 2500 to 12M Plates	45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.30
6P717	125 to 500 Line	0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.40
6P722	500 to 3M Line in 500-Ohm Steps	0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.10

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s. 50	200	1M	5M	10M	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
6P726	P.P. 3300 or 3800 Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.1	+0.5	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P731	P.P. 4500 or 6600 Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P736	P.P. 5000 Plates	70	4-8-16-250-500	25	−0.9	−0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P740	P.P. 4300 Plates	70	4-8-16-250-500	25	−0.9	−0.3	0	+0.3	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P743	P.P. 6600 Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P746	P.P. 8000 Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.1	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P749	P.P. 10,000 Plates	60	4-8-16-250-500	25	−0.4	−0.1	0	+0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.55
6P752	Sgl. 2500 Plate.	60	4-8-16-250-500	10	−3.0	−0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8		1.0	5.70

TELEVISION REPLACEMENT (VERTICAL DEFLECTION)

Type Number	Ratio Pri. to Sec.	Primary Imp.—Ohms	Leakage Inductance	Mounting Style	Dimensions A	B	C	D	E	Net Wt.	List Price
6P860	10:1	19,000 Min.	0.33 Hy. Max.	B x L	3-3/16	2-3/4	2-9/16	1-19/32	2	2.2	6.70

MODULATION TRANSFORMERS—THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two indentical secondary windings, permitting series or parallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics Series Sec. Impedance	Series Sec. Mils	Parallel Sec. Impedance	Parallel Sec. Mils	Primary Impedance Ohms	Mtg. Style	Dimensions A	B	C	D	E	Net Weight	List Price
5P341	15	60		50		100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	9.00
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	14.10
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	22.50
5P354 5P355	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	24 32	51.60 56.40
5P357 5P358	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	62.40 67.20
5P363 5P364	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	51 64	126.00 138.00

Style GL Mtg.

Style HP Mtg.

Style ATL Mtg.

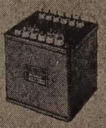
Style BTL Mtg.

Style BxL Mtg.

Style HSP Mtg.

Style GTL Mtg.

Style HT Mtg.


Style JT Mtg.

Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

POWER TRANSFORMERS—THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings

REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	5.40
8P055	117	300-0-300	55	5V. @ 2A.	6.3V. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	5.45
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	6.90

HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P180 8P180G	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL GL	3 3-1/16	2-1/2 2-7/32	3-1/4 3-1/8	2-1/2 2	2 2-3/16	3.2	7.40
8P183 8P183G	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-7/16 3-1/4	2-13/16 2-1/4	2-1/4 2-1/8	3.5	7.80
8P186 8P186G	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-11/16 3-1/2	2-13/16 2-1/4	2-1/4 2-3/8	4.0	8.20
8P189 8P189G	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	3-3/4 3-5/8	3-1/8 2-1/2	2-1/2 2-7/16	5.0	9.00
8P192 8P192G	117	350-0-350	90	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.7	9.90
8P194 8P194G	117	375-0-375	110	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/8 4	3-1/8 2-1/2	2-1/2 2-13/16	6.0	11.10
8P196 8P196G	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL GL	4-1/8 4-3/16	3-7/16 3-15/32	4-3/8 4-3/8	3-7/16 2-3/4	2-3/4 3-5/16	7.7	11.70
8P199 8P199G	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.50
8P202 8P202G	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL GL	4-1/2 4-9/16	3-3/4 3-25/32	4-3/4 4-3/8	3-3/4 3	3 3-11/16	10.7	15.00
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	40.00
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	40.00

REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	9.00
8P293	117	350-0-350	90	5V. @ 3A.	2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	9.80
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.3	11.70

REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487 8P487G	117	350-0-350	70	5V. @ 3A.	No. 1 = 2.5V. @ 3.5A. No. 2 = 2.5V. @ 8A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.80
8P494 8P494G	117	375-0-375	110	5V. @ 3A.	No. 1 = 2.5V. @ 3.5A. No. 2 = 2.5V. @ 10A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/4 4-1/8	3-1/8 2-1/2	2-1/2 2-15/16	6.2	11.80

GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	7.10
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	7.60
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	8.30

BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	4.50
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	6.55

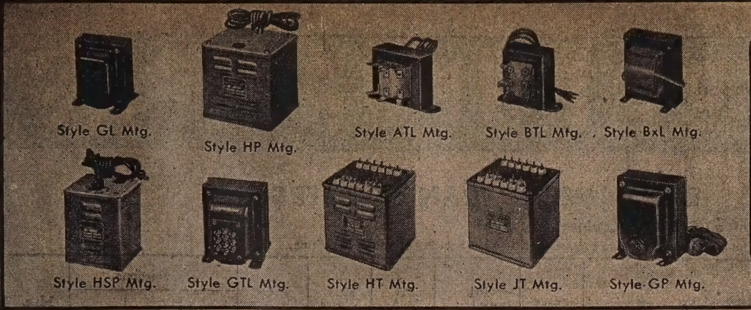
VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8	....	1.3	5.10
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	6.10
8P612	6	390-0-390	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	6.90

TELEVISION REPLACEMENT TYPES

9P803	117	375-0-375	210	5V.@ 3A.	No. 1-5V.@ 2A. No. 2-6.3V.@ 5.6A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	17.75
8P805	117	235-0-235	90	5V.@ 2A.	6.3V.@ 5.5A.	FL	3-3/8	2-13/16	4	2-13/16	2-1/4	5.1	10.20
8P807	117	365-0-365	300	5V.@ 6A.	No. 1-12.6V.@ 5A. No. 2-5V.@ 2A.	FL	4-23/32	3-27/32	6-3/4	4-1/16	3-3/16	16.0	30.60

See Page N-57 for Dimensional Illustrations.



NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

PLATE TRANSFORMERS—THE "SEVEN" SERIES

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units contain electrostatic shields between primary and high voltage windings.

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
7P530	115-230	220	920-0-920 or 740-0-740	750 or 600	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	18.00
7P535 7P536	115-230	320	930-0-930 or 750-0-750	750 or 600	300MA	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22 30	42.00 48.00
7P542 7P543	115-230	530	1470-0-1470 or 1220-0-1220	1250 or 1000	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	50.40 55.20
7P551 7P552	115-230	750	2050-0-2050 or 1740-0-1740	1750 or 1500	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43 51	54.00 66.00
7P557 7P558	115-230	1060	2880-0-2880 or 2350-0-2350	2500 or 2000	300MA	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53 69	74.40 80.40
7P563 7P564	115-230	1760	2900-0-2900 or 2370-0-2370	2500 or 2000	500MA	HT JT	10-3/4	9	7-1/4	7	5-13/16	96 126	108.00 150.00

*All units may be operated with simultaneous loads—provided the total D.C. current of the two loads does not exceed the rating listed.

FILAMENT TRANSFORMERS—THE "FOUR" SERIES

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designated. All have 117 V. 50/60 cycle primary.

Type Number	Applications: Parallel Secondaries	Series Secondaries	Independent Identical Secondaries	Test Voltage	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T. @ 2.5 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.55
4P226*	2.5V. C.T. @ 10 A.*			7500	BL	3	2-1/2	2-3/8	3-1/8		2.0	5.50
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T. @ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	4.80
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T. @ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.70
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T. @ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.10
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	10.20
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T. @ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	9.00
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.8	3.50
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	3.80
4P246	6.3V. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T. @ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	4.20
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 3 A.	Two of 6.3V. C.T. @ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	4.85
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T. @ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	6.30
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T. @ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	5.10
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T. @ 2.3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	6.30
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T. @ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	9.00

*Single secondary units

VOLTAGE CHANGER AND ISOLATION—THE "NINE" SERIES

All Units Have Primary Cord and Secondary Plug and Are For 50/60 Cycle Operation

VOLTAGE CHANGER (ISOLATION)

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
9P707	220-250	110-125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	9.30
9P713	220-250	110-125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	13.80
9P718	220-250	110-125	350	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	36.00

ISOLATION TYPES

9P721	110-250	110-250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	18.00
9P725	110-250	110-250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	29.40
9P728	110-250	110-250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	41.40

VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH

9P732	95-130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	25.80
9P737	95-130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	33.00
9P739	80-130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	49.20

All list prices given are subject to regular trade discounts and may be changed without notice.

S N C MANUFACTURING CO., INC., OSHKOSH, WISCONSIN

See Page N-57 for Dimensional Illustrations.

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TRANSFORMERS

REPLACEMENT TRANSFORMERS

OUTPUT TRANSFORMERS Receiver Replacement Type

To couple the plate or plates of the output stage to the speaker voice coil. Sec. impedance—3.5 ohms.

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3025	$1.50	7A5, 35A5, 35C5, 50C5, 32L7, 35L6, 50B5	A	2500	50	3	1¾	1 3/16	1 7/16	⅞	A
A-3026	1.50	6V6, 7C5, 25AC5, 35A5, 35B5, 35L6	A	5000	40	3	1¾	1 3/16	1 7/16	⅞	A
A-2927	1.60	Single 1C5-G, 1G5-G, 1G5, 1S4, 3Q4, 3Q5, 3S4, 6A4	A	8000	20	3	1½	1⅜	1⅞	1	B
A-2928	1.75	Single 2A3, 6A3, 6B4, 6Y6, 25AC5, 25B6, 25N6, 25L6, 35A5, 35L6, 50L6, 48, 50B5, 35B5, 50A5	A	2000	60	5	2	1⅜	2⅜	1¼	A
A-3018	2.75	Single 6A3, 6L6, 6Y6, 7A5, 12A5, 25A6, 25B6, 25C6, 25L6, 50, 50A5, 50B5, 50C5, 50L6	A	3500	60	8	2⅜	1⅝	2 13/16	1½	A
A-2930	1.80	Single 6V6, 7C5, 12A, 12A5, 25A6, 25A7, 35A5, 35L6, 31, 45, 50, 59	A	5000	40	5	2	1⅜	2⅜	1¼	A
A-3019	2.75	Single 6L6, 6V6, 6AQ5, 6AS5, 7C5, 25A6, 35A5, 35L6, 50	A	5000	50	8	2⅜	1⅝	2 13/16	1½	A
A-2935	3.60	PP 6L6	A	5000 c.t.	150	18	2 13/16	2	3¼	1⅝	A
A-2931	1.80	Single 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5, 20, 31, 42, 47, 50, 6V5	A	7000	30	5	2	1⅜	2⅜	1¼	A
A-3020	2.75	Single 2A5, 6AC5, 6AD7, 6AR5, 6B5, 6F6, 6K6, 6N6, 6Y7, 7B5, 12A6, 14A5, 41, 47	A	7000	40	8	2⅜	1⅝	2 13/16	1½	A
A-2932	1.80	Single 1C5, 1Q5, 3C5, 6A4, 6G6, 6N7, 6R7, 12A, 38, 41, 49, 3V4	A	10000	30	5	2	1⅜	2⅜	1¼	A
A-2938	2.50	Single 19, 1G6, 1J6 PP 1H4, 30, 49	B	10000 c.t.	40	5	2	1⅜	2⅜	1¼	A
A-2936	2.88	PP 6AC5 PP 6V6, 7C5	B AB_1	10000 c.t.	75	10	2⅜	1⅝	2 13/16	1½	A
A-2933	2.20	Single 1D8, 7B5, 6K6, 6G6	A	12000	10	5	2	1⅜	2⅜	1¼	A
A-3021	3.60	PP2A5, 6E6, 6K6 PP6AD7, 47, 49 Single 6Y7, 6Z7, 79	A B B	14000 c.t.	35	12	2 13/16	2	3¼	1⅝	A
A-2934	1.85	Single 1D8, 1F4, 1F5, 1J5, 1T5, 6V7, 12A7, 85	A	15000	10	5	2	1⅜	2⅜	1¼	A
A-2937	2.40	Single 1A5, 1N6, 6V7, 85	A	25000 c.t.	10	5	2	1⅜	2⅜	1¼	A
A-3017	2.50	PP 1E7, 1J5, 6G6, 3A4, 3V4 PPIA5, IAC5, IN6, ILA4	A	50000 c.t.	10	5	2	1⅜	2⅜	1¼	A

FILTER TAPPED OUTPUT TRANSFORMERS Pri. has 3% and 6% Humbucking Taps Sec. Impedance 3-4 ohms

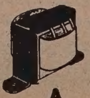
Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3031	$2.20	Single 2A3, 6A3, 7A5, 25L6, 35A5, 35B5, 35L6, 45, 50B5, 50L6	A	3000	50	5	2	1⅜	2⅜	1¼	A
A-3032	2.20	Single 6V6, 6B5, 7C5, 6F6	A	6000	40	5	2	1⅜	2⅜	1¼	A

SPECIAL OUTPUT TRANSFORMERS To Couple Push Pull Plates to Line or Voice Coil Sec. Impedance 2-4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3027	$6.60	PP2A5, 6V6, 7C5, 19, 6F6 PP1H4G, 1J6, 6AC5, 49	A AB_1 B	10000 c.t.	45	15	2 13/16	2	3¼	1¾	F
A-3028	7.50	PP6L6 PP2A3	A_1 AB_1	5000 c.t.	70	20	3⅛	2 5/16	3 11/16	2	F

All prices subject to trade discount, and change without notice.

Products of Merit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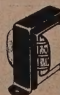
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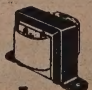
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TRANSFORMERS

VERTICAL OUTPUT TRANSFORMER

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
★A-3035	$6.00	10:1	1 19/32x2	3⅛	2 11/16	2½	EV
★A-3036	4.00	10:1	2 13/16	2	3¼	2	A
★A-3037	4.00	11.4:1*	2 13/16	2	3¼	1⅝	A
★A-3038	5.50	10:1	3⅛	2¼	3 11/16	2¼	A
★A-3039	5.50	18:1*	3⅛	2¼	3 11/16	2⅛	A

★Indicates TV Replacements. *Auto Transformer.

DUAL PRIMARY OUTPUT TRANSFORMERS

For Use with AC-DC Battery Portable Receivers—Sec. Impedance 3-4 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3029	$2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35B5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 6000	60 or 10	5	2	1⅜	2⅜	1¼	A
A-3030	2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 10000	60 or 10	5	2	1⅜	2⅜	1¼	A

UNIVERSAL OUTPUT TRANSFORMERS

To Provide Correct Coupling Between a Variety of Output Tubes and Any Speaker Voice Coil

Type No.	List Price	Tube	Ohms Impedance Pri.	Sec.	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-2900	$2.60	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	35	4	2	1⅜	2⅜	1¼	F
A-2901	2.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	8	2⅜	1⅝	2 13/16	1½	F
A-2902	2.75	Single	1500-2000-4000-5000-7000-10000	.1 to 40	55	10	2⅜	1⅝	2 13/16	1½	F
A-2903	2.50	Single	2000-4500-7000-10000	3.2	30	4	2	1⅜	2⅜	1¼	F
A-2904	3.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	18	2⅜	2¼	2⅞	1⅞	G
A-2905	5.25	Single or Push-pull	3000-5000-7000-8000-10000 c.t.	.17 to 32	70	24	3⅛	2¼	3 11/16	2⅛	F
A-2998	2.50	Single	3500-5000-7000-10000	3.2	35	3	1¾	1⅛	2⅛	1⅛	F
A-2999	2.65	Single	12000-15000-18000-25000	3.2	10	3	1¾	1⅛	2⅛	1⅛	F

HEAVY DUTY OUTPUT TRANSFORMERS

High Level Type to Couple to Line or Speaker. Sec. Impedance: 4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3127	$ 6.00	Single 6L6, 2A3, 6A3, 6Y6	A	2500	80	8	3⅛	2⅝	2½	D
A-3128	10.00	PP6V6, 6F6	AB_1	8000 c.t.*	50	14	3½	2 15/16	3⅛	D
A-3129	10.00	PP6L6	AB_1	4300 c.t.*	95	25	3½	2 15/16	3⅛	D
A-3130	10.50	PP6L6	AB_1	6600 c.t.*	~~80~~	34	3⅞	3 3/16	3⅜	D
A-3131	8.50	PP6L6, 6Y6, PP2A3, 6A3, 6B4, 45, PP6N7, 46	A AB B	5000 c.t.	80	30	3½	2 15/16	3⅛	D
A-3132	8.50	PP6F6,2A5, 7C5, Single 6N7, 6A6	AB_2 B	10000 c.t.	40	25	3½	2 15/16	3⅛	D
A-3133	13.75	P.P. Par. 6L6, P.P. 807	AB_1	3300 c.t.	240	55	4⅝	3 13/16	4	D†

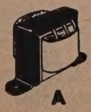
* 10% Feedback Winding. † Mtg. Centers 3 x 2 13/16.

OUTPUT TRANSFORMERS—HIGH FIDELITY TYPE

Frequency Response ± 1 DB 30-20000 Cycles

A-3100	$18.00	PP2A3, 6A5G, 275A, 6A3, 6L6, etc.	5000 and 3000 c.t.	Sec. 4-8-16	20	3⅞	3 3/16	3⅝	D
A-3101	18.00	PP6F6, 6L6, 6V6, etc.	10000 and 6600 c.t.		20	4¼	3½	3⅞	D

All prices subject to trade discount, and change without notice.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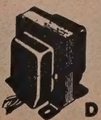
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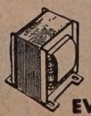
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Products of Merit

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TRANSFORMERS

UNIVERSAL LINE TRANSFORMERS To Couple Various Line Impedances to a Voice Coil

Type No.	List Price	Ohms Impedance		Watts	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2906	$3.00	500-1000-1500-2000	3.2, 6-8	10	2⅜	1⅝	2 13/16	1½	F
A-2907	5.00	500-1000-1500-2000	3.2, 6-8	18	2⅜	2¼	2⅞	1⅞	G
A-2908	5.25	500-1000-1500-2000	6-8, 16	24	3⅛	2¼	3 11/16	2⅛	F
A-2909	2.75	45-50	3.2, 6-8	8	2	1⅝	2 13/16	1½	G
A-3005	2.10	500	3.2, 6-8	5	2	1⅜	2⅜	1¼	A

For Use With Constant 70.7V. Line as Recommended by the RMA. Rated Power is Furnished on Lowest Tap. Other Taps Provide Reduction in Power in Steps of 3DB.

A-3013	$3.00	1000-2000-4000-8000-16000	3.5, 7	5	2	1 5/16	2⅜	1½	F
A-3014	3.60	500-1000-2000-4000-8000	4-8-16	10	2⅜	1⅝	2 13/16	1½	F
A-3015	5.25	275-550-1100-2200-4400-8800	4-8-16	18	2⅜	2¼	2⅞	1⅞	G
A-3016	6.25	210-420-840-1680-3360-6720	4-8-16	24	3⅛	2¼	3 11/16	2⅛	F

TUBE TO LINE TRANSFORMERS For Coupling Single or Push-Pull Plates to Line or Mixer

Type No.	List Price	Ohms Impedance		Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2925	$4.75	20000 c.t.	500/125	10	2 13/16	2	3¼	1⅝	A
A-2926	4.75	20000 c.t.	200/50	10	2 13/16	2	3¼	1⅝	A
†A-3023	5.00	5000-10000-20000 c.t.	500 /333 /200 /125 /50	15	2 13/16	2	3¼	1¾	F
†A-3024	11.00	5000-10000-20000 c.t.	500 /333 /200 /125 /50	50	2x1 11/16	3 5/16	2⅝	2¾	DL

†20,000 ohm only center tapped.

INPUT TRANSFORMERS For Coupling Microphone or Line to Single or Push-Pull Grids. Static Shielded.

Type No.	List Price	Ohms Impedance		Turns Ratio	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2923	$2.75	3.2	50000	1:125	2	1⅜	2⅜	1¼	A
A-2918	4.25	100	400000 c.t.	1:64	2 13/16	2	3¼	1⅝	A
A-2919	4.25	200/50	100000	1:22	2 13/16	2	3¼	1⅝	A
A-2924	4.75	500/125	100000 c.t.	1:14	2 13/16	2	3¼	1⅝	A

INTERSTAGE TRANSFORMERS To Couple a Single Plate to a Single Grid

Type No.	List Price	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.				H.	W.	D.	
A-2910	$2.75	10000	90000	3:1	10	2	1⅜	2⅜	1¼	A
A-2911	2.75	10000	90000	3:1	10	2⅜	1⅝	2 13/16	1½	A

To Couple a Single Plate to Push-Pull Grids

A-2914	$2.75	10000	90000 c.t.	3:1	10	2	1⅜	2⅜	1¼	A
A-2915	3.00	10000	90000 c.t.	3:1	10	2⅜	1⅝	2 13/16	1½	A
A-2916	3.60	10000	90000 c.t.	3:1	10	2 13/16	2	3¼	1⅝	A

To Couple Push-Pull Plates to Push-Pull Grids

A-2912	$4.25	10000 c.t.	90000*	3:1	10 per side	2 13/16	2	3¼	1⅝	A
A-2913	3.60	20000 c.t.	20000 c.t.	1:1	10 per side	2⅜	1⅝	2 13/16	1½	A
A-2917	4.25	20000 c.t.	45000 c.t.	1.5:1	10 per side	2 13/16	2	3¼	1⅝	A

*Split secondary.

All prices subject to trade discount, and change without notice.

Products of Merit

F

DL

G

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TRANSFORMERS

POWER TRANSFORMERS[1]

Receiver Replacement Type — Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded—Mtg. Fig. C

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	D.C. M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
*P-3045	$ 4.65	120	50			6.3	1.5	3⅛	2 3/16	2⅝	1⅝
*P-3046	3.00	150	25	....	....	6.3	.5	2	2	2½	1¾
P-3047	5.50	240–240	50			6.3	2.5	2 x 2½	2½	3	2
P-3048	6.50	260–260	90			6.3	3.5	2 x 2½	2½	3	2⅝
P-2949	6.00	240–240	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2½
P-2958	6 00	240–240	50	5	2	6.3	2.6	2 x 2½	2½	3	3
P-3051	7.70	260–260	70	5	2	6.3	3	2 x 2½	2½	3	3
P-3052	8.50	280–280	90	5	2	6.3	5	2¼ x 2 13/16	2 13/16	3⅜	3½
P-2957	7.25	350–350	50	5	2	6.3 c.t.	2.6	2¼ x 2 13/16	2 13/16	3⅜	3
P-2965	6.75	325–325	40	5	2	2.5 c.t.	4	2 x 2½	2½	3	2¾
P-2966	8.00	350–350	70	5	3	2.5 c.t.	9	2¼ x 2 13/16	2 13/16	3⅜	3⅝
						2.5 c.t.	3.5				
P-2967	10.00	350–350	90	5	3	2.5 c.t.	12.5	2½ x 3⅛	3⅛	3¾	4 1/16
P-2968	12.50	400–400	110	5	3	2.5 c.t.	15	3 x 3¾	3¾	4½	3 13/16
						2.5 c.t.	3.5				
P-2950	6.25	325–325	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2⅞
P-2951	7 25	325–325	70	5	3	6.3 c.t.	3.5	2 x 2½	2½	3	3 7/16
P-2952	8 00	350–350	90	5	3	6.3 c.t.	3.5	2¼ x 2 13/16	2 13/16	3⅜	3¾
P-2953	9 25	350–350	120	5	3	6.3 c.t.	4.7	2½ x 3⅛	3⅛	3¾	3 13/16
P-2954	12.00	375–375	150	5	3	6.3 c.t.	5	2½ x 3⅛	3⅛	3¾	4 5/16
P-2955	14.00	400–400	200	5	3	6.3 c.t.	5	3 x 3¾	3¾	4½	4⅛
P-2956	17.50	435–435	250	5	3	6.3 c.t.	3	3 x 3¾	3¾	4½	4¾
		(80-volt Bias Tap)		2.5	10	6.3 or 5	3				
★P-3071‡	22.50	360–360	180	5	3	6.3	9	2¾ x 3 7/16	3 7/16	4⅛	4 9/16
★P-3072	21.25	360–360	180	5	3	6.3	9	3¾ x 3 7/16	3 7/16	4⅛	4 5/16
★P-3069‡	22.50	350–350	225	5	3	6.3	10	3 x 3¾	3¾	4½	4¼
						6.3	2.7				
★P-3070	21.25	350–350	225	5	3	6.3	10	3 x 3¾	3¾	4½	4
						6.3	2.7				
★P-3059	25.00	360–360	250	5	2	6.3	2.7	3 x 3¾	3¾	4½	5⅛
				5	3	6.3	9				
★P-3063	22.50	360–360	250	5	3	6.3	9	3 3/16 x 4 1/16	5 11/16	3 27/32	4 23/32
						6.3	.8				
						5	2				
★P-3061	27.50	362–362	295	5	6	12.6 c.t.	5	3 3/16 x 4 1/16	6 13/16	3 27/32	4 23/32
						5	2				
★P-3073‡	27.50	† 322–322	180	5	3	6.3	10	3 x 3¾	3¾	4½	5
		205–205	70			6.3	2.7				
★P-3066	25.00	† 375–375	170	5	3	12.6 c.t.	5	3 x 3¾	3¾	4½	5⅜
		325–325	130	5	3	6.3	2.6				
				5	2						
★P-3067	25.00	† 400–400	220	5	3	6.3	10	3 x 3¾	3¾	4½	5⅜
		212–212	90	5	3	6.3	2.6				
				5	2						

* For use with Half-Wave Rectifier Type A Mtg.
‡ Socket Type. See Figure CS.
[1] All TV Powers are Fully Flux and Static Shielded.

	P-3066	P-3067	P-3073
†Max MA High Tap Only	320	300	220
Max MA Low Tap Only	340	340	325

REPLACEMENT TYPE FILTER CHOKES

Inductance Ratings are at 10 V. 60 cy. with Rated Current Flowing as Recommended by the R.M.A.

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Mtg. Centers	Dimensions			Mtg.
							H.	W.	D.	
★C-2973	$1.55	1.5	10	95	1500	1¾	1 3/16	1 7/16	1	A
★C-2994	2.00	1.5	200	90	1500	2⅜	1⅝	2 13/16	1⅝	A
C-2974	3.85	2.0	200	50	1500	2 13/16	2	3¼	1⅝	A
C-2977	2.20	4.5	50	200	1500	2⅜	1⅝	2 13/16	1½	A
C-2975	1.80	5.5	50	330	1500	2	1 5/16	2⅜	1⅛	A
C-2976	1.80	8	40	500	1500	2	1⅜	2⅜	1¼	A
★C-2995	2.75	8.0	100	375	1500	2 13/16	2	3¼	1⅝	A
C-2981	2.20	8.5	50	400	1500	2⅜	1⅝	2 13/16	1½	A
C-2985	2.20	20	15	900	1500	2⅜	1⅝	2 13/16	1½	A
C-2987	2.50	16	50	550	1500	2 13/16	2	3¼	1⅝	A
C-2990	3.30	15	75	400	1500	3⅛	2¼	3 11/16	2⅛	A
★C-2991	4.40	2	250	53	2000	3 5/16	2 3/16	3 11/16	2	A
C-2993	4.40	10.5	110	220	1500	3 9/16	2 9/16	4	2¼	A
★C-2996	3.30	1.0	300	60	1500	3⅛	2¼	3 11/16	2	A

★Indicates TV replacements.

All prices subject to trade discount, and change without notice.

A

C

CS

D

Products of Merit

MERIT Since 1924 FINE RADIO PARTS

TRANSFORMERS

POWER TRANSFORMERS[1] Receiver Replacement Type—Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded Fully Shielded Upright Mounting Type—Mtg. Fig. D

P-3147	$5.50	240-240	50	--------	--------	6.3	2.5	2 x 1 9/16	3⅛	2⅝	2½
P-3148	6.50	260-260	90	--------	--------	6.3	3.5	2 x 2 3/16	3⅛	2⅝	3⅛
P-3149	6.00	240-240	40	5	2	6.3 c.t.	2	2 x 1 11/16	3⅛	2⅝	2⅝
P-3150	6.25	325-325	40	5	2	6.3 c.t.	2	2 x 1⅞	3⅛	2⅝	2 13/16
P-3154	8.25	275-275	50	5	2	6.3	2.6	2 x 2 3/16	3⅛	2⅝	3⅛
P-3160	7.25	350-350	50	5	2	6.3 c.t.	2.6	2¼ x 1⅞	3½	2 15/16	3 1/16
P-3151	7.25	325-325	70	5	3	6.3 c.t.	3.5	2½ x 1 15/16	3⅞	3 3/16	3 3/16
P-3152	8.00	350-350	90	5	3	6.3 c.t.	3.5	2¾ x 2½	4¼	3½	3 7/16
P-3153	9.25	350-350	110	5	3	6.3 c.t.	4.5	3 x 2¼	4⅝	3 13/16	3 7/16
P-3173	11.25	350-350	150	5	3	6.3	6.5	2½ x 2⅞	3⅞	3¼	4⅛
P-3155	14.00	400-400	200	5	3	6.3 c.t.	5	3 x 3 3/16	4⅝	3 13/16	4¼
P-3156	17.50	435-435 (80-volt Bias Tap)	250	5 2.5	3 10	6.3 c.t. 6.3 or 5	3 3	3 x 3 13/16	4⅝	3 13/16	4⅞
★P-3165	18.00	350-350	200	5 5	2 3	6.3 6.3	.6 7	3 x 3⅞	4⅝	3¾	5
★P-3169	27.00	†390-390 325-325	160 130	5 5	3 3	6.3 6.3	8 4	3 x 3⅝	4⅝	3 13/16	4¾
★P-3166	30.00	400-400	300	5 5 5	2 3 6	12.6 c.t.	10	3½ x 4¼	5½	4⅜	5¾
★P-3174	40.00	†450-0-450 325-325	240 200	5 5 5	3 3 3	6.3 6.3 6.3	6 6 2.6	3⅝ x 3⅞	5 15/16	4 7/16	5⅝
★P-3170	10.50	1750	2	2.5	2	6.3 or 2.5	.9 2	2 x 1 15/16	3⅛	2⅝	2⅞
★P-3171	14.00	2500	5	2.5	2	6.3 or 2.5	3 3	2½ x 2 3/16	3⅞	3 3/16	3⅜

		P-3169	P-3174
†Max. M.A.	High Tap Only	270	400
Max. M.A.	Low Tap Only	290	430

[1] All TV Powers are Fully Flux and Static Shielded.

FILAMENT TRANSFORMERS For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles

Type No.	List Price	Sec. Volts	Sec. Amp.	Insulation Volts	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
P-2939	$ 3.75	2.5 c.t.	5	2500	2	3¼	1⅝	A
P-2940	5.75	2.5 c.t.	10	7500	3	3⅝	2¼	B
P-3042	6.25	2.5 c.t.	10	10000	2⅞	3⅜	2¼	EH
P-3040	4.25	5 c.t.	3	2500	2	3¼	2⅛	A
P-2941	5.00	5 c.t.	6	2500	2¼	3 11/16	1⅞	A
P-2942	6.90	5 c.t.	12	2500	3 7/16	2 13/16	2⅜	EV
P-2943	11.00	5 c.t.	30	2500	3⅞	3 3/16	4	DL
P-2944	2.80	6.3 c.t.	1	2500	1⅝	2 13/16	1½	A
★P-3074	3.60	6.3	1.2	3500	2	3¼	1⅝	A
P-2945	3.60	6.3 c.t.	2	2500	2	3¼	1⅝	A
P-2946	4.25	6.3 c.t.	3	2500	2	3¼	1⅞	A
P-2947	5.50	6.3 c.t.	6	2500	3	3⅝	2¼	B
P-2948	7.50	6.3 c.t.	10	2500	3 7/16	2 13/16	2⅞	EV
P-2960	5.00	7.5 c.t.	4	2500	2⅝	3⅛	1⅞	B
P-2961	6.90	6.3 c.t. 6.3 c.t.	3 3	2500	3	3⅝	2¼	B
P-3041	6.90	5 c.t. 6.3 c.t.	3 3.6	2500	2½	4	2⅛	A
P-3143	8.50	7.5 c.t.	8	2500	3½	2 15/16	3⅛	D
P-3145	8.50	10 c.t.	5	2500	3½	2 15/16	3	D
P-3146	10.00	10 c.t.	10	3000	3⅞	3 3/16	3⅝	D
P-2959	4.50	12.6 c.t.	2	2500	2	3¼	1⅞	A
P-2962	4.50	25.2 c.t.	1	2500	2	3¼	1⅞	A
P-2963	10.00	12.6 or 25.2	7 3.5	2500	3⅛	2⅝	3½	D

VIBRATOR TRANSFORMERS For Operation From 6 V. Battery and Vibrator

Type No.	List Price	Sec. DC Volts to Filter	Sec. M.A.	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
P-2969	$5.25	150	40	2¼	2⅞	1¾	B
P-2970	5.75	225	40	2⅝	3 5/16	2⅛	B
P-2971	6.00	250	50	2⅝	3⅛	2¼	B
P-2972	6.90	260	60	3	3⅝	2⅛	B
P-3068	5.00	260	60	2 3/16	2⅝	1⅞	C
P-4071	7.50	250	50	3	2⅜	2 3/16	JT
P-4076	7.00	265	55	3¼	2⅝	2⅝	JG
P-4077	7.50	280	65	3⅞	2¼	2⅜	JT
P-4078	6.90	270	60	2⅝	2 3/16	2¾	JT
P-4079	8.00	270	75	3 1/32	2⅜	2½	JT

★Indicates TV Replacement.

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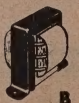
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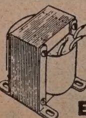
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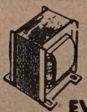
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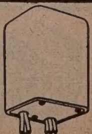
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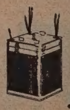
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TRANSFORMERS

BLOCKING OSCILLATOR TRANSFORMERS

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
★A-3000 Vertical	$2.50	1:4.2	2	1⅜	2⅜	1¼	A
★A-3001 Vertical	3.75	†	2⅜	1⅝	2¹³⁄₁₆	1½	A
★A-4000 Vertical	3.25	1:4.2	1¹⁵⁄₁₆	1¾	2⁵⁄₁₆	1½	J
★A-3002 Horizontal	2.75	2:1	2	1⅜	2⅜	1¼	A
★A-4002 Horizontal	3.75	2:1	1¹⁵⁄₁₆	1¾	2⁵⁄₁₆	1½	J

† Pri./Sec. 1—1:2.08, Pri./Sec. 2—1:1.

TV COMPONENTS

HORIZONTAL OUTPUT AND HI-VOLTAGE TRANSFORMERS

Type No.	List Price	Picture Tube	Equivalent Type	Mtg. Type
★HVO-3	$ 8.00	7DP4—10 BP4 Etc.	211T1—211T3	M
★HVO-5	10.00	16 AP4 Etc.	211T5	M
★HVO-6‡	12.00	7″ to 24″	GE 77J1	*
★HVO-7‡	12.00	7″ to 22″	GE 77J1	N
★HVO-8‡	7.00	10″ to 24″ Direct Drive System	RCA 74951	Air Core
★MWC-1	2.25	Width Linearity Control with AGC Winding	None	O

FOCUS COILS

Type No.	List Price	Tube Size	Equivalent Type	DC. Res. Ohms	Mtg. Type
★MF-1	$8.25	10″–12″	202D1	247	P
★MF-2	11.00	16″	202D2	470	S
★MF-3	8.25	10″–12″		360	P

DEFLECTION YOKES

Type No.	List Price	Tube Size	Equivalent RCA Type	Def. Angle
★MD-12	$9.00	10″–16″	201D1–D3–D12	53°
★MD-70‡	8.75	12″–16″		70°
★MDF-70▲	11.00	12″–24″	206D1	70°
★MDF-30▲	11.00	10″–24″		70°

INDUSTRIAL—AMATEUR

OUTDOOR TYPE UNIVERSAL LINE TRANSFORMER

To Couple Various Line Impedances to a Voice Coil
Universal Mounting Bracket

Type No.	List Price	Ohms Impedance Primary	Ohms Impedance Sec.	Watts	Mtg. Center Case	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
A-4040	$11.00	250-500-1000-1500-2000	4-8-16	8	2¾ x 3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO
A-4041	11.75	250-500-1000-1500-2000	4-8-16	12	2¾ x 3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO
A-4042	16.25	250-500-1000-1500-2000	4-8-16	25	2¾ x 3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO
A-4043	11.75	45-50	4-8	12	2¾ x 3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO

DRIVER TRANSFORMERS To Couple Driver Plate to Amplifier Grids

Type No.	List Price	Driver	Output	Ratio, Pri. to ½ Sec.	Class	Pri. M.A.	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-2920	$3.00	6C5, 1H4, 30, 49	Single 1J6, 19, Push-pull 30, 49	2.5:1	B	10	2⅜	1⅝	2¹³⁄₁₆	1½	A
A-2921	4.25	6F6, 2A5, 42	PP6F6, 2A5, 6L6	1.7:1, 1.5:1, 1.3:1	AB	35	2¹³⁄₁₆	2	3¼	1⅝	A
A-2922	5.00	6A6, 6C5 6N7, 46	Single 6A6, 6N7, Push-pull 46	5:1, 4:1, 3:1, 2.5:1	B	20	2¹³⁄₁₆	2	3¼	1⅝	A
A-3120	12.75	500 ohm line	Class B Grids 15 Watt Capacity	1:.75, 1:.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3	B	------	2³⁄₁₆ x 2	3³⁄₁₆	2⅝	3⅜	DL
A-3121	14.50	500 ohm line	Class B Grids 30 Watt Capacity		B	------	2¼ x 2¼	3³⁄₁₆	3	3¾	DL
A-3123	6.00	PP6A6, 53, PP6C5,6N7, 6J5	PP6N7, 6A6, 53, PP6L6, T21	5:1*	B AB$_2$	15	2 x 1¹¹⁄₁₆	3⅛	2⅝	2⅝	D
A-3124	6.00	6F6, 46, 59, 2A5, 42	PP46, 59, PP6L6, 807	2.2:1	B AB$_2$	30	2 x 1¹¹⁄₁₆	3⅛	2⅝	2⅝	D
A-3125	8.50	6F6,2A5,47,42	PP6L6	1.4:1*	AB$_2$	40	2¼ x 2	3½	2¹⁵⁄₁₆	3⅛	D
A-3126	6.90	PP2A3, 6L6, 45, 6V6, 6F6	PP800,203A,811,812, 812A, RK18,RK58,T20, TZ40, T55, 807, 809, 838, 845, 35, 100TH	2:1	B	40	2 x 1¹¹⁄₁₆	3⅛	2⅝	2⅝	D

★Indicates TV Replacement. ‡Ferrite Core. * Same as original 77J1. ▲ Cosine.

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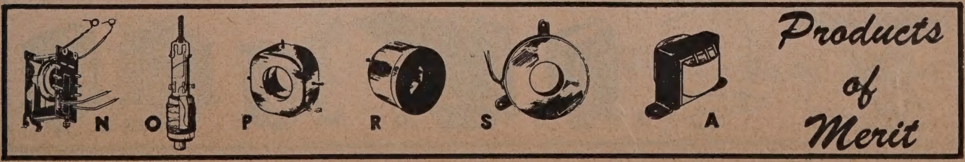

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FINE RADIO PARTS

TRANSFORMERS

MODULATION TRANSFORMERS For Specific Applications

Type No.	List Price	Output Tubes	Ohms Impedance		Max. M.A.		Watts	Dimensions			Mtg.
			Pri.	Sec.	Pri.	Sec.		H.	W.	D.	
A-3008	$3.60	PP6AQ5, 6V6, 6F6, Single 6A6, 6N7, 53	10000 c.t.	4000-5000 7500-10000 12000	70	60	10	2¼	2⅞	2⅛	B
A-3109	8.50	PP2A3, 6A3, 6B4, 6L6, 45, 46, 59	6000 c.t. 3800 c.t. 3000 c.t.	5000-8000 10000	80	100	25	3⅛	2⅝	2¾	D
A-3110	14.50	PP6L6, 807, RK41, HY56, HY61, HK24	6600-3800 c.t.	4000-5000 7500-10000 12000	175	150	60	4¼	3½	3¾	D
A-3113	22.00	PP 800, 809, TZ-40, T-55, HK-54, RK-31, HY-40, 811A, 807, 812A, 5514	15000-6900c.t.	3000-4000 5000-6000	250	300	175	4⅝	3 13/16	5⅝	D

UNIVERSAL MODULATION TRANSFORMERS Tapped Series-Parallel Coils Provide a Wide Range of Modulation Ratios

Type No.	List Price	Pri. Impedance	Pri. M.A. per Side	Sec. Impedance	Max. Sec. M.A. ‡	Watts	Dimensions			Mtg.
							H.	W.	D.	
A-3104	$10.75	2000-20000	50	2000-20000	50/100	15	3 3/16	2⅝	2¾	DL
A-3105	16.00	2000-20000	150	2000-20000	150/300	60	3⅞	3⅛	4⅛	DL
A-3106	22.50	2000-20000	220	2000-20000	220/440	125	4⅝	3 13/16	4⅝	DL

‡Series/Parallel

PLATE TRANSFORMERS For Small Transmitters. DC Voltage Ratings are Approx. Values Obtained at Output of a 2 Section Choke Input Filter Using Mercury Vapor Rectifier Tubes. Pri. is for 115 V. 60 cy.

Type No.	List Price	Sec. Rms. Volts	Sec. DC Volts	DC Sec. M.A.	Dimensions			Mtg.
					H.	W.	D.	
P-3175	$10.50	550-550	400	150	3 9/16	3	3⅞	D
P-3157	13.75	660-660 † 550-550	500 400	250	4⅝	3 13/16	4⅜	D
P-3158	17.00	1080-1080 500-500	1000 ‡ 400	125 150	4⅝	3 13/16	5	D
P-3159	16.50	900-900 800-800	750 600	225	4⅝	3 13/16	5⅛	D
P-3167	41.00	1450-1450 1175-1175	1200 1000	300	5¾	6⅛	4	EH
P-3168	52.00	2100-2100 1800-1800	1750 1500	300	5¾	6⅛	4½	EH
P-4062	80.00	2900-2900 2385-2385	2500 2000	300	8½	6½	5⅝	H

‡For dual operation with simultaneous use of both sec. ratings. †Has 40-volt bias tap.

FILTER CHOKES For Small Transmitter and Amplifier Applications

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Dimensions			Mtg.
						H.	W.	D.	
C-3192	$5.00	15	85	325	1500	3⅛	2⅝	2⅝	D
C-3193	5.00	10	110	200	1500	3⅛	2⅝	2⅝	D
C-3194	6.00	12	150	230	1500	3½	2 15/16	3⅛	D
C-3195	8.75	15	150	180	2000	3⅞	3 3/16	3⅜	D
C-3196	7.00	5	200	80	1500	3½	2 15/16	3⅛	D

FILTER SMOOTHING CHOKES For Transmitter Power Supplies

C-3180	$6.50	10	150	210	3000	3⅛	2⅝	2¾	D
C-3181	8.00	10	200	140	3000	3½	2 15/16	3½	D
C-3182	11.00	10	250	125	3000	3⅞	3 3/16	3¾	D
C-3183	11.50	8	300	80	3000	3⅞	3 3/16	3¾	D

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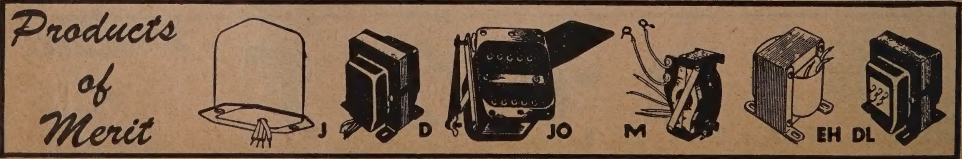


TRANSFORMERS

FILTER INPUT OR SWINGING CHOKES

C-3187	$6.50	4-16	150	210	3000	3⅛	2⅝	2¾	D
C-3188	8.00	4-16	200	140	3000	3½	2¹⁵⁄₁₆	3½	D
C-3189	11.00	4-16	250	125	3000	3⅞	3³⁄₁₆	3¾	D
C-3190	11.50	3-1[illegible]	300	80	3000	3⅞	3³⁄₁₆	3¾	D

AC-DC VIBRATOR TRANSFORMER For Operation from 6 V. Battery and Vibrator or 115 V. 60 cy. Line

Type No.	List Price	H.V. Secondary		Filament		Dimensions			Mtg.
		DC Volts	MA	Volts	Amps	H.	W.	D.	
P-3176	$15.00	300	160	6.3 or 5 @ 3 6.3 @ 4.5	3 4.5	4⅝	3¹³⁄₁₆	4¼	D
P-3075	10.00	330	100	6.3	4	3⅞	3³⁄₁₆	3⅜	D

PHOTO-FLASH POWER TRANSFORMER Primary for 117 V. 60 Cy. Line or 4 V. Battery Vibrator (or Charger Winding)

Type No.	List Price	Secondary		Mtg. Centers	Dimensions			Mtg.
		AC Volts	DC M.A.		H.	W.	D.	
P-3065	$8.00	1100	1.5	2¹¹⁄₁₆	2⅝	3⅛	2	B

STEP-DOWN AUTOTRANSFORMERS Input 220—250 V. 60 cy. Output 110—125 V. Pri. Cord and Plug. Sec. Receptacle.

Type No.	List Price	Output Watts	Dimensions			Mtg.
			H.	W.	D.	
P-3161	$9.75	80	3½	2¹⁵⁄₁₆	3	D
P-3162	13.25	150	3⅞	3³⁄₁₆	3⅝	D
P-3163	17.75	250	4⅝	3¹³⁄₁₆	4	D
P-3164	21.50	500	4⅝	3¹³⁄₁₆	4⅜	D
P-4065	50.00	1000	7¼	6⅝	5⅝	H

ISOLATION TRANSFORMERS Equipped with Pri. Cord and Plug—Sec. Standard Receptacle. Static Shielded

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3177	$45.00	117	105–115–125	350	5⁵⁄₁₆	4½	5¼	D

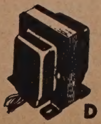
ISOLATION TRANSFORMERS To Provide Isolation Between Line and Associated Circuits. Primary for 50-60 Cy. Static Shielding Between Primary and Secondary.

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3096	$ 6.90	117	117	40	3⅛	2⅝	2⅝	B
P-3197	10.00	117	117	80	3⅞	3³⁄₁₆	3½	D

ISOLATION TRANSFORMERS Equipped with Line Cord and Standard Receptical

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3172	$50.00	117	117	500	5⅜	4⅝	6½	D
P-3198	18.75	117	117	100	4¼	3⁹⁄₁₆	3¾	D
P-3199	35.00	117	117	250	4⅝	3¹³⁄₁₆	4⅞	D

All prices subject to trade discount, and change without notice.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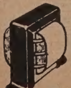
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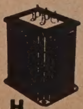
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Products of Merit

PEERLESS
ELECTRICAL PRODUCTS

DIVISION
ALTEC
LANSING CORPORATION

161 Sixth Avenue
New York 13, N.Y.

9356 Santa Monica Blvd.
Beverly Hills, Calif.

CASE A

CASE D

CASE E

CASE K

CASE Q

CASE S

CASE X

The Peerless standard commercial line includes power, filament, plate, input, interstage, bridging, output, impedance matching transformers, reactors, and power chokes. Power transformers rated for maximum heat rise of 55°C. Output transformers deliver full rated power ±3 db 30-10,000 cps.

Unsurpassed 20-20 line audio transformers include input, interstage, bridging, output and impedance matching. Frequency response is flat within 1 db. 20-20,000 cps, with good transmission up to 50 KC. Output transformers deliver rated power ±3 db. 20-20,000 cps.

- * Suffix letter on Type Number indicates case style.
- † Low flux-density core for pre-amplifiers.
- ‡ All Primaries are 117 v 60 cycles. All transformers in R group are supplied with electro-static shield.
- ● Secondary impedance is total of two separate windings.
- ▲ Maximum operating level, 6 mw reference.
- ■ All low-impedance secondary windings of high-level output transformers may be worked into loads within 20% of the rated impedance.
- ★ For RMA standardized 70 volt line.

COMBINATION PLATE AND FILAMENT TRANSFORMERS ‡

Type Number*	High Voltage Secondary		Filament Current, Amperes		Dimensions, Inches			Weight Lbs.	List Price
	AC Volts	DC MA.	5 V.	6.3 V. C.T.	Height	Depth	Width		
R-080-A†	275-0-275	20		2.	3⅛	2⅞	2 9/16	2¼	$9.00
R-320-A	325-0-325	70	3.	3.	3½	3⅝	2⅞	4	9.40
R-400-A	350-0-350	90	3.	4.	4 3/16	3⅝	3¾	6¼	10.40
R-480-A	350-0-350	120	3.	5.	4	3½	3¼	6¾	11.80
R-480-Q	350-0-350	120	3.	5.	5	4⅜	4 1/16	8	21.00
R-482-A	350-0-350	120	3.	3. - 3.	4	3½	3¼	4	12.50
R-560-A	400-0-400	200	3.	6.	5	4⅞	4⅜	11¾	16.90
R-800-A	400-0-400	300	4.	4. - 5.	5	6¼	4⅜	16½	24.00

SMOOTHING CHOKES

Type Number*	Current D.C. MA.	Inductance Henrys	Resistance Ohms	Test Volts R.M.S.	Dimensions, Inches			Weight Lbs.	List Price
					Height	Depth	Width		
C-305-X	90	10	285	1500	2⅛	3¼	2¼	1½	$3.20
C-315-X	225	3	80	1500	2⅜	2¾	2½	1¾	3.65
C-325-A	120	10	240	1500	3⅛	2⅞	2 9/16	2¼	5.50
C-390-A	200	10	150	1500	3⅝	3½	3⅛	5½	7.60
C-455-A	250	10	110	2500	4 3/16	3¾	3¾	6½	10.70

PLATE TRANSFORMERS

Type Number*	Secondary AC Volts	DC Volts Choke Input	DC MA. Choke Input		Primary Choke 50-60 Cycle	Dimensions, Inches			Weight Lbs.	List Price
			ICAS	CCS		Height	Depth	Width		
P-330-K	1175-880-0-880-1175	750-1000	425	300	117	7	8½	5¾	27	$47.50

FILAMENT TRANSFORMERS

Type Number*	Secondary Current, Amperes			Test Volts R.M.C.	Primary Volts 50-60 Cycle	Dimensions, Inches			Weight Lbs.	List Price
	2.5 V. C.T.	6.3 V. C.T.	10 V. C.T.			Height	Depth	Width		
F-012-X		1.		2000	117	1⅝	2⅞	1⅝	½	$2.80
F-072-X		3.6		2000	117	2⅜	3¾	2¼	1½	4.60
F-096-X	10.			7500	117	2⅝	4¼	2½	2⅛	5.95
F-139-E		8.		2000	117	3½	3⅛	2⅞	3½	8.00
F-140-E			5.	2000	117	3½	3⅛	2⅞	3½	8.00

REPLACEMENT OUTPUT TRANSFORMERS

Type Number*	Application	Impedance, Ohms		Max. Pri. M. DC	Audio Watts	Dimensions, Inches			Weight Lbs.	List Price
		Primary	Secondary			Height	Depth	Width		
X-412-X	1-6F6, 6V6, 41, 6K6, 6G6, 6A4, 25A6, etc.	10,000-7000 5000-3500	6 to .2	40	5	1 7/16	2½	1½	⅛	$3.40
X-424-X	1 or 2-41, 42, 6K6, 6V6, etc.	10, 000-7000 5000-3500 C.T.	6 to 1.04	40	7	1⅝	2⅞	1⅝	½	3.50
X-428-X	Universal 1or 2 tubes	14,000-10,000 7000-5000-4000C.T.	16 to .13	50	10	2	3½	2	1	4.25
X-432-X	2-6F6, 6V6, 6K6, 42, 2A5, 45, 71, 50, 6L6	10,000 8000 C.T.	10-6 4-2½	50	15	2⅜	3¾	2¼	1½	4.90

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20-20 OUTPUT TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms		Max.	Primary DC MA.		Dimensions, Inches			Weight	List
		Primary	Secondary	Level ▲	Max.	Unbal.	Height	Depth	Width	Lbs.	Price
S-220-Q	Primary may be used single ended or in Push-Pull — two secondaries with balanced capacitance to ground—parallel feed recommended. 60 db magnetic shield.	12,500 3125 or 15,000 3750	500, 250 125, 62½ or 600, 300 150, 75	+15 db 6 mw ref.	15 Per Winding Push-Pull Only	0	4⅛	3 3/16	3 1/16	2⅛	$45.00
S-230-Q ■	Secondary may be operated with one end grounded.	6600 C.T.	16, 8, 4, 2	20 watts +35 db	70	7	4⅝	3⅝	3½	6	26.00
S-240-Q ■	Same as S-230-Q.	5000 C.T.	16, 8, 4, 2	20 watts	90	9	4⅝	3⅝	3½	6	26.00
S-242-Q ★	Secondary should be operated balanced to ground.	5000 C.T.	500, 250 125, 62½	20 watts +35 db	90	9	4⅝	3⅝	3½	6	26.50
S-245-Q ■	Same as S-230-Q.	3000 C.T.	16, 8, 4, 2	20 watts	110	11	4⅝	3⅝	3½	6	26.00
S-265-Q ■	Two center-tapped primaries may be used in series or parallel. Secondary may be operated with one end grounded.	10,000 C.T. 2500 C.T.	16, 8, 4, 2	40 watts 38 db	110 220	11 22	5	4 5/16	4 1/16	10	45.00
S-270-Q ★	Same as S-265-Q except secondary should be operated balanced to ground.	10,000 C.T. 2500 C.T.	500, 250 125, 62½	40 watts +38 db	110 220	11 22	5	4 5/16	4 1/16	10	45.00
S-275-S ■	For operation from triodes. Load impedances may be varied over range of 3 to 1. May be operated at 100 watts in restricted freq. range 25-16,000 cps.	4000 C.T. to 12,000 C.T.	16, 8, 4, 2 to 48, 24, 12, 6	80 watts +41 db See Data	120	12	6	6	5⅜	24	80.00

20-20 INPUT TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms		Max.	Primary DC MA.		Dimensions, Inches			Weight	List
		Primary	Secondary ●	Level ▲	Max.	Unbal.	Height	Depth	Width	Lbs.	Price
K-221-Q	Secondary used single ended or Push-Pull — has two winding with balanced capacitance to ground. Static shield between primary and secondary. 90 db magnetic shield.	500, 250 30 or 600, 300 36	70,000 or 84,000	—20 db	0	—	3½	2⅜	2½	1⅝	$36.50
K-221-D	Same data as K-221-Q except has only 30 db electro-magnetic shielding.	500, 250 30 or 600, 300 36	70,000 or 84,000	—20 db	0	—	2⅞	1¾	1¾	1⅛	30.00
K-251-Q	Same as K-221-Q except has 30 db electro-magnetic shielding.	500, 250 125, 62½ or 600, 300 150, 75	40,000 or 48,000	+15 db	0	—	4⅛	3 3/16	3 1/16	2⅜	45.00
K-281-Q	For Push-Pull only—two secondaries with balanced capacitance to ground.	500, 220 125, 56, 14 or 600, 265 150, 67, 17	30,000 or 36,000	+30 db	0	—	4⅝	3⅝	3½	5½	52.50

20-20 INTERSTAGE TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms		Max.	Primary DC MA.		Dimensions, Inches			Weight	List
		Primary	Secondary	Level ▲	Max.	Unbal.	Height	Depth	Width	Lbs.	Price
G-212-Q	Both primary and secondary may be used single-ended or in Push-Pull—has two secondary windings with balanced capacitance to ground—static shield between primary and secondary—parallel feed recommended. 90 db magnetic shield.	10,000 2500	40,000 10,000	—20 db	5 Per Winding Push-Pull Only	0	3½	2⅛	2½	1⅝	$36.50
G-252-Q	Same as G-212-Q except has 30 db electro-magnetic shield.	10,000 2500	40,000 10,000	+15 db	10	1.0	4⅛	3 1/16	3 1/16	2⅜	45.00

20-20 MATCHING TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms		Max.	Primary DC MA.		Dimensions, Inches			Weight	List
		Primary	Secondary ■	Level ▲	Max.	Unbal.	Height	Depth	Width	Lbs.	Price
E-243-Q ★	Line to speaker. Primary impedances designed to conform with RMA 70v line. Insertion loss less than ¾ db. Flanged mounting plate furnished.	1000 C.T. 750, 500 C.T. 250, 125	16, 12, 8, 4, 2	+35 db (20 watts)	5, 6⅔ 10, 20	—	6	4⅝	3⅝	3½	$27.00

20-20 TRIODE AMPLIFIER KIT

No. 10722

Kit to build Peerless A-100-A, 15 Watt, Triode Amplifier: Consists of one each; R-480-Q, S-240-Q, X-432-X, L-370-D, 10581 Terminal Board, 10723 Chassis, 10726 Chassis Bottom. (1) 10725 Wiring Diagram and two 10724 Part, schematic (1 cemented on 10726 plate). Condensers, resistors, sockets, etc., not included. Procure from your parts supplier. **Specifications** of completed amplifier: **Power:** Rated, 15 watts —at 5% harmonics (100 and 5000 cps.), 18 watts—at 8% IM (40-2000 cps.), 17 watts. **Frequency Response:** Within 1 db, 20-20,000 cps. Note: Phono input equalized for variable reluctance pickup. **Gain,** 1000 cps.: Radio input 84 db—Phono input 107 db. **Impedances:** Input, 500,000 ohms each—Output, 16 ohms (can be connected for 8, 4, or 2 ohms). **Tubes:** 2-6J7, 1-6J5, 2-6SN7, 2-6A5G, 1-5V4G. **Controls:** 1-gain, 1-low frequency boost (continuously variable), 1-high frequency droop (4 step pi type), 1-channel selector, 1-A.C. switch. **Chassis:** 14″ x 10″ x 3″ high (8″ overall). **Shipping Weight:** 32 pounds.

List Price

$78.00

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STANDARD OUTPUT TRANSFORMERS

Type Number*	Application	Freq. Range ±1 db	Impedance, Ohms Primary	Impedance, Ohms Secondary	Pri. Max.	DC MA. Unbal.	Audio Watts	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
S-448-Q ▲	Single or push-pull plates to line. 30 db hum bucking.	20 20,000	20,000 C.T. 12,500 C.T. 5000 3125	500 C.T. 200 C.T. 333-250 125-50	15	2	+ 10 db	3½	2⅜	2½	1½	**$24.75**
S-464-X	Single or push-pull plates to line.	100 5000	18,000 C.T.	500-200 50	10	2	5	1⅝	2⅞	1⅝	½	**4.15**
S-508-A	P.-P. plates to VC.	30-15,000	8000 C.T.	16-12-8-4	45	5	10	2 13/16	2 13/16	2¼	1¾	**9.25**
S-516-A	P.-P. plates to VC.	30-15,000	6600 C.T.	16-12-8-4	70	7	20	3⅛	3	2 9/16	2½	**11.75**
S-524-A	P.-P. plates to VC or line.	30-15,000	6600 C.T. 5000 C.T.	500 C.T. 125 16-12-8-4	70	7	20	3½	3¼	2⅞	3	**13.75**
S-530-A	P.-P. plates to speaker or line.	30-15,000	5000 C.T. 3000 C.T.	500 C.T. 125 16-12-8-4	90	9	20	3½	3¼	2⅞	3	**13.75**
S-532-A	P.-P. plates to VC.	30-15,000	5000 C.T. 3000 C.T.	16-12-8-4	90	9	20	3⅛	3	2 9/16	2½	**13.00**
S-552-A ★	P.-P. plates to speaker or line.	30-15,000	3800 C.T. 3200 C.T.	330, 82½ 16-12-8-4-2	250	25	60	4¾	4⅝	3⅞	9	**29.00**

STANDARD IMPEDANCE MATCHING TRANSFORMERS

Type Number*	Application	Impedance, Ohms Primary	Impedance, Ohms Secondary	Radio Watts	Freq. Range	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
E-372-Q ▲	Mic. or Line to Line—Static Shield Btwn. Pri. & Sec. 60 db. Mag. Shield.	500 C.T. 333-250 200 C.T. 125-50	500 C.T. 333-250 200 C.T. 125-50	+10 db	20-20,000	3½	2⅜	2½	1½	**$27.00**
E-374-X ★	Line to Speaker—RMA Standardized line for Sound Distribution. Insertion Loss 0.6 db—¼ watt tap for lines of 500 or less ohms.	10,000 C.T. 7,500 5000 C.T. 2500-1250	16-12-8-4-2	4	30-15,000	2⅜	3¾	2¼	1¾	**10.50**
E-377-X	Line to Speaker.	500	16-8	5	40-10,000	2	3½	2	1	**4.75**
E-386-E ★	Line to Speaker—RMA Standardized line for Sound Distribution. Insertion Loss 0.6 db Max.	1600 C.T. 1200 800 C.T. 400-200	16-12-8-4-2	24	30-15,000	3⅞	3	3¼	4¼	**18.50**
E-392-E ★	Same Data as E-386-E.	625 C.8.-470 312 C.T. 156-78	16-12-8-4-2	64	30-15,000	4¾	4⅞	3⅞	9	**28.00**

STANDARD INPUT TRANSFORMERS

Type Number*	Application	Impedance, Ohms Primary	Impedance, Ohms Secondary	Freq. Range ±1 db	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
K-049-D ▲	Line, Mixer or Microphone to Singl Grid. Maximum Level = Odb. 30 db Magnetic Shielding.	500 C.T.-330-250 200 C.T.-125-50	60,000	20-20,000	2⅞	1¾	1¾	1	**$17.50**
K-049-Q	Same as K-049-D except has 90 db Magnetic Shielding.	500 C.T.-333-250 200 C.T.-125-50	60,000	20-20,000	3½	2⅜	2½	1½	**25.50**
K-054-Q ▲	Line, Mixer, or Microphone to 2 Grids Max. Level = +10 db Hum-bucking.	500 C.T.-333-250 25-200 C.T.-125-50	70,000	20-20,000	3½	2⅜	2½	1½	**25.50**
K-063-A ▲	Line to Push-Pull Grids Max. Level = 34 db.	500 C.T.-125	12,500 ●	30-15,000	3⅛	3	2 9/16	2½	**12.00**

STANDARD INTERSTAGE TRANSFORMERS

Type Number*	Application	Freq. Range ±1 db	Impedance, Ohms Primary	Impedance, Ohms Secondary	Turns Ratio	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
G-306-X	Single Plate to 1 or 2 Grids.	100 5000	10,000	96,000 C.T.	1:3.1	1⅝	2⅞	1⅝	½	**$ 4.00**
G-318-D ▲	Single Plate to Single Grid. Maximum Level = 0 db, 30 db. Magnetic Shielding.	20-20,000	10,000	60,000		2⅞	1¾	1¾	1	**16.00**

STANDARD EQUALIZING REACTORS

Type Number*	Application	Res. Ohms	Ind. Henrys	DC MA. Normal	DC MA. Max.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
L-360-D	Tone Control (Cathode Circuit).	220	23	0	0	2⅞	1⅝	Round	½	**$ 4.80**
L-370-D	Low Pass Filter	725	4	0	10	1¾	1⅝	Round	⅝	**10.00**

TELEVISION
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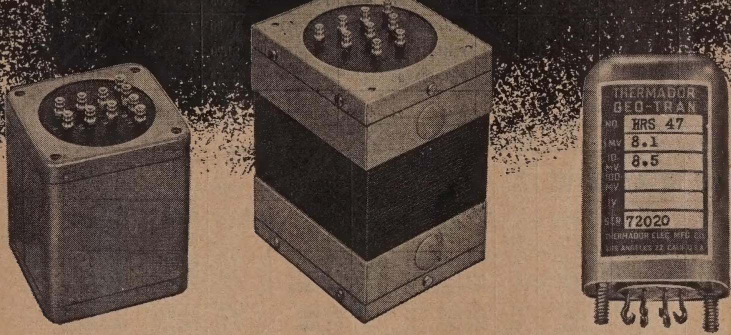
TRANSFORMERS


THERMADOR
GEO-TRAN
NO. HRS 47
1 MV 8.1
10 MV 8.5
100 MV
1 V
SER 72020
THERMADOR ELEC MFG CO
LOS ANGELES 22 CALIF U.S.A.

For over 35 years, Thermador, the west's largest manufacturer of electrical appliances and transformers, has consistently offered products of proven high quality and unfailing dependability. Meticulous supervision and rigid adherence to engineering specifications assures you transformers of unexcelled quality. Engineering ingenuity and long years of manufacturing experience enables us to render you invaluable assistance in the designing and production of transformers to meet specific requirements; joint Army-Navy specifications.

Included in the Thermador Transformer line are Audio, Auto, Geophysical, Driver, Filament, High-Fidelity Audio, Input, Midget Plug-In, Output, Plate, Power, Television and Tube to Line transformers. Thermador also manufactures Chokes and Reactors.

INQUIRIES INVITED

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"Seven Leagues Ahead"

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CHICAGO

NEW EQUIPMENT

POWER TRANSFORMERS FILTER REACTORS

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS—PLATE AND FILAMENT SUPPLY

For CAPACITOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary Volts A-C-	Ma. D-C	Output V.D-C	Filaments Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.	Wt. Lbs.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price	C-Type Mounting Cat. No.	Case No.	List Price
225-0-225	40	210	5	2	6.3CT	2	3¼	PHC-40	17	$20.00	PSC-40	17	$ 9.35	PCC-40	16	$ 6.60
270-0-270	55	260	5	2	6.3CT	2	3½	PHC-55	17	21.95	PSC-55	17	11.00	PCC-55	16	7.15
300-0-300	60	285	5	2	6.3CT	3	4½	PHC-60	19	22.90	PSC-60	19	11.55	PCC-60	18	8.25
335-0-335	70	320	5	2	6.3CT	3	4½	PHC-70	19	23.75	PSC-70	19	12.65	PCC-70	18	8.80
330-0-330	85	320	5	2	6.3CT	3	6	PHC-85	20	25.50	PSC-85	20	14.55	PCC-85	20	10.15
345-0-345	105	320	5	2	6.3CT	3.5	6½	PHC-105	21	28.05	PSC-105	21	15.40	PCC-105	20	11.00
375-0-375	120	380	5	3	6.3CT	4	9½	PHC-120	21	29.70	PSC-120	22	16.20	PCC-120	22	12.35
370-0-370	150	390	5	3	6.3CT 6.3CT	4 1	11½	PHC-150	22	36.75	PSC-150	22	21.45	PCC-150	22	16.50
385-0-385	200	390	5	3	6.3CT 6.3CT	4.5 1	12¼	PHC-200	22	38.70	PSC-200	22	22.80	PCC-200	22	17.85
400-80-0-80-400	250	410	5	6	6.3CT 5	7 2	15	PHC-250	24	46.20	PSC-250	24	26.40	PCC-250	24	22.00

For REACTOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary Volts A-C-	Ma. D-C	Output V.D-C	Filaments Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.	Wt. Lbs.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price	C-Type Mounting Cat. No.	Case No.	List Price
350-0-350	55	260	5	2	6.3CT	2	3¼	PHR-55	17	$21.95	PSR-55	17	$11.25	PCR-55	16	$ 7.95
425-0-425	70	320	5	2	6.3CT	3	4½	PHR-70	19	23.75	PSR-70	19	12.90	PCR-70	18	9.05
440-0-440	85	325	5	2	6.3CT	3	6	PHR-85	20	25.50	PSR-85	20	14.85	PCR-85	20	10.45
445-0-445	105	320	5	2	6.3CT	3.5	6½	PHR-105	21	28.05	PSR-105	21	15.65	PCR-105	20	11.25
500-0-500	120	390	5	3	6.3CT	4	9½	PHR-120	21	29.70	PSR-120	22	16.50	PCR-120	22	12.65
505-0-505	150	395	5	3	6.3CT 6.3CT	4 1	11½	PHR-150	22	36.75	PSR-150	22	21.70	PCR-150	22	16.75
520-0-520	200	390	5	3	6.3CT 6.3CT	4.5 1	12¼	PHR-200	22	38.70	PSR-200	22	23.10	PCR-200	22	18.15
550-370-75-0-75-370-550	300	420	5	6	6.3CT 6.3CT	1 5	17½	PHR-300	24	52.80	PSR-300	24	33.00	PCR-300	24	25.85

FILTER REACTORS

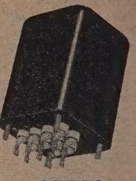
Inductance in Henries	Max. Current Ma. D-C	D-C Resistance in Ohms	Insulation Test Volts	Wt. Lbs.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price	C-Type Mounting Cat. No.	Case No.	List Price
15	40	475	2,500	1½	RH-1540	12	$10.55	RS-1540	12	$ 4.65	RC-1540	12	$ 3.30
15	55	385	2,500	2	RH-1555	13	10.90	RS-1555	13	5.50	RC-1555	12	4.10
15	85	270	2,500	2¾	RH-1585	14	11.55	RS-1585	15	6.60	RC-1585	14	4.95
12	105	170	2,500	4	RH-12105	17	13.55	RS-12105	17	7.15	RC-12105	16	5.75
12	150	150	2,500	5½	RH-12150	19	15.50	RS-12150	19	9.60	RC-12150	18	7.95
12	200	140	2,500	7	RH-12200	20	18.25	RS-12200	21	11.25	RC-12200	20	9.60
10	55	222	2,500	1¾	RH-1055	13	10.90	RS-1055	13	5.20	RC-1055	12	3.85
10	85	175	2,500	2½	RH-1085	14	11.55	RS-1085	15	6.30	RC-1085	14	4.65
8	105	103	2,500	3¾	RH-8105	17	13.55	RS-8105	17	6.85	RC-8105	16	5.50
8	150	100	2,500	5¼	RH-8150	18	15.50	RS-8150	19	9.35	RC-8150	18	7.70
8	200	85	2,500	7	RH-8200	20	18.25	RS-8200	21	11.00	RC-8200	20	9.35
8	250	90	2,500	10½	RH-8250	22	22.00	RS-8250	22	13.75	RC-8250	22	12.10
8	300	70	2,500	12½	RH-8300	22	26.20	RS-8300	22	17.05	RC-8300	22	14.85

FILAMENT TRANSFORMERS—Primary 115-230 Volts, 50-60 Cycles

Secondary Volts	Amps.	Insulation Test Volts	Wt. Lbs.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price
2.5CT	5.25	3,500	2	FH-25	15	$15.65	F-25	14	$ 8.25
2.5CT	10.0	5,000	3	FH-210	16	22.45	F-210	17	11.80
2.5CT	10.0	9,000	4	FH-210H	19	26.10	F-210H	19	13.75
2.5CT	15.0	9,000	6	FH-215H	21	31.25	F-215H	20	16.50
5CT	4.0	2,500	2¼	FH-54	15	16.30	F-54	15	8.50
5CT	10.0	2,500	3½	FH-58	17	22.45	F-58	17	11.80
5CT	10	8,000	6	FH-510H	21	33.45	F-510H	21	17.60
5CT	20.0	2,500	6½	FH-516	21	32.40	F-516	21	17.05
5CT	20	10,000	13	FH-520HB	22	41.80	F-520HB	22	22.00
5CT	30	2,500	10½	FH-530	22	41.80	F-530	22	22.00
6.3CT	5.5	2,500	3	FH-65	16	18.80	F-65	17	9.90
6.3CT	10.0	2,500	5	FH-610	19	26.60	F-610	19	14.00
7.5CT	5.0	2,500	3¼	....			F-75	17	9.60
7.5CT	12	2,500	6½	....			F-712	21	16.50
7.5CT	25.0	2,500	12	....			F-725	22	22.05
10CT	4.0	2,500	3¼	FH-104	17	19.30	F-104	17	10.15
10CT	6.5	2,500	5	FH-106	19	26.60	F-106	19	14.00
10CT	10.0	2,500	6½	FH-1010	21	31.25	F-1010	21	16.50
11CT	10.0	2,500	9½	....			F-1110	22	17.60

BIAS TRANSFORMERS—Combination Plate and Filament—Primary 50-60 Cycles

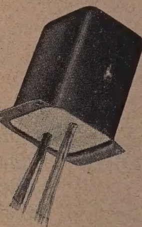
Primary Volts	High Voltage Secondary AC Volts	DC Ma.	Rect. Volts	Fila. Amps.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price	C-Type Mounting Cat. No.	Case No.	List Price
115	180-160-140-120	150	5.0	3.0	1BH-150	19	$27.15	1BS-150	19	$14.30	1BC-150	18	$9.05
230	180-160-140-120	150	5.0	3.0	2BH-150	19	26.60	2BS-150	19	14.00	2BC-150	18	8.80



MEETS JAN-T-27 SPECS

H-Type. Steel base cover deep-seal soldered into case. Terminals hermetically sealed. Ceramic bushings. Stud-mounted unit.

S-Type. Steel base cover fitted with phenolic terminal board. Convenient numbered solder lug terminals. Flange-mounted unit.



C-Type. With 10" color-coded stripped and tinned leads brought out through fibre board base cover. Flange-mounted unit.

CASE DIMENSIONS

Case No.	Depth	Width	Height
12	2¼	2⅛	2 11/16
13	2¼	2⅛	2 15/16
14	2½	2⅜	3 1/16
15	2½	2⅜	3 5/16
16	2⅞	2 11/16	3½
17	2⅞	2 11/16	3¾
18	3¼	3	3⅞
19	3¼	3	4¼
20	3 11/16	3 5/16	4 5/16
21	3 11/16	3 5/16	4 11/16
22	4 9/16	4⅛	5 5/16
24	5 5/16	4 13/16	6 1/16

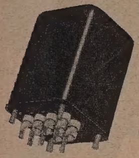
CHICAGO

NEW EQUIPMENT

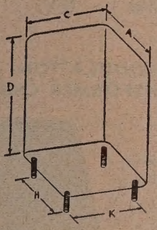
AUDIO TRANSFORMERS

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

B-TYPE MOUNTING



H-TYPE MOUNTING



H & B TYPE MTG. DIMENSIONS

Case Size	Dimensions in Inches				
	A	C	D	H	K
13	$2\frac{1}{4}$	$2\frac{1}{8}$	$2\frac{15}{16}$	$1\frac{9}{16}$	$1\frac{3}{8}$
14	$2\frac{1}{2}$	$2\frac{3}{8}$	$3\frac{1}{16}$	$1\frac{13}{16}$	$1\frac{11}{16}$
16	$2\frac{7}{8}$	$2\frac{11}{16}$	$3\frac{1}{2}$	2	$1\frac{7}{8}$
18	$3\frac{1}{4}$	3	$3\frac{7}{8}$	$2\frac{3}{8}$	$2\frac{1}{8}$
20	$3\frac{11}{16}$	$3\frac{5}{16}$	$4\frac{5}{16}$	$2\frac{5}{8}$	$2\frac{3}{8}$
21	$3\frac{11}{16}$	$3\frac{5}{16}$	$4\frac{11}{16}$	$2\frac{5}{8}$	$2\frac{3}{8}$

HIGH Q CHOKES

For Dynamic Noise Suppression Circuits (S-Type Mounting)

Two efficient reactors, inductance values .8 and 2.4 henrys respectively, are designed for noise suppression circuits, but can be used in any tuned circuit requiring the given inductances. Inductance values accurate within −5% with up to 15 ma. d-c. Minimum Q of 20. Mounted in identical drawn steel cases.

Cat. No.	Inductance	List Price
NSI-1 NSI-2	.8 hy. 2.4 hy.	$8.25 8.25

FULL FREQUENCY RANGE AUDIO TRANSFORMERS

Frequency Response within ±½ db, 30 to 15,000 Cycles

INPUT TRANSFORMERS

H-Type (Cat. No. BIH) and B-Type (Cat. No. BI) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Hum Shielding	Case Size	Wt. Lbs.	Cat. No.	List Price
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	2	BIH-1 BI-1	$46.00 24.20
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−90 dbm.	13	2	BIH-2 BI-2	60.60 31.90
Line bridging to P-P Grids	*Pri: 8,000/6,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	2	BIH-3 BI-3	48.05 25.30
Line to Line	Pri: 600/150 ohms CT Sec: 600/150 ohms CT	+15 dbm.	−70 dbm.	13	2	BIH-4 BI-4	43.90 23.10
Line to Line	*Pri: 600/150 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	−90 dbm.	18	3	BIH-5 BI-5	62.70 33.00
Interstage: P-P Plates to Sgl. or P-P Grids	*Pri: 20,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	2	BIH-6 BI-6	46.00 24.20
Low Imped. Mike, Pickup, or Multiple Line to Grid	Pri: 50/150/250/600 *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-7 BI-7	48.05 25.30
Single Plate to Push-Pull Grids	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-8 BI-8	46.00 24.20
Single Plate to Push-Pull Grids**	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	18	3¼	BIH-9 BI-9	54.35 28.60

*Split and balanced windings.

OUTPUT TRANSFORMERS

H-Type (Cat. No. BOH) and B-Type (Cat. No. BO) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Case Size	Wt. Lbs.	Cat. No.	List Price
Single Plate to Line	†Pri: 15,000 ohms *Sec: 600/150 ohms CT	+15 dbm.	14	2	BOH-1 BO-1	$27.15 14.30
P-P Plates to Line	*Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	16	2¾	BOH-2 BO-2	39.70 20.90
P-P Plates to Line	Pri: 5,000 ohms CT *Sec: 600/150 ohms CT	+40 dbm.	20	5	BOH-3 BO-3	35.55 18.70
P-P Plates to Line	Pri: 7,500 ohms CT *Sec: 600/150 ohms CT‡	+43 dbm.	20	5	BOH-4 BO-4	37.60 19.80
P-P Plates to Line or Voice Coil	*Pri: 10,000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+37 dbm.	18	4	BOH-5 BO-5	50.15 26.40
P-P Plates to Voice Coil	Pri: 7,500 ohms CT Sec: 8/20 ohms‡	+43 dbm.	20	5	BOH-6 BO-6	48.05 25.30
Line to Voice Coil	Pri: 600/150 ohms Sec: 8/20 ohms	+45 dbm.	20	5	BOH-7 BO-7	46.00 24.20
P-P Parallel Pl. to Line or Voice Coil	Pri: 1500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+45 dbm.	21	6½	BOH-8 BO-8	62.70 33 00
P-P Plates to Line or Voice Coil	*Pri: 5000/3000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+42 dbm.	20	6	BOH-9 BO-9	46.00 24.20
P-P Low Level Plates to Line	Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+15 dbm.	13	1½	BOH-10 BO-10	43.90 23.10

*Split and balanced windings. †0 to 10 ma. D.C.
‡Has tertiary winding to provide 15% inverse feedback.
**Has D.C. in primary; frequency response ±2 db, 30–15,000 cycles.

DETAILS OF NEW EQUIPMENT LINE MOUNTINGS

The New Equipment Line offers these exclusive features: (1) Uniformity of mounting—all but the largest units have CHICAGO's famous **Sealed in Steel** constructions; (2) Choice of three alternate mountings, the H-Type, S-Type and C-Type, in most categories.

A fourth construction, the B-Type mounting, is used for the Full Frequency Range audio units, where fine wire windings deserve the highest degree of sealing against moisture.

H-TYPE MOUNTING—Hermetic sealing meets all MIL-T-27 specifications. Steel base cover is bonded into the case by deep-seal soldering. Terminals are hermetically sealed by unique rubber gasket—ceramic bushing construction. Units are stud mounted.

C-TYPE MOUNTING—Moisture-resistant compound surrounds coil and core. Ten-inch, RMA-color-coded leads, ends stripped and tinned for easy soldering. Flange-mounted drawn steel cases.

S-TYPE MOUNTING—Precision-fitted steel base-covers and terminal boards, plus compound filling, keep moisture out. Solder-lug terminals are clearly identified, easy to use. Drawn steel cases are flange-mounted.

B-TYPE MOUNTING—Steel bases are bonded into the drawn steel cases by deep-seal soldering to make units completely moisture proof. Stud-mounted cases take minimum chassis space. Convenient, compact, pin-type terminals.

CHICAGO PUBLIC ADDRESS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 50 to 10,000 Cycles

Driver and output transformers in this CHICAGO series are designed for three general power levels to fit a wide range of application. Up-to-date secondary impedances match 600 or 150-ohm lines, 16, 8, and 4-ohm speakers. (16/8/4-ohm taps also suitable for 20/6/3.2-ohm speakers.) Output transformers have tertiary windings for 10% inverse feedback that minimizes distortion and provides extra audio watts without loss of fidelity.

INPUT TRANSFORMERS

H-Type (Cat. No. PHD), S-Type (Cat. No. PSD) and C-Type (Cat. No. PCD) Mountings

Application	Primary Impedance	Max. D.C. Pri. CT.	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	10 ma.	3:1	14	2¼	PHD-10 PSD-10 PCD-10	$15.20 7.95 5.50
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	25 ma.	3:1	15	2¼	PHD-25 PSD-25 PCD-25	14.65 7.70 5.20
P-P Plates to P-P Grids	5,000/10,000 ohms (Pri. CT)	100 ma.	5:1	18	4½	PHD-100 PSD-100 PCD-100	25.10 13.20 9.35

OUTPUT TRANSFORMERS

H-Type (Cat. No. PHO), S-Type (Cat. No. PSO) and C-Type (Cat. No. PCO) Mountings

Application	Impedances	Typical Output Tubes	Class	Max. Audio Watts	Max. D.C. Pri. CT	Case Size Wt.	Cat. No.	List Price
P-P Plates to Line or Voice Coil	Primary: 5,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6B4G, 6L6, 6V6, etc.	A₁ AB	20	120 ma.	20: 6½ lbs.	PHO-80 PSO-80 PCO-80	$31.35 16.50 12.10
P-P Plates to Line or Voice Coil	Primary: 10,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6V6, 6F6, 6K6, etc.	AB, AB₁	15	200 ma.	19: 5 lbs.	PHO-150 PSO-150 PCO-150	28.20 14.85 10.45
P-P Plates to Line or Voice Coil	Primary: 6,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	Two 6L6's, Four 6V6's, or similar	B, AB₂†	30	250 ma.	22: 9 lbs.	PHO-200 PSO-200 PCO-200	35.05 18.15 13.75

*Has tertiary winding to provide 10% inverse feedback.
†For low distortion, use fixed bias.

COMMUNICATIONS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 200 to 3,500 Cycles

These transformers are specifically designed for use in receiving and transmitting equipment such as amateur, police, railroad, and aircraft types, where clear voice reproduction is desired.

INPUT TRANSFORMERS

H-Type (Cat. No. CIH), S-Type (Cat. No. CIS) and C-Type (Cat. No. CIC) Mountings

Application	Impedances: Primary—Secondary	Case Size	Wt. Lbs.	Cat. No.	List Price
Low Level Line to Single or Push-Pull Grids	Pri: 600/150 ohms CT *Sec: 100,000 ohms CT	9	¾	CIH-1 CIS-1 CIC-1	$21.95 11.55 8.25
Low Level S. B. or D. B. Mike to Sgl. or P-P Grids	Pri: 125/50 ohms @ 80 ma. Sec. 125,000 ohms CT	9	¾	CIH-2 CIS-2 CIC-2	12.55 6.60 4.10

*Split and balanced windings: may be used singly or push:pull.

OUTPUT TRANSFORMERS

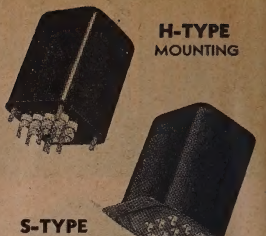
H-Type (Cat. No. COH), S-Type (Cat. No. COS) and C-Type (Cat. No. COC) Mountings

Application	Impedances: Pri.—Sec.	Typical Audio Tubes	Pri. Class	Max. Case Watts	Max. Pri. D.C.	Case Size	Wt. Lbs.	Cat. No.	List Price
Sgl. P. to Line or Speaker	Pri.: 5000 ohms Sec. ohms: 600/150/16/8/4	6L6, 6V6, 25A6	A	5	55 ma.	14	2¼	COH-1 COS-1 COC-1	$15.65 8.25 5.20
Sgl. Pl. to Line or Speaker	Pri: 8000 ohms Sec. ohms: 600/150/16/8/4	6F6, 6V6, 6K6	A	5	55 ma.	14	2¼	COH-2 COS-2 COC-2	16.20 8.50 5.50

DRIVER TRANSFORMER

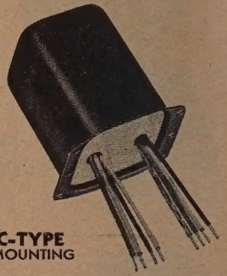
H-Type (Cat. No. CDH), S-Type (Cat. No. CDS) and C-Type (Cat. No. CDC) Mountings

Application	Primary Impedance	Max. D.C. Pri. CT	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates (2A3's, etc.) to P-P Grids	5,000 ohms (Pri. CT)	100 ma.	3:1	17	3	CDH-1 CDS-1 CDC-1	$17.25 9.05 6.30



H-TYPE MOUNTING

S-TYPE MOUNTING

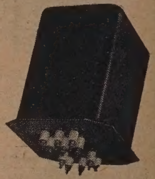


C-TYPE MOUNTING

MODULATION TRANSFORMER CMS-1

for Communications Transmitters

Freq. Range, 200 to 3,500 Cycles



Chicago's No. CMS-1 Modulation Transformer and matching Driver Transformer No. CDS-1, at left, are ideally suited for use in ham and commerical speech transmitters. No. CMS-1 will deliver 250 watts of Class B audio power from P-P 203A's, 211's, 805's, 75TL's, etc. to a Class C load with response variations not exceeding ±1db. over the stated frequency range. Primary impedances, 9000/6700 ohms ct; secondary, 8000/6000/4000 ohms. Case size 26. Wt., 22 lbs.

No. CMS-1.........List Price, $44.00

MODULATION TRANSFORMER CMS-2

Delivers 500 watts of Class B audio power from 810's, 822's, etc. to a Class C load. Frequency response is within ±1 db. over the stated voice range. Primary impedance, 12,000 ohms CT; secondary, 6,250 ohms. FS-Type mounting, size 65 (see page N-75). Wt. 43 lbs.

No. CMS-2.........List Price, $82.50

CHICAGO

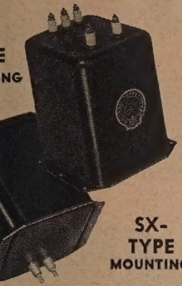
NEW EQUIPMENT

TRANSFORMERS and REACTORS

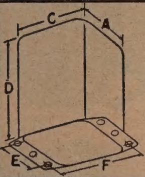
for Broadcast, Amateur, and Industrial Application

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

BX-TYPE MOUNTING

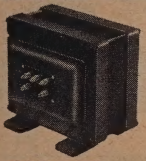


SX-TYPE MOUNTING

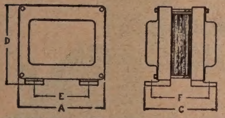


CASE DIMENSIONS FOR BX-, S- & SX-TYPE MOUNTINGS

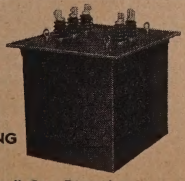
Case Size	Dimensions in Inches A	C	D	E	F
22	4 9/16	4⅛	5 5/16	2½	4¾
24	5 5/16	4 13/16	6 1/16	3½	5⅜
26	6⅛	5¼	7 1/16	4¼	6
28	7 1/16	6⅛	8 1/16	5	7



FS TYPE MOUNTING



Size	Dimensions in Inches A	D	E	F	C
60	7½	7	4¾	5½	6 5/16
61	7½	7	4¾	5 5/16	6⅞
62	7½	7	4¾	6¼	7⅛
63	7½	7	4¾	6 11/16	7½
65	7½	7	4¾	6⅞	7 13/16
71	8⅞	8½	5½	6½	8⅛
81	11½	10½	7½	8¼	10¼
84	11½	10½	7½	11 13/16	13 13/16



WC-TYPE MOUNTING

Overall Case Dimensions:
H—31½" W—26½" D—23½"

DRIVER AND MODULATION TRANSFORMERS

For Full Frequency Range Broadcasting

Ideally suited to the small-to-medium size, high fidelity broadcast station, three matched sets of driver and modulation transformers provide frequency response within ±1db. over the full 30 to 15,000-cycle range. A uniformly low percentage of distortion proven in use. Three specially designed modulation reactors complete the sets.

CONSTRUCTIONS

BX-TYPE MOUNTING—Flange mounted case with steel base solder-sealed in. Bushing-insulated screw terminals in the tops of the cases.

SX-TYPE MOUNTING—Flange mounted cases with precision-fitted steel bases. Bushing-insulated screw terminals ut the bases of the units.

FS-TYPE MOUNTING—Heavy duty frame-and-shield construction. Screw terminals on the primaries; bushing-insulated terminals on the secondaries.

WC-TYPE MOUNTING—Large oil-filled cases, made of heavy, welded steel plate. High voltage type, bushing-insulated terminals.

DRIVER TRANSFORMERS

Recommended Application: In:	Tubes:	Ratio Pri./½ Sec.	Mtg. Type	Case Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	From two 2A3's, 6B4's, or similar P-P Plates to Class B 838's, 805's, 203-A's, etc.	3.5:1	B*	20	6½	BD-1	$33.00
1-KW Transmitter	From four 2A3's, 6B4's, or similar P-P Plates to two 833-A's or similar P-P Grids	3:1	†	24	12¼	BD-2	68.20
5-KW Transmitter	From four 845's, two 152-TL's or similar P-P Plates to 891-R's or similar P-P Grids	3.5:1	BX	26	24	BD-3	176.00

†Similar to SX-Type mounting, but with screw terminals on a terminal board.
*B-Type mounting, but with screw terminals. See page N-73 for dimensions.

MODULATION TRANSFORMERS

Recommended Application In:	With:	Impedances (Pri. Plate to Plate)	Modulator Tubes	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Driver Transformer #BD-1	Pri: 7500 ohms CT Sec: 5000 ohms	203-A, 838 805, etc.	BX	26	25	BM-1	$73.70
1-KW Transmitter	Driver Transformer #BD-2	Pri: 9000 ohms CT Sec: 7500 ohms	833-A, etc.	FS	84	175	BM-2	429.00
5-KW Transmitter	Driver Transformer #BD-2	Pri: 13500 ohms CT Sec: 10250 ohms	891-R, etc.	WC		1100	BM-3	786.50 (net)

MODULATION REACTORS

Recommended Application: In:	With:	Inductance	D.C. Ma.	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Mod. Transformer #BM-1	65 hy.	250	BX	28	41	BR-1	$106.70
1-KW Transmitter	Mod. Transformer #BM-2	100 hy.	500	FS	81	165	BR-2	203.50
5-KW Transmitter	Mod. Transformer #BM-3	120 hy.	900	WC		1100	BR-3	660.00(net)

PLATE TRANSFORMERS

Primary: Volts	Max. VA.	Secondary: A.C. Load Volts	D.C. Volts after Filter	D.C. Ma.	Mtg. Size	Mtg. Type	Wt. Lbs.	Cat. No.	List Price
115-230	185	675-0-675 575-0-575	500 400	250	22	S	12	P-45	$19.80
115-230	250	900-0-900 735-0-735	750 600	250	22	S	13½	P-67	23.65
115-230	310	1150-0-1150 870-0-870	1000 750	250	60	FS	37	P-107	55.00
115-230	360	1425-0-1425* 600-0-600	1250 400	150 200	24	S	26	P-1240	35.75
115-230	550	1710-0-1710 1430-0-1430	1500 1250	300	63	FS	43	P-1512	71.50
115-230	915	2820-0-2820 2260-0-2260	2500 2000	300	71	FS	71	P-2520	110.00
115-230	1850	3450-0-3450 2850-0-2850	3000 2500	500	81	FS	137	P-3025	192.50

*Both secondaries may be rectified simultaneously.

FILTER REACTORS

Inductance In Henrys	Max. D.C. Ma.	D.C. Resistance, Ohms	Insulation Test Volts	Mtg. Type	Mtg. Size	Wt. Lbs.	Cat. No.	List Price
10	500	40	9,000	FS	62	35	R-105	$38.50
10	300	40	7,500	SX	26	22	R-103	22.00
6	700	35	10,000	FS	61	35	R-67	44.00
6	500	35	9,000	FS	60	35	R-65	35.75
6	300	35	7,500	SX	24	16½	R-63	18.70

CHICAGO

REPLACEMENT TYPE

TRANSFORMERS and REACTORS

Premium Quality—Yet They Cost No More

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS

6.3-VOLT FILAMENTS—VERTICAL SHIELD MOUNTING (V)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PV-40	225-0-225	40	5	2	6.3 C-T	1	3⅛	2½	2¼	2¼	$ 7.25
PV-50	325-0-325	50	5	3	5.3 C-T	2	3¾	2⅞	3	3¾	8.15
PV-60	250-0-250	60	5	2	6.3 C-T	2	3⅛	2½	3	3	8.70
PV-70	350-0-350	70	5	3	6.3 C-T	3	4⅛	3⅛	3⅛	4½	9.35
PV-70A	300-0-300	70	5	3	6.3 C-T	3	3¾	2⅞	3⅛	4	9.25
PV-90	350-0-350	90	5	3	6.3 C-T	3.5	4⅛	3⅛	3½	5¼	10.45
PV-100	350-0-350	100	5	3	6.3 C-T	5	4⅞	3¾	3¾	7½	10.80
PV-120	300-0-300	120	5	3	6.3 C-T	5	4⅛	3⅛	3¾	5¾	11.00
PV-120A	350-0-350	120	5	3	6.3 C-T	4.5	4⅛	3⅛	3 7/16	6	12.10
PV-145	372-0-372	145	5	3	6.3 C-T	5	4⅞	3¾	4	7½	13.00
PV-200	400-0-400	200	5	4	6.3 C-T	5.5	4⅞	3¾	4¼	9	15.20

6.3-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PH-40	250-0-250	40	5	2	6.3 C-T	1.6	3	3	2½	2½	$ 7.50
PH-50	250-0-250	50	5	2	6.3 C-T	2	3½	3	2½	3	7.60
PH-50A	280-0-280	50	5	3	6.3 6.3	1.5 .6	3¼	3	2½	3½	7.80
PH-70	300-0-300	70	5	3	6.3 C-T	3	3½	3⅜	2 13/16	4	7.90
PH-70B	350-0-350	70	5	3	6.3 C-T	2.5	3¼	3	2½	4½	8.05
PH-90	350-0-350	90	5	3	6.3 C-T	3.5	3¾	3¾	3⅛	5¼	8.45
PH-120	300-0-300	120	5	3	6.3 C-T	5	3⅞	3¾	3⅛	5¾	9.35
PH-120B	350-0-350	120	5	3	6.3 C-T	4.5	3⅞	4⅛	3½	6	9.35
PH-145	372-0-372	145	5	3	6.3 C-T	5	3⅞	4½	3¾	7½	11.00
PH-200	350-0-350	200	5	3	6.3 C-T	6	4	4½	3¾	8	13.45

6.3 AND 2.5-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PH-60	300-0-300	60	5	3	6.3 C-T 2.5 C-T	2.5 7.5	3½	3⅜	2 13/16	4½	$9.05

2.5-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PH-70A	325-0-325	70	5	3	2.5 C-T	9	3⅝	3¾	3⅛	4½	$ 9.05
PH-120A	325-0-325	120	5	3	2.5 C-T 2.5 C-T	12.5 3.5	3⅞	4⅛	3½	6	11.55

All transformers above are designed for 117 volts, 50/60 cycles.

FILAMENT TRANSFORMER

Catalog No.	Secondary Volts	Amps.	Primary Volts	Cycles	Insulation Test Volts	Mounting Type	Dimensions H	W	D	Wt. Lbs.	Price List
F-633	6.3 C-T	3	117	60	2000	U	2¾	2⅞	1¾	1	$3.95

FILTER REACTORS

Catalog No.	Inductance in Henries	Maximum D.C. Current Ma.	D.C. Resistance in Ohms	Insulation Test Volts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
R-1230	12	30	400	2000	L	1⅜	2⅜	1⅜	½	$1.70
R-1240	12	40	400	2000	L	1⅝	2⅞	1⅜	¾	1.75
R-650	6	50	300	1500	L	1⅝	2⅞	1⅜	¾	1.80
R-1365	13	65	500	2000	L	2¼	3¾	2¼	1½	2.75
R-885	8	85	250	2000	L	2¼	3¾	2¼	1½	3.00
R-23110	23	110	250	2000	V	3⅛	2½	2¾	2½	4.20
R-8120	8	120	350	1500	L	2½	4	2	2½	4.30
R-7150	7.5	150	160	2000	V	3⅛	2½	3⅛	2½	5.50
R-7200	8	200	125	3000	V	3⅜	2⅞	3⅛	3¾	6.95

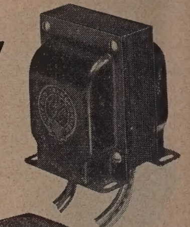
DRIVER TRANSFORMERS

Cat. No.	Typical Applications: From Driver Tubes	To Output Tubes	Class	Ratio Primary: ½ Sec.	Max. Pri. D.C. Ma.	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
D-15	Single 30	P-P 19 or 30's	B	2.5-1	15	L	1⅝	2⅞	1½	¾	$2.85
D-30	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	30	LS	2	3¼	2⅛	1	4.10
D-35	Triode Plate	P-P Grids		1:1, 1.5:1 or 2:1	35	L	2	3¼	1⅞	1	4.40
D-40	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	40	V	3⅛	2½	2½	2½	6.05

INTERSTAGE TRANSFORMERS

Cat. No.	Application	Class	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma	Ratio Sec.: Pri.	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
IN-10	S. Pl. to P-P Gds.	A	10000	160,000	10	4-1	L	2	3¼	1¾	1	$3.50
IN-11	S. Pl. to P-P Gds.	A	10000	122,500	10	3.5:1	L	1⅝	2⅞	1½	⅝	2.85
IN-13	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	2	3¼	1⅞	1	3.50
IN-14	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	1⅝	2⅞	1½	⅝	3.20
IN-15	P-P Pls.-P-P Gds.	A	10000	* 90,000	10	3:1	L	2	3¼	1⅞	1	4.45
IN-16	Sgl. or P-P Input & Output	A				1:1, 3:1, or 6:1	L	2	3¼	2¼	1½	4.65

*Universal type: center-tapped primary, split secondary.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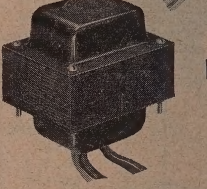
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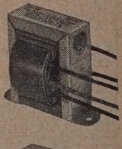
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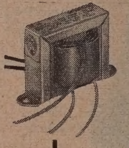
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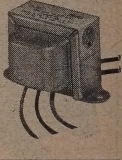
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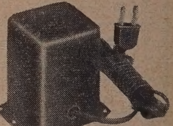
ISOLATION TRANSFORMERS



CHICAGO Isolation Transformers are designed for a dual purpose: (1) To supply 115 volts isolated from a line of above/below normal, or normal, voltage—primary switch sets for 125/115/105 volts, 50/60 cycles; or (2) For use in servicing to eliminate shock hazard, by isolating chassis ground from line ground (particularly important on "hot" AC-DC television sets). Also provide 125 and 105 volts on the secondary for locating doubtful tubes, etc.

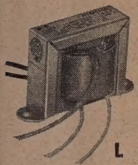
Cat. No.	Capacity	List Price
IS-50	50 VA	$ 9.90
IS-100	100 VA	15.40
IS-150	150 VA	23.10
IS-250	250 VA	38.50

CHICAGO

REPLACEMENT TYPE

TRANSFORMERS

Premium Quality—
Yet They Cost No More.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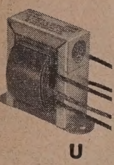
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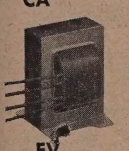
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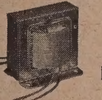
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Vertical Blocking Oscillator Transformers

No. TBO-1. Creates 60-cycle vertical sweep voltages. Pri. Induc.: 1.15 hy. @ 3 v., 1000 cycles. Ratio (Pri:Sec) 1:4.2 Type CC mounting. Wt., 1 lb. List Price, $3.00

No. TBO-2. Same as TBO-1, but in Type CB mounting. Wt. ½ lb. List Price, $2.75

No. TBO-3. Same function as TBO-1. Pri. Induc.: 3 hy. @ 3 v., 60 cycles. Type CA mtg. Wt., 1 lb. List Price, $3.30

TV Filter Reactors (Type L)

Low inductance chokes for use in TV power supplies. 2⅝"H. x 4" x 2". Mtg. 3⁹⁄₁₆".

Type TR-3300. Inductance 2.8 henries @ 300 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs. ....List, $4.30

Type TR-4200. Inductance 3.7 henries @ 200 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs. ....List, $4.30

OUTPUT TRANSFORMERS

SINGLE PLATE TO VOICE COIL

Catalog No.	Application Typical Output Tubes	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-2	25L6 35A5, 2A3, 6B4	2000	3 to 6	50	4	L	1⅜	2⅜	1¼	½	$1.90
RO-3	25L6 (10-ohm tap on primary)	2000	3 to 6	50	4	L	3⅜	2⅜	1⅜	½	2.30
RO-6	12A5, 25A6, 45, 71A	4000	4-8-15	40	10	L	2	3¼	1¾	1	2.85
RO-8	2A5, 25A6, 43	4500	3 to 6	35	5	L	1⅜	2⅜	1¼	½	2.05
RO-9	6V6, 25A7G, 30, 31, 50	5000	4-8-15	50	8	L	2	3¼	1¾	1	2.85
RO-11	1S4	6000	3 to 6	5	2	L	1⅛	2⅛	1⅛	⅜	1.75
RO-13	7B5, 18, 31, 33, 42, 46, 47	7000	3 to 6	35	5	L	1⅜	2⅜	1¼	½	1.90
RO-16	1C5G, 1G5G, 1J6G, 6A4, 6A6	10000	3 to 6	30	5	L	1⅜	2⅜	1¼	½	2.00
RO-18	1A5G, 1E7G, 1N6G, 6V7G	25000	3 to 6	10	5	L	1⅝	2⅞	1⅜	⅝	1.85

PUSH-PULL PLATES TO VOICE COIL

RO-110	P-P 2A5, 6AC5G, 6A6, 6N7, 45	10000	4-8-15	80	12	U	2⅜	2⅞	1¾	1	$3.30
RO-111	P-P 6B5, 6K6, 6N6G, 7B5, 31	14000	4-8-15	80	15	U	2⅜	2⅞	1¾	1	3.50
RO-113	P-P 1A5G, 1E7G, 1N6G, 6V7G	50000	3 to 6	20	8	L	1⅝	2⅞	1½	⅝	3.20

UNIVERSAL TYPE—SINGLE PLATE TO VOICE COIL

Catalog No.	Range of Ohms Impedance Primary	Secondary	Primary D.C. Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-201	4000, 7000, or 100000	3 to 6	40	8	L	1⅝	2⅞	1½	⅝	$2.85

UNIVERSAL TYPE—SINGLE OR PUSH-PULL PLATES TO VOICE COIL

RO-301	2500 to 14000	2, 4, 6, 8, 15, etc.	30	4	L	1⅜	2⅜	1⅝	½	$2.90
RO-302	2500 to 15000	2, 4, 6, 8, 15	50	4	L	1⅜	2⅜	1⅝	⅝	2.90
RO-303	2500 to 14000	2, 4, 6, 8, 15, etc.	40	8	L	1⅝	2⅞	1⅞	⅝	3.00
RO-304	2500 to 13000	2, 4, 6, 8, 15	70	8	U	2	2½	1⅞	13/16	3.30
RO-305	2500 to 14000	2, 4, 6, 8, 15, etc.	60	12	L	2	3¼	2⅜	1	4.50
RO-307	2500 to 14000	2, 4, 6, 8, 15, etc.	50	10	U	2⅜	2⅞	2¼	1	3.50

UNIVERSAL TYPE—PUSH-PULL PLATES (ONLY) TO VOICE COIL

RO-401	2500 to 13000	2, 4, 6, 8, 15	70	15	U	2 5/16	2¾	2⅜	1½	$4.60

SPEAKER MATCHING TRANSFORMERS

SM-1	Sgl. Tube—500–1000–1500–2000	6	80	12	L	2⅜	2⅞	1⅞	1	$4.10
SM-2	Sgl. Tube—2500–4000–6000–8000	6	80	12	L	2⅜	2⅞	1⅞	1	4.40
SM-3	Sgl. Tube—500–1000–1500–2000	6	60	5	L	1⅞	2⅜	1½	¾	2.55

CHICAGO EXACT REPLACEMENT TELEVISION TRANSFORMERS

POWER TRANSFORMERS

Catalog No.	HV Secondary A.C. Volts	D.C. Ma.	Filaments Rectifier	Others	Mtg. Type	Wt. Lbs.	List Price
TP-210	233-0-233	90	5 v. 2 a.	6.3 v. 5.3 a.	TH	4½	$ 9.60
TP-350	356-0-356	200	5 v. 3 a.	6.4 v. 8.7 a.; 6.4 v. 0.6 a.	C	15	38.50
	2380	2		1.25 v. 0.3 a.	(in case)		
TP-355	360-0-360	250	5 v. 3 a.	5 v. 2 a.; 6.4 v. 8 a.; 6.4 v. 0.6 a.	TH	13	20.35
TP-360	365-0-365	260	5 v. 6 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	13½	20.35
TP-365	362-0-362	295	5 v. 6 a.	12.6 v. CT 5 a.; 5 v. 2 a.	TH	17	28.60
TP-370	348-0-348	215	5 v. 3 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	12	20.35
TP-375	354-0-354	185	5 v. 3 a.	6.45 v. 12 a.	TH	11	18.70
	163-0-163	65					
TP-380	380-0-380	180	5 v. 3 a.	6.3 v. 9 a.	TH	9½	16.50
TP-383	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.3 v. 9. a.	TH	13½	22.00
TP-390	400-330-0				V	11	
	330-400	180	5 v. 3 a.	5 v. 3 a.	Vert. Shield		19.80
TP-392	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.45 v. 7.4 a.; 6.3 v. 1.6 a.	TH	13¼	22.00
TP-393	366-0-366	270	5 v. 6 a.	6.7 v. 4.5 a.	TH	10½	19.25
TP-395	360-0-360	260	5 v. 6 a.	5 v. 2 a.; 6.3 v. 8.85 a.	TH	13¼	23.10
TP-400	374-0-374	205	5-v. 3 a.	5 v. 2 a.; 6.3 v. 5.6 a.	TH	9	16.50
TP-405	350-0-350	270	5 v. 6 a.	5 v. 2 a.; 6.6 v. 7.8 a.; 6.3 v. 1.6 a.	TH	13¼	23.10
TP-409	360-0-360	240	5 v. 6 a.	6.5 v. 9.3 a.	TH	11½	19.25
TP-410	385-0-385	240	5 v. 3 a.	5 v. 2 a.; 6.3 v. 8.6 a.	TH	12	20.90
TP-450	364-0-364	195	5 v. 3 a.	5 v. 2 a.; 6.3 v. 8.25 a.			
	229-0-229	105	5 v. 2 a.	6.3 v. 0. 6 a.	TH	12	22.80

Vertical Scanning Output Transformers

No. TSO-1. Couples vert. output tube to deflection yoke. Pri. Imped.: 19,000 ohms @ 30 v., 60 cycles, with 13 ma. D.C. Ratio (Pri:Sec) is 10:1. Mtg. Type FV, Wt. 2½ lbs. List, $5.75

No. TSO-2. Similar to TSO-1. Ratio (Pri:Sec) 8:1. Mtg. Type FH. Wt., 2½ lbs....List, $5.20

No. TSO-3. Very similar to TSO-1. Mtg. FV. List Price, $5.50

No. TSO-4. Similar to TSO-1. Pri. Imped. 18,000 ohms @ 30 v.,60 cycles, with 10 ma. D.C. Mtg. Type FV, Wt. 2 lbs.......List Price, $4.65

Type TSO-5. Use in vertical deflection circuits of sets using 12" direct-view tubes. Type L mtg. Primary impedance 14000 ohms at 30V 60 CY with 15 ma. D.C. Primary to secondary ratio 10:1. High potential test 2500 V. Ship Wt. 2 lbs. List $3.85

Horizontal Deflection Output and H-V Transformers (Type TF)

Type TFB-1. "Fly-back" transformer for coupling horizontal output tube to horizontal deflection yoke. For use with deflection yokes such as RCA type 201DI and with direct viewing tubes 7DP4 and 10BP4..................List, $7.70

Type TFB-2. Similar to TFB-1 but designed with slightly lower output voltage, for use only with 10" tubes such as 10BP4. Will replace RCA Type 211T3. About 9000V D.C. output under load. Ship. Wt., 2 lbs............List $7.70

Type TFB-3. Flyback for use with 12" tubes such as 12AP4. About 9000 V D.C. output under load. Ship. Wt., 2 lbs...............List, $10.45

Type TFB-4. Horizontal deflection, use with 16" tube such as 16AP4 and yokes such as RCA 201D1 or 201D2. Provides h-v for voltage doubling, has filament windings to supply 2 rectifiers. Replacement for RCA 211T5. About 11,500 V D.C. output under load. Ship. Wt., 2 lbs.............................List, $10.45

CREST TRANSFORMER CORP.
1830 W. North Ave., Chicago 22, Ill.

FIGURE J

FIGURE F

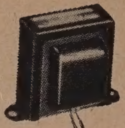


FIGURE D

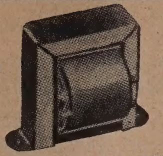
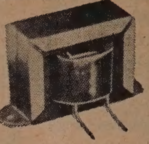


FIGURE A



AUDIO TRANSFORMERS

Driver

Stock No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to ½ Sec.	Pri. M.A.	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	Dimensions W.	Dimensions D.	Wt. Lbs.	List Price
6115	1-30, 49, 6C5 1-1J6G	19, 2-30, 49	B	2.4:1	8	B	2"	1⅞	2⅜	1⅝	0.7	$2.60
6118	1-33, 41, 42, 46, 59, 2A5, 6F6	P.P. 46, 59 6L6, 6F6	B AB2	2.2:1	32	K	2x1 11/16"	3 3/16	2⅝	2⅝	2.6	4.40
6116	1-42, 45, 2A5, 6C5, 6F6, 6N7	P.P. 42, 2A5, 6F6, 6L6, 6V6	AB	1.7:1 1.5:1 1.3:1	35	A	2 13/16"	2	3¼	1½	1.7	3.80
6117	1-42, 47, 2A5, 6F6	P.P. 2A5, 6F6, 6L6	AB2	1.4:1	40	K	2¼x2"	3½	3	3 1/16	3.5	6.00
6122	P.P. 45, 2A3, 6F6, 6L6	35T, 203A, 800, 806, T20, T55,	B	3.2:1 2:1	40	K	2x1¾"	3⅛	2⅝	2⅝	2.7	6.50
6119	P.P. 45, 6C5, 6F6, Tri. 59, 2A3, 4-2A3, 6L6	59, 805, 100TH, HY57, RK18, TZ40, P.P. 6L6,	A B	5:1 4:1 3.2:1	60	K	2x1¾"	3⅛	2⅝	2⅝	2.7	7.00

Input or Microphone Mike to Grid

Stock No.	Application	Ohms Impedance Pri.	Ohms Impedance Sec.	Turns Ratio	Mtg. Fig.	Mtg. Ctrs.	H.	W.	D.	Wt.	List Price
6100	S.B. Mic. to Single or P.P. Grids	100	400000/C.T.	1:64	F	2	2	2⅜	1⅝	0.9	$3.50
6101	Voice Coil to Grid	3.2 CT	38,000		F	1¾	1⅝	2	1¾	0.8	2.25
6103	Low. Imp. Ribbon Mike to Grid	150-250 CT	53,000		F	2	2	2½	2	1.0	2.60

Interstage

Stock No.	Ohms Impedance Pri.	Ohms Impedance Sec.	Turns Ratio	M.A. Pri.	Fig. Mtg.	Ctrs. Mtg.	Dimensions H.	Dimensions W.	Dimensions D.	Wt. Lbs.	List Price
6302	10000	90000	Sgl. 3:1	10	A	2	1⅜	2⅜	1½	0.6	$2.25
6301	10000 CT	90000 CT	P.P. 3:1	10	A	2⅜	1⅝	2⅞	1½	0.8	2.50
6305	10000	125000 CT	P.P. 3.5:1	10	A	2 13/16	2	3¼	1⅝	1.2	3.00
6306	10000 CT	90000 CT	P.P. 3:1	10	A	2 13/16	2	3¼	1⅝	1.2	3.25

Modulation

Stock No.	Typical Tube	Impedance Pri.	Impedance Sec.	Max. M.A. Pri.	D.C. Sec.	Class	Watts	Mtg.	Dimensions H.	Dimensions W.	Dimensions D.	Wt. Lbs.	List Price
6850	P.P. 6V6, 6F6, 1-53, 6A6, 6K6, 7C5, 6N7, 14C5	10000 CT	7500 5500 3500	60	60	A	12	F	2⅜	2⅞	2⅛	1.4	$3.80
6851	P.P. 6L6, 45, 50, 2A3, 6A3, 6F6, 6V6	6000 CT 3000 CT	10000 7500 5000	100	100	AB	25	K	3⅛	2⅝	2⅞	2.9	6.50
6852	P.P. 6L6, 46, HY56, 807	6600 CT	12000 8000 4000	150	150	AB	40	L	4¼	3⅝	4⅝	6.4	11.50

Output

Stock No.	Typical Tube	Class	Ohms Impedance Pri.	Ohms Impedance Sec.	Pri. M.A.	Max. Watts	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	Dimensions W.	Dimensions D.	Wt. Lbs.	List Price
6018	P.P. 50L6, 25B5, 25AC5, 25L6, 6Y6, 6W6, 6V6	AB	4000	3.2	50	4	A	2	1⅜	2⅜	1⅜	0.4	$1.70
6013	Sgl. 89, 95, 6F6, 6D5, 6B5, 12A6	A	7000	3-6	30	3	A	2	1⅜	2⅜	1⅜	0.4	1.70
6012	Sgl. 1C5G, 1Q5G, 3A4, 1G5, 1S4, 3S4, 3Q5	A	8000	3.2	20	5	A	2	1⅜	2⅜	1⅝	0.5	1.45
6008	P.P. 1-19, 1-1J6G, 1-1G6G, 2-30, 49, 25A6	AB B	10000	4/8	30	8	A	2 13/16	2	3¼	1⅝	1.0	2.75
6019	P.P. 43, 6F6, 59B, 25A6, 6V6, 7C5, 71A	AB	10000	3.2	45	10	A	2 13/16	2	3¼	1⅝	1.0	2.85
6016	P.P. 6F6, 6D5, 6AC5, 6K6, 6B5, 6AD7, 6N6, 7B5, 12A6, 18	AB	14000	3-6	42	10	A	2 13/16	2	3¼	1⅝	1.0	3.00
6009	P.P. 1B8, 1E7, 1F4, 1T5, 6G6, 1299, 1602 Sgl. 6V7, 55, 85	A	25000	3.2	12	5	A	2	1⅜	2⅜	1⅜	0.4	2.15
6026	P.P. Par 4-6L6, P.P. 2-6L6, 45, 6A3	AB1	3300	4/8/15 250/500	155	60	K	2½×2¼	4	3¼	3½	5.2	10.50
6025	P.P. 6L6, 6F6, 6AL6	AB2	5500	4/8/15 250/500	90	40	K	2½×2	4	3¼	3¼	4.7	9.00
6005	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	30	4	C	2	2	2⅜	1⅝	0.6	2.40
6000	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	35	8	C	2⅜	1⅝	2⅞	1¾	.07	2.70
6003	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	40	12	D	2⅜	2⅜	2⅞	1⅞	1.0	3.80
6004	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	40	18	D	2 13/16	2⅝	3 5/16	2¼	1.5	4.30

WRITE FOR LATEST CATALOG SHOWING COMPLETE LINE

FIGURE K

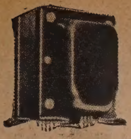


FIGURE G

FIGURE E

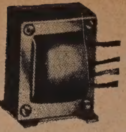


FIGURE P

FIGURE CT-1

CHOKES

Filter

Stock No.	Inductance Henries	Current Rating M.A.	D.C. Res. Ohms	Volts Insul.	Mtg. Fig.	Mtg. Dimensions H.	W.	D.	Wt. Lbs.	Price List
6200	13.5	35	850	1600	A	1⅞	3¼	1⅝	1.0	$2.30
6208	6.5	40	530	1600	A	$1\frac{5}{16}$	2⅜	1⅝	0.8	1.90
6201	7.0	60	200	1600	A	1⅞	3¼	1½	1.0	2.40
6204	16	75	400	1600	A	2¼	$3\frac{11}{16}$	1⅞	1.8	2.80
6221	5.0	80	138	1600	A	1⅞	3¼	1¾	1.5	2.50
6202	7.5	80	250	1600	A	1⅞	3¼	1¾	1.4	2.50

Heavy Duty

Stock No.	Inductance At zero DC	Inductance At rated DC	Current Rating M.A.	D.C. Res. Ohms	Volts Insul.	Mtg. Fig.	Mtg. Dimensions H.	W.	D.	Wt. Lbs.	Price List
6223	34	10	150	231	1600	K	3½	$2\frac{27}{32}$	3⅛	2.6	5.00
6224	10.2	4.2	215	80	3000	K	3½	$2\frac{27}{32}$	3⅛	2.6	6.00
6225	19.5	7.3	250	121	3000	K	4¼	3⅝	3⅞	6.2	7.50
6220	17	4.8	450	60	5000	L	4¾	3⅞	5	12.5	15.25

Swinging

Stock No.	Inductance Henries	D.C. M.A. Range	D.C. Res. Ohms	Volts Insul.	Mounting Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
6217	5-20	15-150	215	3000	K	3⅜	2⅞	$2\frac{1}{16}$	2.8	$4.80
6230	5-20	50-500	70	5000	L	5⅜	4½	4¾	13.0	19.00

FILAMENT TRANSFORMERS

Stock No.	Pri. Volts	Sec. Volts	Sec. Amps	Volts Insul.	Mtg. Fig.	Dimensions H.	D.	W.	Wt. Lbs.	List Price
F-6730	115	2.5 c.t.	5.25	1800	B	2⅜	2⅞	2⅛	1.3	$3.25
F-6732	115	2.5 c.t.	10	7500	R	4	3¾	3¼	2.6	5.10
F-6740	115	5.0 c.t.	5	1800	B	$3\frac{1}{16}$	3⅜	2⅛	2.2	4.50
F-6752	115	5.0 c.t.	12	10000	R	$4\frac{3}{16}$	$3\frac{7}{16}$	3¼	7.0	10.50
F-6724	115	6.3 c.t.	1.5	1600	B	2	1¾	1¾	1.0	2.40
F-6727	115	6.3 c.t.	3	1600	B	2⅜	2⅞	2⅛	1.4	3.25
F-6750	115	7.5 c.t.	5	2500	R	3¼	2½	2¼	2.8	4.25
F-6751	115	7.5 c.t.	8	1800	R	3¾	3	2⅞	4.0	6.00
F-6756	115	10.0 c.t.	5	3000	R	$3\frac{7}{16}$	$2\frac{13}{16}$	2¾	4.6	6.00
F-6757	115	10.0 c.t.	8	3000	R	3⅞	3⅛	3⅛	4.8	6.85

FULLY ENCLOSED POWER TRANSFORMERS

Stock No.	H.V. A.C. Load Volts	Secondary D.C. M.A.	Filament Windings Fil. No. 1	Fil. No. 2		Mtg. Fig.	Mtg. Ctrs.	Mtg. Dimensions H.	W.	D.	Wt. Lbs.	List Price
6600	325-325	40	5V-2A	6.3V-2A	C.T.	K	2 x1½	$3\frac{3}{16}$	2⅝	2½	2.2	$6.00
6601	325-325	50	5V-2A	6.3V-3A	C.T.	K	2 x1¾	$3\frac{3}{16}$	2⅝	2¾	2.8	6.25
6602	350-350	70	5V-3A	6.3V-3.5A	C.T.	K	2½x1⅝	3⅞	3¼	3⅛	4.2	8.00
6603	350-350	100	5V-3A	6.3V-4.5A	C.T.	K	2½x2¼	3⅞	3¼	3½	5.2	8.60
6604	350-350	120	5V-3A	6.3V-5A	C.T.	K	2½x2⅛	3⅞	3¼	3⅝	5.7	9.25
6605	400-400	200	5V-4A	6.3V-6A	C.T.	K	3 x2¾	4⅝	3⅞	3¾	8.0	12.80
6606	430-430	325	5V-6A	6.3V-8A	C.T.	K	3 x4½	4⅝	3⅞	5⅝	14.7	18.00

TELEVISION TRANSFORMERS

Stock No.	Type	Electrical Equivalent	Mtg. Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
TVB-1	Vertical Blocking Oscillator	R.C.A. 208T2 Potted	G	1¾	$2\frac{5}{16}$	1½	0.6	$2.95
THB-1	Horizontal Blocking Oscillator	R.C.A. 208T1 Potted	G	1¾	$2\frac{5}{16}$	1½	0.8	3.60

VERTICAL OUTPUT TRANSFORMERS

Stock No.	Turns Ratio	Pri. Ind.	Primary Res. Approx.	Secondary Res. Approx.	Type Mtg.	Wt. Lbs.	List Price
TVO-1	10-1	60 H—13 Ma. DC	590 Ohms	6.9 Ohms	E	2.5	$5.40
TVO-2	10-1	47 H—10 Ma. DC	520 Ohms	6.9 Ohms	E	2.3	4.40
TVO-3	11.4-1	45 H—18 Ma. DC	1200 Ohms	11 Ohms	A	1.2	3.30

TELEVISION POWER TRANSFORMERS

Stock No.	Primary	Plates		Fil. #1	Fil. #2	Fil. #3	Fil. #4	Type Mtg.	Weight	List Price
TPF-1	117V 60 Cy	362-362V .295 Amp		12.6 V CT 5.0 Amp	5.0 V 6.0 A	5.0 V 2.0 A	— —	T	16 lbs.	$24.50
		Plates AC								
TPF-2	117V 60 Cy	360-369V .250 Amp		6.3 V 8.0 A	6.3 V 0.6 A	5.0 V 3.0 A	5.0 V 2.0 A	T	12.5 lbs.	18.90
TPF-3	117V 60 Cy	365-365V .260 Amp		5.0 V 6.0 A	6.3 V 1.5 A	6.3 V 9.0 A	— —	T	12 lbs.	18.50
		Plates	Plates				Motor Winding			
TPF-4	117V 60 Cy	380-380V .230 Amp	160-160V .230 Amp	6.3 V 9.5 A	5.0 V 3.0 A	5.0 V 2.0 A	25 V 0.6 A	K	13.5 lbs.	26.25
TPF-5	117V 60 Cy	375-375V .210 Amp		6.3 V 8.0 A	6.3 V 2.5 A	5.0 V 5.0 A	— —	K	10 lbs.	16.60
TPF-6	117V 60 Cy	415-415V .230 Amp		5.0 V 6.0 A	6.3 V 3.5 A	6.3 V 10.0 A	— —	K	13.7 lbs.	21.50
TPF-7	117V 60 Cy	385-385 V .180 Amp		5.0 V 3.0 A	6.3 V 1.2 A	6.3 V 7.5 A	5.0 V 2.0 A	K	11 lbs.	16.60
TPF-8	117V 60 Cy	400-400V .205 Amp		6.3 V 6.4 A	5.0 V 3.0 A	6.3 V 3.1 A	6.3 V 1.2 A	P	12.5 lbs.	18.40

LINE REGULATORS STEP UP OR STEP DOWN 50-60 CYCLE

ISOLATION TRANSFORMERS 50-60 CYCLE

AUTOFORMERS STEP UP OR STEP DOWN 50-60 CYCLE

Stock No.	Input Volts	Output Volts	Max. Watts	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
5909	220-250	110-125	100	J	2¾x3	$4\frac{3}{16}$	3½	4	6.4	$15.50
5916	220-250	110-125	150	J	2¾x3¼	$4\frac{3}{16}$	3½	4⅜	6.0	17.00
5917	220-250	110-125	250	J	3 x4¼	4⅝	3⅞	5½	14.0	25.50
5906	110-125	110-125	250	J	3 x4¼	4⅝	3⅞	5½	14.0	25.50
5907	110-125	110-125	500	J	5¾x3½	6¼	5¾	5	28.0	35.00
5912	220-250	110-125	150	J	2¾x1½	$4\frac{3}{16}$	3½	3⅜	4.8	10.50
5913	220-250	110-125	250	J	2¾x3	4⅝	3⅞	$4\frac{3}{16}$	7.6	12.25
5914	220-250	110-125	500	J	3 x3½	4⅝	3⅞	5¼	10.8	19.50

CRESTROL SERIES
Line Voltage Regulators

Stock No.	Primary Voltage	Secondary Voltage	Maximum Wattage	Type Mtg.	Dimensions H	W	D	Wt. Lbs.	List Price
CT-1	90-140	117	350	Crestrol	5¾	5	4½	4.7	$28.50
CT-2	90-140	117	660	Crestrol	5¾	6	5½	6.6	48.75

WRITE FOR LATEST CATALOG SHOWING COMPLETE LINE ——— CREST TRANSFORMER CORP., CHICAGO 22, ILLINOIS

STANDARD ELECTRICAL PRODUCTS CO.
Staco
A QUALITY PRODUCT
DAYTON, O. U.S.A.

TRANSFORMERS

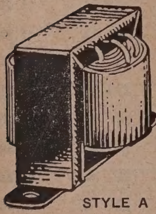
SPECIAL PURPOSE AND OPERATION OF WAR SURPLUS EQUIPMENTS

MULTI-USE FILAMENT TRANSFORMERS

For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles.
All windings center tapped except those marked*

Type No.	Use #1	Use #2	Use #3	Volt Insul.	Style Mtg.	Mtg. Dimensions H.	W.	D.	Ship. Wt.	Net Price
F5049	Two Sec. of 2.5 V. @ 2.5 A	5 V. @ 2.5 A	2.5 V. @ 5 A	2000	D	2 5/16"	2"	1 7/8"	3	$3.00
F5050	Two Sec. of 2.5 V. @ 5 A	5 V. @ 2.5 A	2.5 V. @ 10 A	10000	E	3 1/8"	2 1/2"	3 1/4"	3	5.16
F5051	Two Sec. of 2.5 V. @ 5 A	5 V. @ 5 A	2.5 V. @ 10 A	2000	E	3 1/8"	2 1/2"	2 3/8"	3	3.90
F5052	Two Sec. of 2.5 V. @ 7.5 A	5 V. @ 7.5 A	2.5 V. @ 15 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.20
F5053	Two Sec. of 5 V. @ 3.25 A	10 V. @ 3.25 A	5 V. @ 6.5 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.05
F5054	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	10000	E	4 3/16"	3 7/16"	3 7/16"	7	6.45
F5055	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	2000	E	4 13/16"	3 1/8"	3 3/8"	7	6.00
F5056			6.3 V. @ .6 A	2000	D	1 5/8"	1 3/8"	1 1/2"	2	3.00
F5057			6.3 V. @ 1.2 A	2000	D	1 7/8"	1 5/8"	1 11/16"	2	3.30
F5007			6.3 V. @ 3 A	2000	D	2 5/16"	2"	1 7/8"	3	3.90
F5058	Two Sec. of 6.3 V. @ 1 A	12.6 V. @ 1 A	6.3 V. @ 2 A	2000	D	2 5/16"	2"	1 7/8"	3	3.60
**F5006	Two Sec. of 6.3 V. @ 3 A	12.6 V. @ 3 A	6.3 V. @ 6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.50
**F5004	Two Sec. of 6.3 V. @ 6.5 A	12.6 V. @ 6.5 A	6.3 V. @ 13 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.82
F5059	Two Sec. of 7.5 V. @ 1.5 A	15 V. @ 1.5 A	7.5 V. @ 3 A	2000	D	2 3/4"	2 5/16"	2 3/16"	3	4.05
F5060	Two Sec. of 7.5 V. @ 2.3 A	15 V. @ 2.3 A	7.5 V. @ 4.6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.65
F5061	Two Sec. of 11 V. @ 5 A	22 V. @ 5 A	11 V. @ 10 A	2000	E	3 13/16"	3 1/8"	3 1/4"	7	6.00
**F5005*	Two Sec. of 12 V. @ 4 A	24 V. @ 4 A	12 V. @ 8 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.67
**F5069*	One Sec. of 24 V. @ 3 A	War Surplus Equipment		2000	E	3 1/8"	3 3/4"	2 5/8"	2 1/2	4.80
**F5075*	One Sec. of 24 V. @ 1 A	War Surplus Equipment		2000	D	2 3/4"	3 1/4"	2"	1 1/4	3.90

** Types F5004, F5005, F5006, F5069, and F5075 designed for operation of 12 and 24 volt War Surplus Equipment.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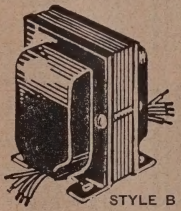
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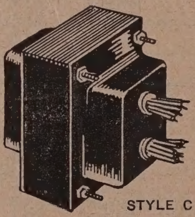
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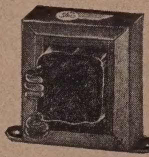
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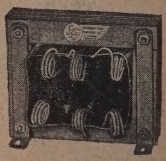

STYLE E

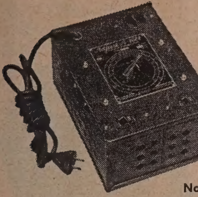
SPECIALS TO YOUR ORDER

- **Special transformers can be manufactured to your order in the styles illustrated above on a job-lot basis. Small industrial users need not purchase so-called "stock" transformers and compromise their designs. Our prices are reasonable and delivery is good. Your inquiries on "specials" are solicited—give us complete information and we will quote on your requirements.**

AUTO-TRANSFORMERS • ISOLATED PRIMARY TRANSFORMERS • METERED TRANSFORMERS

Staco
STANDARD ELECTRICAL PRODUCTS CO.
A QUALITY PRODUCT
DAYTON, O. U.S.A.

Adjust-A-Volt
VARIABLE TRANSFORMER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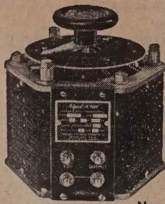
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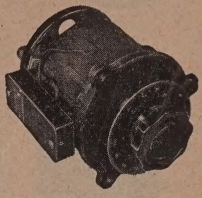
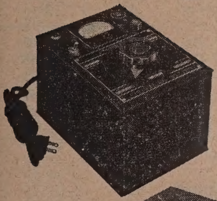
No. 2


No. 1

No. 5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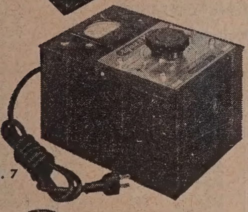

No. 7

No. 8

AUTO-TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
300BU	TREED	115	0-135	3.0	400	1	6 lbs.	$ 12.50	300BU
500BU	FIVED	115	0-135	7.5	1000	1	11 lbs.	19.00	500BU
500B	FEDEN	115	0-135	7.5	1000	2	12 lbs.	23.00	500B
1500B	TOODE	115	0-135	15.0	2000	3	23 lbs.	46.00	1500B
3000B	THIRT	115	0-135	30.0	4000	2	27 lbs.	55.00	3000B
5000B	SIXEN	115	0-135	50.0	6100	3	80 lbs.	118.00	5000B
CA-5	CADDY	115	0-280	3.5	430	4	30 lbs.	27.50	CA-5
CA-10	CAMMY	115	0-280	7.5	860	4	40 lbs.	52.50	CA-10
520BU	BRANY	230	0-270	3.0	810	1	11 lbs.	20.00	520BU
520B	CRANY	230	0-270	3.0	810	2	12 lbs.	26.00	520B
1520B	DANNY	230	0-270	9.0	2400	3	27 lbs.	46.00	1520B
3020B	RANNY	230	0-270	18.0	4850	2	27 lbs.	55.00	3020B
5020B	TANNY	230	0-270	28.0	7500	3	80 lbs.	126.00	5020B
NA-5	NADDY	230	0-140	7.5	860	4	27 lbs.	28.50	NA-5
NA-10	NAMMY	230	0-140	15.0	1500	4	40 lbs.	55.50	NA-10

Electro-Statically Shielded
Television-Servicing Servicing—Radio & Laboratory

ISOLATION TRANSFORMER MODELS

LR-5	LARKE	115	70-140	5.0	500	5	27 lbs.	$ 29.50	LR-5
LR-10	LAMBE	115	70-140	10.0	1000	5	40 lbs.	57.50	LR-10
LR-22	LOOSE	230	70-140	5.0	500	5	27 lbs.	31.50	LR-22
LR-24	LOOKE	230	70-140	10.0	1000	5	40 lbs.	61.50	LR-24

METERED AUTO-TRANSFORMER MODELS

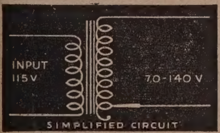
PAL-7	PADDE	115	0-135	7.5	1000	6	15 lbs.	$ 40.50	PAL-7
1500-BD	LATTE	115	0-135	15.0	2000	8	35 lbs.	64.00	1500-BD
CAL-5	MALLE	115	0-280	3.5	430	7	32 lbs.	38.50	CAL-5
CAL-10	NALLE	115	0-280	7.5	860	7	42 lbs.	64.50	CAL-10
MAL-7	QUALM	230	0-270	3.0	810	6	15 lbs.	49.50	MAL-7
1520-BD	RALEN	230	0-270	9.0	2400	8	35 lbs.	64.00	1520-BD
NAL-5	TALLE	230	0-140	7.5	860	7	27 lbs.	40.50	NAL-5
NAL-10	SALLE	230	0-140	15.0	1500	7	40 lbs.	67.50	NAL-10

Electro-Statically Shielded
Television-Servicing Servicing—Radios & Laboratory

METERED ISOLATION TRANSFORMER MODELS

LRL-5	BARKE	115	0-140	5.0	500	7	29 lbs.	$ 41.50	LRL-5
LRL-10	BAMBE	115	0-140	10.0	1000	7	42 lbs.	69.50	LRL-10
LRL-22	BOOSE	230	0-140	5.0	500	7	29 lbs.	43.50	LRL-22
LRL-24	BOOKE	230	0-140	10.0	1000	7	42 lbs.	73.50	LRL-24

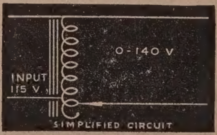
ISOLATION TRANSFORMER



ADJUST-A-VOLT FEATURES:

- Smooth Continuous Control
- No Waveform Distortion
- High Efficiency
- Rugged Construction
- Excellent Regulation
- Conservatively Rated
- 50/60 Cycle Operation
- Standard Mountings

AUTO-TRANSFORMER



The Adjust-A-Volt combines the ease of control of the Rheostat with the high efficiency of the transformer and provides smooth, continuous control of voltage for the control of AC lines, Power, Heat, Light and Speed.

Other models available. Ask for complete catalog.

MANUFACTURED UNDER U. S. PATENT 2,009,013 AND OTHER PATENTS PENDING

Staco
STANDARD ELECTRICAL PRODUCTS CO.
A QUALITY PRODUCT
DAYTON, O. U.S.A.

TRANSFORMERS

STEP DOWN STEP UP

ISOLATION AND LINE CORRECTION

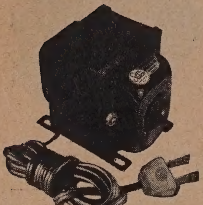


FIG. 1

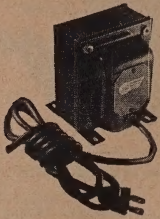


FIG. 2

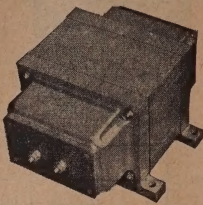


FIG. 3

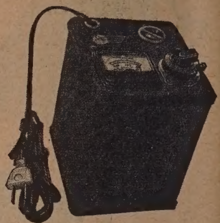


FIG. 4

STEP-DOWN AUTOTRANSFORMERS

Input 220-240 V. 60 cy. Output 115 V. Pri. Cord and Plug Sec. Receptacle

Cat. No.	Code	Mount Fig. No.	Cap. in Watts	Input, Volts	Output, Volts	Cycles	Dimensions in Inches			Net Wt. in Lbs.	Net Price	Cat. No.
							H.	W.	D.			
SB-0075	STEBA	1	75	200/240	115	50/60	3⅛"	2⅝"	3¾"	3½	$ 5.40	SB-0075
SB-0150	STECA	1	150	200/240	115	50/60	3⅞"	3¼"	3⅝"	4½	7.35	SB-0150
SB-0250	STEDA	1	250	200/240*	115	50/60	4¾"	3⅞"	4⅜"	8½	9.60	SB-0250
SB-0500	STEFA	1	500	200/240*	115	50/60	4¾"	3⅞"	6⅛"	12½	15.60	SB-0500
SB-1000	STEGA	3	1000	200/240*	115	50/60	4⅞"	7¼"	9"	22½	28.50	SB-1000
SB-2000	STELA	3	2000	200/240*	115	50/60	5¼"	8⅝"	11¼"	40¼	47.40	SB-2000

* These models have primary taps of 200–220–240 Volts. Simply remove cover plate (see Figure 2) and connect to required taps.

TELEVISION LINE CORRECTION STEP-UP AUTOTRANSFORMERS

Models SU 100/105Volt. Input. Models RU 200/210 Volt Input
All SU Models Boost Input 10 Volts. All RU Models Boost Input 20 Volts

SU-0100	SUBAT	1	100	100/110	110/120	50/60	3⅛"	2⅝"	2⅞"	2¾	$ 5.15	SU-0100
SU-0250	SUCAT	1	250	100/110	110/120	50/60	3⅛"	2⅝"	3¾"	3½	7.35	SU-0250
SU-0500	SUDAT	1	500	100/110	110/120	50/60	3⅞"	3¼"	3¼"	4½	8.85	SU-0500
SU-1000	SUFAT	1	1000	100/110	110/120	50/60	4⅝"	3⅞"	4⅛"	8½	17.65	SU-1000
SU-2000	SUGAT	1	2000	100/110	110/120	50/60	4⅝"	3⅞"	5⅝"	14½	35.40	SU-2000
RU-0100	SREBA	1	100	200/210	220/230	50/60	3⅛"	2⅝"	2⅞"	2¾	5.15	RU-0100
RU-0250	SRECA	1	250	200/210	220/230	50/60	3⅛"	2⅝"	3¾"	3½	7.35	RU-0250
RU-0500	SREDA	1	500	200/210	220/230	50/60	3⅞"	3¼"	3¼"	4½	8.85	RU-0500
RU-1000	SREFA	1	1000	200/210	220/230	50/60	4⅝"	3⅞"	4⅛"	8½	17.65	RU-1000
RU-2000	SREGA	1	2000	200/210	220/230	50/60	4⅝"	3⅞"	5⅝"	14½	35.40	RU-2000

RADIO — ISOLATION TRANSFORMERS — TELEVISION

All Models 115 V. Input. 115 V. Output. Electrostatically Shielded.

SI-050	SICAR	1	50	115	115	50/60	3 17/32"	2⅞"	3"	4½	$ 6.00	SI-050
SI-100	SICER	1	100	115	115	50/60	3 29/32"	3 5/32"	3⅝"	7¼	11.70	SI-100
SI-250	SICOR	1	250	115	115	50/60	4¾"	3⅞"	5⅛"	14½	21.00	SI-250

TELEVISION LINE VOLTAGE ADJUSTORS, METERED

8 Position Rotary Switch Corrects Low or High Line to 115 V. from 85-95-105-115-125-135 V-AUTOTRANSFORMER

LC-150	LABAD	4	150	85-135	115	50/60	6½"	4⅜"	5"	7¾	$17.40	LC-150
LC-350	LAFAD	4	350	85-135	115	50/60	6½"	4⅜"	5"	10¾	21.00	LC-350
LC-500	LAJAD	4	500	85-135	115	50/60	6½"	4⅜"	5"	11½	25.50	LC-500

STACO Transformers are compact and modern in design. Only the highest quality silicon lamination steel is used which assures cool operating transformers. Each coil is layer wound with the best quality enameled wires, each layer is insulated with heavy insulating material, each coil is varnished impregnated and high temperature baked. High Voltage Breakdown Test is performed on each coil and transformer in accordance with existing RMA Specs. This combination of high quality materials plus the finest workmanship is assurance of better and lasting performance at highest operating efficiency, yet costs no more than average.

Finishes: Mount type #1, Black baked enamel, Mount type #2, Black baked enamel, Mount type #3, Natural Buffed Aluminum, Mount type #4, Black Wrinkle baked enamel.

MALLORY CAPACITORS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 4

Metal Tubular Dry Electrolytic Capacitors Single Section

Mallory Cat. No.	List Price
TC22	$1.00
TC26	1.00
TC29	1.10
TC30	1.00
TC31	.90
TC32	1.00
TC36	1.05
TC39	1.20
TC40	1.00
TC41	1.05
TC42	1.05
TC43	1.10
TC44	1.15
TC45	1.20
TC47	1.30
TC48	1.35
TC49	1.40
TC50X	1.05
TC51	1.15
TC52	1.20
TC53	1.25
TC54	1.30
TC55	1.35
TC58	1.55
TC59	1.70
TC60	1.05
TC61	1.20
TC62	1.25
TC63	1.30
TC64	1.40
TC65	1.45
TC68	1.95
TC70	1.20
TC71	1.25
TC72	1.30
TC73	1.35
TC74	1.40
TC75	1.55
TC77	1.70
TC78	1.80
TC81	1.35
TC82	2.70
TC83	1.60
TC84	1.75
TC92	2.95
TC308	4.40
TC310	1.70
TC420	3.50
TC421	3.00
TC495	1.90
TC605	1.55
TC610	1.90
TC1505	1.75
TC2501	1.35
TC2505	2.30
TC50025	1.75

Metal Tubular Dry Electrolytic Capacitors • Dual Common Negative

Mallory Cat. No.	List Price
TCD26	$1.40
TCD45	1.65
TCD47	1.80
TCD48	1.85
TCD49	2.10
TCD52	1.65
TCD55	1.85
TCD62	1.70
TCD65	2.25
TCD71	1.70
TCD72	1.85
TCD74	2.20

Mallory Page 4

Mallory Cat. No.	List Price
TCD75	$2.50
TCD485	1.75
TCD497	1.95
TCD498	2.35

Metal Tubular Dry Electrolytic Capacitors • Dual Separate Section

Mallory Cat. No.	List Price
TCS44	$2.00
TCS45	2.10
TCS47	2.25
TCS48	2.35
TCS52	2.10
TCS55	2.35
TCS61	2.10
TCS64	2.75
TCS71	2.15
TCS74	2.75
TCS75	3.15
TCS505	3.60

Mallory Page 5&6

FP and WP Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
FP113	$1.55
FP115	1.65
FP116	2.00
FP117	2.15
FP119	2.80
FP125	1.55
FP135	1.90
FP137	2.10
FP138	2.85
FP140	3.95
FP142	1.55
FP143	1.70
FP144	1.80
FP145	1.95
FP146	2.05
FP149	3.05
FP208	1.70
FP210	1.80
FP211	1.85
FP212	1.90
FP213	2.00
FP214	2.15
FP215	3.40
FP216	2.30
FP217	1.90
FP218	4.00
FP221	2.50
FP225	2.25
FP227	2.30
FP228	2.65
FP229	2.60
FP230	2.80
FP231	1.90
FP234	2.55
FP235	3.65
FP236	2.65
FP237	3.05
FP238	3.45
FP239	3.65
FP240	3.85
FP244	3.50
FP245	3.60
FP246X	4.85
FP250	3.65
FP255	3.95
FP258	2.35
FP262	4.30
FP303	2.90
FP304	2.70

Mallory Page 5&6

Mallory Cat. No.	List Price
FP306	$2.30
FP307	2.50
FP309	2.70
FP310	2.40
FP311	2.65
FP312	3.00
FP313	2.55
FP314	2.80
FP316	2.35
FP318	3.85
FP326	4.20
FP328	2.50
FP330	3.10
FP331	3.15
FP332	2.40
FP334	3.45
FP335	4.90
FP336	5.80
FP339	3.05
FP341	4.00
FP342	3.70
FP343	3.95
FP344	3.35
FP345	3.90
FP346	3.95
FP352	3.65
FP353	3.15
FP354	2.30
FP355	2.40
FP356	2.90
FP357	2.60
FP358	4.05
FP360	2.40
FP363	2.90
FP364	5.10
FP366	2.85
FP367	2.40
FP368	4.60
FP369	2.55
FP371	3.05
FP373	4.20
FP375	4.95
FP376	2.90
FP377	4.90
FP378	5.40
FP379	3.35
FP380	3.10
FP384	3.10
FP386	2.45
FP387	2.85
FP389	2.60
FP390	2.95
FP391	4.80
FP393	4.15
FP394	2.70
FP395	4.15
FP396	4.45
FP397	4.55
FP398	4.15
FP407	3.10
FP409	3.10
FP410	3.55
FP413X	4.90
FP414	4.50
FP416	4.55
FP417	4.55
FP418	5.25
FP419	5.80
FP420	4.55
FP421	4.65
FP422	4.75
FP423	4.40
FP424	3.50
FP425	5.15
FP426	3.45
FP427	4.10
FP428	4.60
FP429	4.50
FP431	4.10
FP432	4.70
FP433	4.60

Mallory Page 5&6

Mallory Cat. No.	List Price
FP434	$3.35
FP436	4.65
FP437	4.55
FP444	4.70
FP445	4.60
FP455	4.75
FP456	4.95
FP457	3.95
FP461	4.80
FP465	3.70
FP471	5.00
FP473	4.30
FP474	3.50
FP550	3.45
WP032	3.20
WP039	2.55
WP041	3.45
WP055	1.60
WP057	2.55
WP059	3.55
WP063	1.25
WP065	2.65
WP200	4.40
WP204	2.85
WP302	3.00
WP505	3.00
WP510	4.40
WP520	2.15
WP540	5.20

Mallory Page 7

Threaded Neck Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
RS207	$2.05
RS212	2.20
RS213	2.20
RS214	2.40
RS215	2.40
RS216	2.45
RS217	2.45
RS219	2.70
RS223	3.00
RS224	3.15
HD684	2.30
HS691	2.95
HS693	3.15
HS696	3.85
RM262	3.00
RM265	5.00
SR638	3.00
SR645	3.00

Cardboard Tubular Dry Electrolytic Capacitors • Single Section

Mallory Cat. No.	List Price
ST595	$1.25
ST597	1.40
ST598	1.55
ST599	1.70
ST645	2.35
ST845	2.80
TN111	1.40
2N501	2.80
2N509	1.65
2N511	1.85
2N513	1.80
2N514	1.75
2N516	1.60

Mallory Page 7

Mallory Cat. No.	List Price
2N518	$1.70
2N520	1.95
2N521	2.10
2N523	3.20
2N525	2.20
2N527	2.40
2N529	3.60
2N531	2.95
2N533	2.50
2N535	3.20
2N537	3.40
2S556	2.25
2S567	2.15
2S569	2.80
TN125	2.00
TN129	2.25
3N527	2.05
3N533	2.20
3N535	3.30
3N537	3.20
3N539	3.75
3N541	3.55
3S579	2.65
3S584	2.85
4N723	3.60
4N727	3.25
4S715	3.25

Mallory Page 8

High Capacity Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
HC1020	$ 5.15
HC1040	7.25
HC1060A	7.50
HC1520	5.80
HC1540	8.10
HC1560	10.00
HC2510	4.85
HC2520	7.20
HC2540	9.85
HC5005	4.80
HC5010	7.00
HC5020	9.10
HC15010	10.50
HC20005	9.80
HC45003	12.00

Non-Polarized Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
NP0340	$ 7.25
NP1225	5.00
NP1235	5.75
NP1255	7.50
NP3003	3.75
NP3006	4.00
NP3014	6.75
NP3025	9.50
NP4505	7.50
NP4510	11.60

Bathtub Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
BS26	$4.50
BS29	4.60
BS36	4.55
BS39	4.70

MALLORY CAPACITORS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 8

Bathtub Dry Electrolytic Capacitors

Mallory Cat. No.	List Price
BS45	$4.70
BS48	4.85
BS62	4.75
BS65	4.90
BS81	5.75
BS91	5.85

Mallory Page 9

AC Motor Starting Capacitors • Round Type

Mallory Cat. No.	List Price
PS2010	$2.05
PS2520	4.60
PS2610	2.10
PS3210	2.10
PS3220	4.90
PS3810	2.10
PS3820	5.30
PS4310	2.10
PS4320	5.55
PS5310	2.15
PS5320	5.75
PS6410	2.25
PS6420	6.75
PS7010	2.40
PS7020	7.00
PS7510	2.55
PS7520	7.35
PS8610	2.65
PS8620	7.65
PS9710	2.80
PS10810	2.85
PS12410	2.95
PS13010	2.95
PS14510	3.20
PS16110	3.25
PS19410	3.90
PS20010	3.90
PS21610	4.05
PS24310	4.70
PS27010	4.75
PS32410	5.40
PS34010	5.55
PS37810	6.00
PS40010	6.05
PS43010	6.95
PS48510	7.60

AC Motor Starting Capacitors • Rectangular Type

Mallory Cat. No.	List Price
MSG222	$3.30
MSG223	3.60
MSG225	3.85
MSG226	3.90
MSG228	4.00
MSG230	4.25
MSG231	4.30
MSG234	5.75

Continuous Duty • Oil Impregnated AC Capacitors

Mallory Cat. No.	List Price
RP3301	$4.20
RP3302	5.20

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Mallory Cat. No.	List Price
RP3303	$ 5.55
RP3304	6.20
RP3305	6.80
RP3306	7.50
RP3307	7.90
RP3308	8.35
RP3310	9.55
RP3312	10.90
RP3315	13.80

Capacitor Selector

Mallory Cat. No.	List Price
MSS101	$15.00 Net

Mallory Page 10

Plastic Tubular Capacitors

Mallory Cat. No.	List Price
PT401	$ .35
PT411	.25
PT412	.25
PT413	.30
PT415	.30
PT4025	.45
PT601	.45
PT611	.30
PT612	.30
PT613	.35
PT614	.35
PT615	.40
PT616	.40
PT621	.25
PT622	.25
PT623	.25
PT624	.25
PT625	.25
PT626	.25
PT1611	.60
PT1612	.60
PT1615	.70
PT1621	.55
PT1622	.55
PT1623	.55
PT1624	.55
PT1625	.55
PT1626	.55
PT1627	.55
PT1628	.60
PT16115	.60
PT16275	.55
PTD16115	.80

Mallory Page 11

Tubular Paper Capacitors

Mallory Cat. No.	List Price
TP400	$ .23
TP401	.23
TP402	.23
TP403	.23
TP404	.23
TP405	.23
TP406	.23
TP407	.23
TP408	.23
TP409	.23
TP410	.27
TP411	.27

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Mallory Cat. No.	List Price
TP412	$ .27
TP413	.32
TP414	.32
TP415	.36
TP416	.36
TP417	.45
TP418	.41
TP419	.50
TP420	.50
TP421	.23
TP422	.81
TP423	.23
TP424	.27
TP425	.27
TP426	.27
TP427	.32
TP428	.32
TP429	.36
TP430	.41
TP431	.54
TP432	.72
TP433	1.13
TP434	.45
TP435	.45
TP437	.54
TP439	.68
TP442	.50
TP444	.45
TP445	.27
TP450	.27
TP451	.32
TP452	.41
TP453	.59
TP454	.68
TP455	.45
TP456	.45
TP457	.45
TP458	.45
TP459	.45
TP460	.45
TP461	.45
TP462	.45
TP463	.45
TP464	.45
TP465	.54
TP466	.54
TP467	.63

Oil Impregnated Tubular Paper Capacitors

Mallory Cat. No.	List Price
OW331	$ .55
OW332	.55
OW333	.60
OW334	.60
OW335	.60
OW336	.60
OW337	.60
OW338	.70
OW339	.70
OW340	.55
OW341	.55
OW342	.55
OW343	.55
OW344	.55
OW345	.55
OW346	.60
OW611	1.20
OW612	1.25
OW613	1.25
OW615	1.75
OW621	1.10
OW622	1.10
OW623	1.15
OW625	1.15
OW635	1.10
OW6275	1.20
OWD335	.80

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Metal Cased Oil Impregnated Paper Capacitors

Mallory Cat. No.	List Price
OT101	$ .95
OT103	1.05
OT106	1.10
OT110	1.25
OT113	1.70
OT116	2.20
OT301	1.10
OT303	1.20
OT306	1.30
OT310	1.50
OT370	1.20
OT371	1.20
OT372	1.20
OT373	1.20
OT375	1.25
OT376	1.30
OT377	1.20
OT378	1.30
OT379	1.30
OT380	1.40
OT458	1.25
OT459	1.25
OT460	1.25
OT461	1.25
OT462	1.30
OT463	1.30
OT464	1.35
OT465	1.40
OT466	1.40
OT467	1.45

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Special Vibrator Buffer Capacitors

Mallory Cat. No.	List Price
VB470	$1.10
VB471	1.15
VD491	.65
VO480	.65

Miniature Metal Tubular Capacitors

Mallory Cat. No.	List Price
MT105	$ .90
MT107	.90
MT115	.90
MT125	.90
MT127	.95
MT135	.95
MT145	1.00
MT605	.95
MT607	.95
MT615	.95
MT625	.95

Automotive Noise Suppression Capacitors

Mallory Cat. No.	List Price
AG442	$ .80
AG443	1.00
AG444	.60
AG450	1.50
AG451	.65
AG452	.90
AG453	1.50
AM454	.65
AS125	1.20

Mallory Page 12

Mallory Cat. No.	List Price
AS145	$1.40
AS165	1.50
AS185	1.75
AS525	1.35
AS545	1.60
AS565	2.00
CA275X	3.00
DL445X	2.25
FM441	.85
FM442	.65
RF480	.80
RF481	.90
RF482	1.15

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Steel Cased Oil Filled Capacitors

Mallory Cat. No.	List Price
CB403	$2.25
CB404	2.40
CB405	2.85
CB406	3.60
CB602	2.65
CB603	2.80
CB604	3.00
CB605	3.40
CB1002	2.85
CB1003	2.95
CB1004	3.20
CBD403	3.25
CBD404	3.75
CBD602	3.35
CBT403	4.00
CBT404	4.75
CBT602	3.80

Uncased Wax Capacitors

Mallory Cat. No.	List Price
UB351	$1.00
UB352	1.50
UB353	2.60
UB354	1.15
UB355	1.80
UB356	3.00
UB357	1.05
UB358	1.40
UB359	2.10
UB362	2.30
UB363	3.80
UB364	3.90

Ceramic Tubular Trimmers

Mallory Cat. No.	List Price
CT551	$ .50
CT552	.50
CT565	.50
CT565A	.50

Stand-Off Ceramic Capacitors

Mallory Cat. No.	List Price
SC521	$1.00
SC535	1.00

Feed-Thru Ceramic Capacitor

Mallory Cat. No.	List Price
FC5215	$1.00

High Voltage Ceramic Capacitor

Mallory Cat. No.	List Price
HV20035	$2.25

MALLORY CAPACITORS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

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Ceramic Capacitors

Mallory Cat. No.	List Price
UC521	$ .25
UC522	.25
UC523	.25
UC525	.30
UC531	.25
UC532	.25
UC533	.25
UC535	.25
UC541	.25
UC545	.25
UC5212	.25
UC5215	.25
UC5218	.25
UC5222	.25
UC5225	.25
UC5227	.25
UC5233	.25
UC5240	.25
UC5247	.25
UC5312	.25
UC5315	.25
UC5322	.25
UC5325	.25
UC5327	.25
UC5333	.25
UC5339	.25
UC5347	.25
UC5356	.25
UC5368	.25
UC5375	.25
UC5412	.25
UC5415	.25
UC5418	.25
UC5422	.25
UC5425	.25
UC5427	.25
UC5433	.25
UC5439	.25
UC5447	.25
UC5456	.25
UC5468	.25
UC5475	.25
ZT531	.55
ZT541	.50
ZT542	.50
ZT545	.55
ZT553	.50
ZT555	.50
ZT5315	.60
ZT5425	.50
ZT5433	.50
ZT5475	.55
ZT5515	.50
ZT5533	.50
ZT5547	.50
ZT5568	.50
ZT5675	.75
ZT53175	.60
NT531	.50
NT541	.50
NT555	.50
NT5447	.50
NT5475	.50

Ceramic Trimmer Capacitors

Mallory Cat. No.	List Price
ST553Z	$1.50
ST5515Z	1.50
ST554N	1.50
ST557N	1.50

Mallory Page 14

Mallory Cat. No.	List Price
DT553Z	$2.50
DT5515Z	2.50
DT554N	2.50
DT557N	2.50

Disc Ceramic Capacitors

Mallory Cat. No.	List Price
DC511	$ .30
DC521	.25
DC522	.25
DC525	.25
DC5215	.25
DCD521	.40
DCD522	.40
DCD524	.45
DCD5215	.40

Mallory Page 15

Radio Frequency Choke Coils

Mallory Cat. No.	List Price
RF581	$ .60
RF582	.60
RF583	1.25

Motor Brush Noise Filters (Type W)

Mallory Cat. No.	List Price
W7	$1.35
W9	1.75
W11	2.10
W7SP	1.80
W9SP	2.20

Appliance Noise Filters (Type X)

Mallory Cat. No.	List Price
X1	$1.60
X3	1.80
X5	2.70
X6	1.60
X6D	9.60

Mallory Page 16

Appliance Noise Filters (Type Z)

Mallory Cat. No.	List Price
Z2	$2.20
Z4	2.50
Z6	3.60
Z8	3.60

Heavy-Duty Appliance Noise Filters (Type LC)

Mallory Cat. No.	List Price
LC5	$11.25
LC10	15.00

Mallory Page 16

Fluorescent Lighting Noise Filter

Mallory Cat. No.	List Price
Z8A	$3.00

Heavy-Duty Appliance Noise Filters (Type LB)

Mallory Cat. No.	List Price
LB10	$17.50
LB20	47.50
LB40	58.75

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Mica Receiver Capacitors

Mallory Cat. No.	List Price
MC205	$ .25
MC215	.25
MC220	.25
MC223	.20
MC225	.20
MC230	.20
MC235	.20
MC236	.20
MC237	.20
MC240	.25
MC241	.25
MC243	.25
MC245	.25
MC251	.25
MC255	.30
MC256	.30
MC445	.30
MC451	.30
MC456	.40
MC457	.40
MC460	.45
MC461	.50
MC463	.55
MC465	.60
MC467	.75
MC469	.90
MC471	1.00
MC475	1.20
MCB205	.45
MCB215	.40
MCB220	.40
MCB223	.40
MCB225	.40
MCB230	.40
MCB235	.40
MCB236	.45
MCB237	.45
MCB240	.45
MCB241	.55
MCB243	.65
MCB245	.70
MCB251	.95
MCB255	1.10
MCB445	.70
MCB451	.95
MCB456	1.35
MCB457	1.35
MCB460	1.80
MCB461	2.05
MCB463	2.15
MCB465	2.25
MCB467	2.60
MCB469	2.90
MCB471	3.20
MCB475	3.50
MCE215	.50

Mallory Page 17

Mallory Cat. No.	List Price
MCE220	$ .50
MCE223	.50
MCE225	.50
MCE230	.50
MCE235	.50
MCE236	.55
MCE237	.55
MCE240	.55
MCE241	.70
MCE243	.80
MCE245	.85
MCE251	1.10
MCE255	1.35
MCE445	.85
MCE451	1.15
MCE456	1.65
MCE457	1.65
MCE460	2.20
MCE461	2.45
MCE463	2.60
MCE465	2.70
MCE467	3.15
MCE469	3.50
MCE471	3.85
MCE475	4.20
MCK210	.80
MCK215	1.10
MCK220	1.35
MCK224	1.55
MCK310	.35
MCK315	.35
MCK318	.35
MCK322	.40
MCK327	.45
MCK333	.50
MCK347	.60
MCK368	.65
MCK382	.75
MCK475	.30
MCL447	.30
MCL468	.35
MCM422	.30
MCM433	.35
MCP410	.35
MCP550	.35

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Mica Transmitting Capacitors (Type MH)

Mallory Cat. No.	List Price
MH535	$ .70
MH545	.70
MH555	.70
MH557	.80
MH565	1.00
MH575	3.10
MH577	2.20
MH635	1.00
MH645	1.00
MH655	1.25
MH657	1.90
MH665	2.40
MH675	3.90
MH735	1.25
MH745	1.70
MH755	2.05
MH757	3.10
MH765	4.70

Mica Transmitting Capacitors (Type MX)

Mallory Cat. No.	List Price
MX855	$ 8.00
MX857	11.00
MX865	14.50

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Mallory Cat. No.	List Price
MX875	$15.25
MX877	16.00
MX885	18.50
MX895	18.50

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Transmitting Capacitors (Type TX)

Mallory Cat. No.	List Price
TX801	$5.20
TX802	6.50
TX803	8.50
TX804	5.70
TX805	7.60
TX806	9.60
TX807	6.85
TX808	9.50
TX809	12.75
TX810	8.40
TX811	9.95
TX812	12.25
TX813	20.00
TX814	18.75
TX815	23.25
TX816	10.50
TX817	14.00
TX818	39.00
TX819	50.00
TX820	62.00
TX821	77.00
TX822	4.55
TX823	13.75
TX824	12.75
TX825	15.50
TX827	43.00
TX829	15.75
TX830	23.00
TX831	6.50
TX832	6.90
TX833	18.00
TX834	28.50
TX835	12.75
TX836	14.00
TX837	15.50
TX838	34.00
TX839	34.00

Transmitting Capacitors (Type TZ)

Mallory Cat. No.	List Price
TZ382	$4.65
TZ383	6.20
TZ384	4.30
TZ385	5.45
TZ386	5.05
TZ387	5.45
TZ388	7.25
TZ389	7.25
TZ390	6.85
TZ391	7.60

Mallory Page 20

Type "MSU, P, HC and NP" Hardware

Mallory Cat. No.	List Price
115-1	$ .20
116-1	.20
118-1	.20
119-1	.20
121-1	.35
122-1	.35
123-1	.35
124-1	.35

Mallory Page 20

Special Hardware for FP Type Capacitors

Mallory Cat. No.	List Price
BP-2	$ .05
BP-4	.05
BP-6	.05
BP-4A	.05
MP-2	.05
MP-4	.05
MP-6	.05
MW-100	1.75
PS-4	.70
PS-6	.90
PSC-4	.10

Mounting Straps and Washers

Mallory Cat. No.	List Price
015-1	$ .05
015-2	.05
A-016	.10
A-017	.10
MS-1	.05

Type "P" Hardware

Mallory Cat. No.	List Price
HB-4	$ .30
HB-8	.35
PL-3	.20
PL-6	.25
PL-8	.30
PL-3A	.20
PL-6A	.25
PL-8A	.30

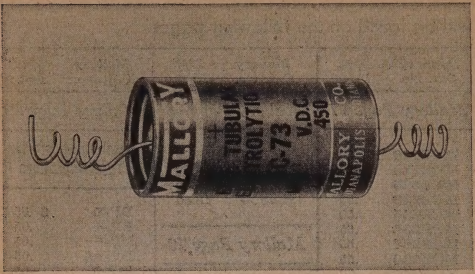
Mounting Clips and Clamps

Mallory Cat. No.	List Price
TH-13	$ .05
TH-15	.05
TH-17	.05
TH-19	.05
TH-21	.05
TH-23	.05
TH-25	.10
VR-1	.15
VR-3	.15
VR-4	.20
VR-6	.25
VR-8	.30
VR-10	.35
104-1	.20

Insulating Sleeves

Mallory Cat. No.	List Price
CE-1	$ .10
CE-3	.10
CE-4	.10
CE-5	.10
CE-6	.10
CE-7	.10
CE-8	.15
CE-9	.10
CE-10	.15
OE-1	.05
OE-3	.05
OE-4	.10
OE-5	.10
OE-6	.10

MALLORY DRY ELECTROLYTIC CAPACITORS



Metal Tubular Dry Electrolytic Capacitors Single Section

APPLICATION—For under-chassis mounting in filter and audio bypass circuits where long life and small size is desirable.

DESCRIPTION—Single section dry electrolytic type encased in hermetically sealed aluminum tube with external insulating sleeve. Suitable in operation up to 185°F. (85°C.) at full rated voltage except type designated (*).

TERMINALS—One 3″ bare solid tinned copper lead at each end. Positive lead marked (+) on insulating sleeve.

MOUNTING—Designed for mounting by its own leads or with applicable hardware listed on page 20.

PACKAGING—25, 50, or 100 capacitors per display carton. Furnished in individual display cartons on orders for less than 25 or when specified.

Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size Dia. Length
TC310	1000	3	4	15/16 x 1¾
TC605	500	6	10	13/16 x 1¾
TC610	1000	6	10	15/16 x 2
TC1505	500	15	20	15/16 x 2
TC22	10	25	40	9/16 x 1¼
TC26	25	25	40	9/16 x 1¼
TC29	50	25	40	11/16 x 1½
TC2501	100	25	40	11/16 x 1¾
TC2505	500	25	40	1 1/16 x 2⅞
TC30	5	50	75	9/16 x 1¼
TC31	1	50	75	9/16 x 1¼
TC32	10	50	75	9/16 x 1¼
TC36	25	50	75	11/16 x 1¼
TC39	50	50	75	13/16 x 1¼
TC40	5	150	200	9/16 x 1¼
TC41	8	150	200	11/16 x 1¼
TC42	10	150	200	11/16 x 1¼
TC43	12	150	200	11/16 x 1½
TC44	16	150	200	11/16 x 1½
TC45	20	150	200	13/16 x 1½
TC47	30	150	200	13/16 x 1½
TC48	40	150	200	15/16 x 1¾
TC49	50	150	200	15/16 x 1¾
TC495	150	150	200	1 1/16 x 2⅞
TC50X	5	250	325	11/16 x 1¼
TC51	8	250	325	11/16 x 1¾
TC52	10	250	325	11/16 x 1¾
TC53	12	250	325	13/16 x 1¾
TC54	16	250	325	13/16 x 1¾
TC55	20	250	325	13/16 x 1¾
TC58	40	250	325	1 1/16 x 1¾
TC59	50	250	325	1 1/16 x 2
TC60	5	350	425	11/16 x 1¾
TC61	8	350	425	13/16 x 1¾
TC62	10	350	425	13/16 x 1¾
TC63	12	350	425	15/16 x 1¾
TC64	16	350	425	15/16 x 1¾
TC65	20	350	425	15/16 x 1¾
TC68	60	350	425	1 1/16 x 2⅞
TC70	5	450	525	11/16 x 1¾
TC71	8	450	525	13/16 x 1¾
TC72	10	450	525	13/16 x 1¾
TC73	12	450	525	13/16 x 1¾
TC74	16	450	525	15/16 x 1¾
TC75	20	450	525	1 1/16 x 1¾
TC77	30	450	525	1 1/16 x 2¼
TC78	40	450	525	1 1/16 x 2⅞
***TC81**	10	500	550	15/16 x 1¾
TC82	10	500	650	1 1/16 x 2 15/16
***TC83**	20	500	550	1 1/16 x 2 15/16
***TC84**	30	500	550	1 1/16 x 2¼
TC92	10	600	750	1 1/16 x 2 15/16
TC50025	250	50	75	1 1/16 x 2⅞
TC308	.5Z @ 15750 Cycles 3 V. N. P.			1 1/16 x 2
TC420	1.5Z @ 60 Cycles 4 V.			1 1/16 x 2⅞
TC421	1.5Z @ 120 Cycles 6 V.			1 1/16 x 2

MALLORY
METAL TUBULAR
ELECTROLYTIC
MALLORY & CO.
INDIANAPOLIS
MALLORY
MADE IN U.S.A.

Metal Tubular Dry Electrolytic Capacitors Dual Section

APPLICATION—For under-chassis mounting in filter and audio bypass circuits where long life and small size is desirable.

DESCRIPTION—Dual section dry electrolytic type encased in hermetically sealed aluminum tube with external insulating sleeve. Suitable for operation up to 185°F. (85°C.) at full rated voltage. Type TCD is dual common negative, TCS dual separate section.

TERMINALS—Type TCD is supplied with 3″ bare solid tinned copper leads, both positive leads at one end and common negative lead at opposite end. Type TCS is supplied with soldering lugs, positive and negative of one section at one end and the other section at the opposite end.

MOUNTING—Type TCD is designed for mounting by its own leads or with applicable hardware shown on page 20. Type TCS is supplied with the Mallory TH clips for mounting, further described on page 20.

PACKAGING—Individual display carton.

Dual Common Negative

Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size Dia. Length
TCD26	25-25	25	40	13/16 x 1¼
TCD45	20-20	150	200	13/16 x 2
TCD47	30-30	150	200	15/16 x 2
TCD48	40-40	150	200	1 1/16 x 2
TCD485	40-20	150	200	1 1/16 x 2
TCD49	50-50	150	200	1 1/16 x 3 1/16
TCD497	50-30	150	200	1 1/16 x 2¼
TCD498	80-50	150	200	1 1/16 x 2¾
TCD52	10-10	250	325	15/16 x 2
TCD55	20-20	250	325	1 1/16 x 2
TCD62	10-10	350	425	15/16 x 2
TCD65	20-20	350	425	1 1/16 x 3 1/16
TCD71	8-8	450	525	15/16 x 2
TCD72	10-10	450	525	1 1/16 x 2
TCD74	15-15	450	525	1 1/16 x 3 1/16
TCD75	20-20	450	525	1 1/16 x 3 1/16

Dual Separate-Section

Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size Dia. Length
TCS44	15-15	150	200	13/16 x 2⅜
TCS45	20-20	150	200	15/16 x 2⅜
TCS47	30-30	150	200	1 1/16 x 2⅜
TCS48	40-40	150	200	1 1/16 x 2⅞
TCS505	70-70	175	225	1 1/16 x 3⅞
TCS52	10-10	250	325	15/16 x 2⅜
TCS55	20-20	250	325	1 1/16 x 2⅜
TCS61	8-8	350	425	15/16 x 2⅜
TCS64	15-15	350	425	1 1/16 x 2⅞
TCS71	8-8	450	525	1 1/16 x 2⅜
TCS74	15-15	450	525	1 1/16 x 2⅞
TCS75	20-20	450	525	1 1/16 x 3½

MALLORY DRY ELECTROLYTIC CAPACITORS

FP† Dry Electrolytic Capacitors

APPLICATION—For top chassis mounting in filter and audio bypass circuits and TV applications. Extremely dependable under heavy ripple current, and high surge voltage.

DESCRIPTION—All WP and FP capacitors are designed for high temperature (85°C.) operation at full rated voltage. Single, dual, triple and quad section units encased in compact rubber sealed aluminum cases with self-contained mounting feature. Type FP is supplied with famous Mallory Fabricated Plate (metalized cotton gauze) anodes, type WP with etched plate anodes. Special internal design provides low RF impedance and minimum coupling between sections. Case at negative potential.

TERMINALS—Solder lug type all at one end. Positive terminals identified by symbols in terminal board corresponding to case marking. Mounting ring provides negative terminal connection.

MOUNTING—Primarily designed for twist prong mounting through suitable chassis slots and may also be mounted as follows:

1. Type MP metal wafer providing the necessary slots without actually punching the chassis for grounded negative circuits.
2. Type BP bakelite wafer for insulated mounting, otherwise similar to Paragraph No. 1. One furnished with each capacitor.
3. TH clip for horizontal mounting.
4. Type PS socket for plug-in mounting. (Remove blank ear with diagonal pliers to polarize unit in relation to socket.)

See page 20 for applicable hardware, and insulating sleeves.

PACKAGING—Individual display carton, with mounting wafer.

†Only Mallory can supply genuine Fabricated Plate (metalized cotton gauze) capacitors.

Surge Voltage Data

● **Due to the many multiple section listings on FP capacitors, it is not practical to show surge voltage ratings without consuming considerable space in the chart. The surge voltage ratings are, therefore, given separately in the small chart.**

Wkg. VDC.	Surge Volts
3	4
6	10
10	15
15	20
25	40
50	75
150	200
200	275
250	325
300	375
350	425
400	525
450	525
475	550

Mallory Cat. No.	Capacity Mfd.	Wkg. Volts DC	Size Dia. Length
WP510	.52Z@15750 cycles	3 V.	1 x 2
WP540	1.0Z@60 cycles	3 V.	1⅜ x 3
WP505	10Z@30 cycles	3 V.	¾ x 2
WP032	3000	10	1⅜ x 2½
WP039	1000	15	1 x 2½
WP041	2000	15	1⅜ x 2½
WP055	100	25	1 x 2
WP057	500	25	1 x 2½
WP059	1000	25	1⅜ x 2
WP063	4	50	¾ x 2
WP065	500	50	1⅜ x 2
FP113	30	150	¾ x 2
FP115	50	150	1 x 2
FP116	100	150	1 x 2½
FP117	150	150	1 x 3
FP119	300	150	1⅜ x 3
FP125	15	250	¾ x 2
FP135	30	350	1 x 2
FP137	50	350	1 x 2½
FP138	80	350	1⅜ x 2½
FP140	125	350	1⅜ x 3
FP142	10	450	¾ x 2
FP143	15	450	1 x 2
FP144	20	450	1 x 2
FP145	30	450	1 x 2½
FP146	40	450	1 x 2½
FP149	80	450	1⅜ x 2½
WP204	250-1000	10-6	1⅜ x 2
WP200	1000-1000	15-15	1⅜ x 2½
FP208	20-20	150-150	1 x 2
FP211	30-30	150-150	1 x 2
FP210	40-20	150-150	1 x 2
FP212	40-40	150-150	1 x 2½
FP213	50-30	150-150	1 x 2½
FP214	50-50	150-150	1 x 2½
FP216	80-40	150-150	1 x 3
FP215	125-100	150-150	1⅜ x 2½
FP217	20-20	250-250	1 x 2
FP221	40-40	250-250	1 x 3
FP218	120-20	300-300	1⅜ x 3
FP228	30-30	350-300	1 x 3
FP225	15-15	350-350	1 x 2
FP227	20-20	350-350	1 x 2½
FP229	35-100	400-50	1 x 3
FP244	80-50	450-50	1⅜ x 3
FP230	20-50	450-250	1 x 3
FP235	20-80	450-350	1⅜ x 2½
FP550	10-80	450-400	1⅜ x 3
FP231	10-10	450-450	1 x 2
FP234	20-20	450-450	1 x 3
FP237	30-30	450-450	1⅜ x 2½
FP236	40-10	450-450	1⅜ x 2
FP238	40-40	450-450	1⅜ x 3
FP239	50-40	450-450	1⅜ x 3
FP240*	50-50	450-450	1⅜ x 3
FP245	80-10	450-450	1⅜ x 3
FP250	40-80	475-200	1⅜ x 2½
FP255	20-100	475-300	1⅜ x 3
FP258	15-15	475-475	1 x 2½
FP262	40-40	475-475	1⅜ x 3
FP246X	80-50	475-450	1⅜ x 4
WP520	40-40-40	25-25-25	1 x 2
FP303	20-250-100	150-15-15	1⅜ x 2
FP312	100-25-50	150-25-50	1 x 3
WP302	15-15-1000	150-150-2	1 x 2
FP306	40-20-20	150-150-25	1 x 2
FP307	40-20-100	150-150-25	1 x 2½
FP304	40-20-200	150-150-25	1 x 2½
FP310	40-40-20	150-150-25	1 x 2½
FP314	40-40-200	150-150-25	1 x 3
FP309	50-30-100	150-150-25	1 x 2½
FP311	50-50-20	150-150-25	1 x 3
FP354	20-20-20	150-150-150	1 x 2
FP355	40-20-20	150-150-150	1 x 2½
FP357	40-40-40	150-150-150	1 x 3
FP356	80-40-20	150-150-150	1⅜ x 2
FP358	120-120-40	150-150-150	1⅜ x 3

* **Designed for photo-flash applications; supplied with insulating tube.**

MALLORY DRY ELECTROLYTIC CAPACITORS

Mallory Cat. No.	Capacity Mfd.	Wkg. Volts DC	Size Dia. Length
FP313	30-20-20	200-200-25	1 x 2
FP318	90-90-20	200-200-50	1⅜ x 3
FP360	15-20-20	250-150-150	1 x 2
FP316	20-15-20	250-250-25	1 x 2
FP363	40-20-20	250-250-250	1⅜ x 2
FP326	100-60-20	300-150-25	1⅜ x 3
FP334	20-80-10	300-250-200	1⅜ x 2½
FP335	100-60-20	300-250-250	1⅜ x 3
FP336	200-60-20	300-250-250	1⅜ x 4
FP331	30-30-20	350-300-25	1 x 3
FP328	15-10-20	350-350-25	1 x 2
FP330	30-20-20	350-350-25	1 x 3
FP369	20-10-5	350-350-250	1 x 2
FP371	30-10-20	350-350-250	1 x 3
FP367	10-10-10	350-350-350	1 x 2
FP342	40-40-130	450-150-50	1⅜ x 2½
FP343	40-100-50	450-150-50	1⅜ x 3
FP341	40-90-50	450-150-150	1⅜ x 3
FP352	20-60-100	450-250-25	1⅜ x 2½
FP353	20-40-10	450-250-250	1⅜ x 2
FP380	20-15-15	450-350-300	1 x 3
FP344	10-30-30	450-400-300	1⅜ x 2½
FP332	10-10-20	450-450-25	1 x 2
FP339	20-20-20	450-450-25	1 x 3
FP346	40-40-20	450-450-25	1⅜ x 3
FP364	80-40-100	450-450-25	1⅜ x 4
FP366	20-10-50	450-450-50	1 x 3
FP368	60-40-75	450-450-50	1⅜ x 4
FP395	40-40-40	450-450-150	1⅜ x 3
FP345	40-10-80	450-450-200	1⅜ x 3
FP373	40-10-100	450-450-200	1⅜ x 3
FP375	40-40-100	450-450-200	1⅜ x 4
FP376	10-10-40	450-450-250	1⅜ x 2½
FP389	10-10-10	450-450-450	1 x 2½
FP390	15-15-10	450-450-450	1 x 3
FP393	40-40-10	450-450-450	1⅜ x 3
FP377	40-40-40	450-450-450	1⅜ x 4
FP378	80-40-20	450-450-450	1⅜ x 4
FP379	10-100-40	475-200-50	1⅜ x 2½
FP384	20-20-40	475-300-25	1⅜ x 2
FP386	10-10-5	475-475-25	1 x 2½
FP387	10-10-100	475-475-50	1 x 3
FP391	20-20-60	475-475-400	1⅜ x 3
FP394	10-10-10	475-475-475	1 x 3
FP396	30-30-20	475-475-475	1⅜ x 3
FP397	40-35-10	475-475-475	1⅜ x 3
FP398	10-40-40	500-450-450	1⅜ x 3
FP407	30-20-20-200	150-150-150-10	1⅜ x 2
FP409	40-40-30-20	150-150-150-25	1⅜ x 2
FP410	50-50-50-20	150-150-150-25	1⅜ x 2½
FP417	100-40-80-20	300-50-25-25	1⅜ x 2½
FP418	120-20-100-20	300-250-30-25	1⅜ x 3
FP419	200-20-100-20	300-250-50-25	1⅜ x 4
FP423	40-40-40-40	300-250-250-25	1⅜ x 2½
FP413X	40-40-40-20	450-300-300-150	1⅜ x 3
FP420	40-40-20-10	300-300-300-300	1⅜ x 2½
FP414	15-80-40-200	350-200-200-25	1⅜ x 3
FP416	40-40-20-20	350-300-300-25	1⅜ x 3
FP421	5-5-50-80	400-400-300-250	1⅜ x 3
FP427	20-80-20-50	450-200-200-50	1⅜ x 2½
FP422	10-40-80-100	450-350-200-50	1⅜ x 3
FP425	30-40-40-10	450-350-350-200	1⅜ x 3
FP426	20-15-20-20	450-450-25-25	1⅜ x 2
FP428	40-10-35-10	450-450-350-350	1⅜ x 3
FP424	15-15-10-20	450-450-450-25	1⅜ x 2
FP432	40-10-10-250	450-450-450-25	1⅜ x 3
FP431	40-15-10-25	450-450-450-25	1⅜ x 2½
FP429	40-30-10-20	450-450-450-25	1⅜ x 3
FP436	40-20-20-40	450-450-450-25	1⅜ x 3
FP437	20-20-20-100	450-450-450-50	1⅜ x 2½
FP433	60-10-10-20	450-450-450-150	1⅜ x 3
FP434	10-10-10-10	450-450-450-450	1⅜ x 2
FP444	20-20-20-20	450-450-450-450	1⅜ x 3
FP445	35-35-10-5	450-450-450-450	1⅜ x 3
FP456	25-20-40-100	475-450-300-50	1⅜ x 3
FP455	10-50-30-30	475-450-450-25	1⅜ x 3
FP457	10-40-10-20	475-450-450-50	1⅜ x 2½
FP461	15-15-80-40	475-475-300-50	1⅜ x 3
FP465	10-10-20-100	475-475-400-25	1⅜ x 2
FP471	40-20-10-10	475-475-475-250	1⅜ x 3
FP473	20-20-10-10	475-475-475-300	1⅜ x 2½
FP474	10-10-10-10	475-475-475-475	1⅜ x 2

Why the
MALLORY FP CAPACITOR
is Tops

IN DEPENDABLE PERFORMANCE!

● Only Mallory supplies genuine Fabricated Plate (metalized cotton gauze) capacitors for replacement.

It takes a superior capacitor to operate at 185 °F. and Mallory FP capacitors do it. Tests prove they perform consistently during 2000 hours of operation at a temperature of 185 °F. At lower temperatures, even longer!

Proof of this performance is found in the experience of one television manufacturer, who kept records of field failures for six months. Of 385,000 Mallory FP capacitors in service only six failed. Special design and meticulous production care make such records possible . . . by eliminating the major source of internal corrosion.

You can count on Mallory FP capacitors for longer shelf life—longer life in an inactive set—lower RF impedance—and ability to withstand higher ripple current.

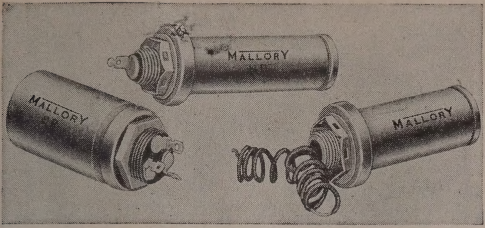
Check these new improvements in Mallory FP capacitors . . . stronger anode tabs—withstand higher discharge currents—improved high surge separators—still greater heat resistance—extra heavy rubber seal—heavier cathode tab—special etched cathode.

And Mallory capacitors cost no more than ordinary capacitors . . . they're easy to install, and when they are installed they're dependable.

Mallory FP capacitors are manufactured under the following patents:

2144959	**2202166**
2020408	**Des. 122825**

MALLORY DRY ELECTROLYTIC CAPACITORS



Threaded Neck Dry Electrolytic Capacitors

APPLICATION—Designed for replacement of wet or dry electrolytic threaded neck type filter capacitors originally employed in any type of electronic filter or bypass circuit.

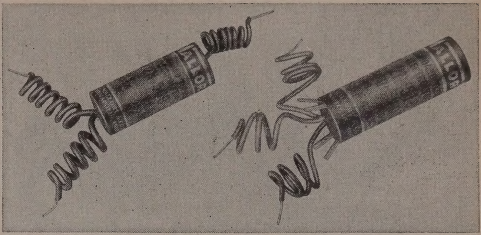
DESCRIPTION—Type RS are single section, RM multiple separate section capacitors encased in aluminum cans equipped with threaded necks for mounting. Both types are internally insulated from their aluminum can. Type HD is for heavy duty, type HS for high surge voltage conditions. Type SR638 is lug type dual. Type SR645 has special internal connections, one terminal common anode, one terminal negative to one section and case negative to the other section.

TERMINALS—RS, RM and HS have 8″ flexible insulated stranded copper leads all out through the threaded neck part of the case. Type HD has one solder lug terminal for positive and case is negative. Type SR has two positive lug terminals with case common negative.

MOUNTING—Types RS, RM, HD and HS have threaded necks (⅝ x 16 for 1″ dia.—¾ x 16 for 1⅜″ dia.) supplied with Pal-nut and special washer providing installation in various chassis hole sizes. All 1″ diameter units in these types are also supplied with a special turned-over washer for 1⅜″ clamp mounting. Type SR has ⅞-16 thread molded necks with solid nut. See page 20 for other hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity Mfd.	Volts DC	Size Dia. Length
RS207	30	250	1 x 3½
RS212	8	450	1⅜ x 3
RS213	8	450	1 x 2¾
RS214	12	450	1⅜ x 3
RS215	12	450	1 x 2¾
RS216	16	450	1 x 3½
RS217	16	450	1⅜ x 3
RS219	20	450	1⅜ x 3
RS223	30	450	1⅜ x 3
RS224	40	450	1⅜ x 3
HD684	10	450	1 x 3
HS691	4	600	1⅜ x 4
HS693	8	600	1⅜ x 4
HS696	20	600	1⅜ x 4¼
RM262	8-8	450	1⅜ x 3
RM265	8-8-8	450	1⅜ x 4¼
SR638	8-8	450	1⅜ x 2¾
SR645	8-8	450	1⅜ x 2¾



Cardboard Tubular Dry Electrolytic Capacitors

APPLICATION—Low cost filter and bypass units for above or below-chassis mounting where humidity conditions are not extreme.

DESCRIPTION—Single, dual, triple and quad section units in cardboard tubes with extra inner seal and ample wax seal at ends. Dual, triple and quad section units are common negative or separate section type, as indicated in chart.

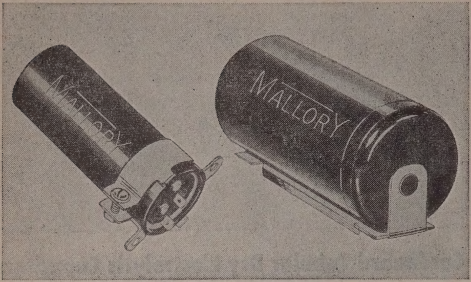
TERMINALS—All types are supplied with flexible covered leads out one end except those marked (*) which have negative lead out opposite end.

MOUNTING—All units (except TN111) are supplied with an adjustable horizontal mounting strap (MS-1). Units marked (†) have special feet for vertical mounting in addition to the strap. For other hardware, see page 20.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity Mfd.	Volts DC	Size Dia. Length
Single Section			
ST595†	8	450	¹³⁄₁₆ x 2⅛
ST597†	16	450	⅞ x 2¾
ST598†	20	450	1 x 2¾
ST599†	30	450	1 x 3¼
ST645	60	450	1³⁄₁₆ x 3⅜
ST845	80	450	1³⁄₁₆ x 4⅜
Dual Common Negative			
TN111	10-10	25-25	⅝ x 1¾
2N501	250-1000	10-6	1¹⁄₁₆ x 2⅝
2N509*	20-20	150-150	⅞ x 2⅛
2N513*	30-30	150-150	⅞ x 2⅜
2N514*	40-20	150-150	⅞ x 2½
2N511*	40-40	150-150	¹⁵⁄₁₆ x 2½
2N520*	50-30	150-150	¹⁵⁄₁₆ x 2⅜
2N521†	50-50	150-150	1 x 2⅞
2N523	100-100	150-150	1⅛ x 3⅜
2N525	30-30	200-200	1 x 2⅝
2N527	50-75	250-50	1¼ x 2⅝
2N529	100-150	250-50	1⅜ x 3⅜
2N516*	8-8	250-250	⅞ x 2⅛
2N531	40-40	300-300	1⅛ x 3⅜
2N533	40-50	450-50	1⅛ x 3⅜
2N535	30-60	450-300	1¼ x 3⅜
2N518†	8-8	450-450	¹⁵⁄₁₆ x 2¾
2N537	40-40	450-450	1¼ x 3⅛
Dual Separate Section			
2S556†	30-30	150-150	1 x 2¾
2S567†	8-8	450-450	1⅛ x 2¾
2S569†	16-16	450-450	1¼ x 3⅞
Triple Common Negative			
3N527*	20-20-20	150-150-25	¹⁵⁄₁₆ x 2¼
3N533*	30-30-20	150-150-25	1 x 2⅜
TN125*	20-10-10	150-150-150	⅞ x 2⅜
TN129†	40-20-20	150-150-150	¹⁵⁄₁₆ x 2⅞
3N535	40-30-40	350-250-150	1³⁄₁₆ x 3⅜
3N537	30-50-100	450-150-25	1¼ x 3⅛
3N539	30-30-30	450-350-250	1⁵⁄₁₆ x 3⅜
3N541	40-20-10	450-450-450	1⁵⁄₁₆ x 3⅜
Triple Separate Section			
3S579†	8-8-20	450-450-25	1³⁄₁₆ x 2⅞
3S584†	8-8-8	450-450-450	1³⁄₁₆ x 2⅞
Quad Common Negative			
4N723	10-10-10-150	450-450-450-50	1³⁄₁₆ x 3⅜
4N727	10-10-10-10	450-450-450-450	1⅛ x 3⅜
Quad Separate Section			
4S715†	16-16-10-10	150-150-25-25	1⅛ x 2⅝

MALLORY DRY ELECTROLYTIC CAPACITORS



High Capacity Dry Electrolytic Capacitors and Non-Polarized Dry Electrolytic Capacitors

APPLICATION—Type HC are for filtering dry disc rectifiers and for electric fence controls, talking picture equipment, and other high-capacity low-voltage applications. Type HC1060A is especially designed for replacement in fence control equipment.

Type NP are non-polarized units for use where polarity may be applied in either direction, but are not suitable for continuous AC applications. Useful in welding and control equipment as a stored energy device.

DESCRIPTION—High quality etched plate electrolytic capacitors supplied in moisture-proof plastic cases requiring no external insulation. Type HC are polarized, and NP are non-polarized type.

TERMINALS—Type HC have two solder lug terminals at one end. Type NP have two screw terminals at one end.

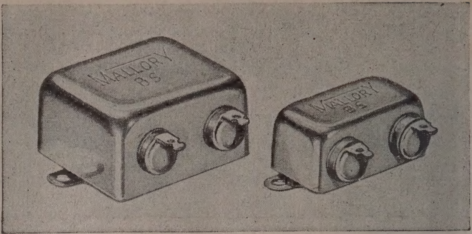
MOUNTING—Supplied with type VR bracket for vertical mounting, and design permits horizontal mounting with protector end cap (sold separately). See page 20 for hardware details.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size Dia. Length
HC1020	2000	10	15	1 7/16 x 3 3/8
HC1040	4000	10	15	1 13/16 x 3 3/8
HC1060A*	6000	10	15	1½ x 4⅛
HC1520	2000	15	20	1 7/16 x 3 3/8
HC1540	4000	15	20	1 13/16 x 3 3/8
HC1560	6000	15	20	1 13/16 x 4 3/8
HC2510	1000	25	40	1 7/16 x 3 3/8
HC2520	2000	25	40	1 13/16 x 3 3/8
HC2540	4000	25	40	1 13/16 x 4 3/8
HC5005	500	50	75	1 7/16 x 3 3/8
HC5010	1000	50	75	1 13/16 x 3 3/8
HC5020	2000	50	75	1 13/16 x 4 3/8
HC15010	1000	150	200	2 1/16 x 4 3/8
HC20005	500	200	275	2 1/16 x 4 3/8
‡HC45003	300	450	525	2 1/16 x 4 3/8
NP0340	2000	25	40	2 1/16 x 4 3/8
NP1225	200	125	200	1 13/16 x 4 3/8
NP1235	300	125	200	2 1/16 x 4 3/8
NP1255	500	125	200	2 1/16 x 4 3/8
NP3003	15	300	375	1 7/16 x 3 3/8
NP3006	30	300	375	1 7/16 x 3 3/8
NP3014	100	300	375	1 13/16 x 4 3/8
NP3025	200	300	375	2 1/16 x 4 3/8
NP4505	50	450	525	1 13/16 x 3 3/8
NP4510	100	450	525	2 1/16 x 4 3/8

*This unit in Aluminum Case

‡Designed for Photoflash Application.



Bathtub Dry Electrolytic Capacitors

APPLICATION—For filter and bypass circuits in marine, aircraft, geophysical and other applications where extreme operating conditions are encountered. BS81 and BS91 are ideal for power amplifier and other high voltage applications.

DESCRIPTION—Dry electrolytic capacitors where cartridges are first sealed in aluminum tubes and then encased in sturdy corrosion-resistant, hot-tinned steel cases providing complete hermetical seal under all weather conditions. All units internally insulated from outer case. BS81 and BS91 employ the special Mallory balanced series unit construction for extreme dependability at high voltage. Temperature range, −40°F. to +185° F.

TERMINALS—Two solder lug terminals on one side.

MOUNTING—Provided with mounting flanges at each end having 3/16" holes.

PACKAGING—Individual display carton.

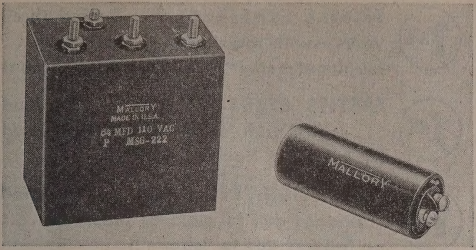
Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Max. Surge Voltage	Size* H W L Y
BS26	25	25	40	¾ x 1 x 1¾ x 2⅛
BS29	50	25	40	¾ x 1 x 1¾ x 2⅛
BS36	25	50	75	¾ x 1 x 1¾ x 2⅛
BS39	50	50	75	⅞ x 1 x 1¾ x 2⅛
BS45	20	150	200	⅞ x 1 x 1¾ x 2⅛
BS48	40	150	200	1 x 1¼ x 1¾ x 2⅛
BS62	10	300	375	⅞ x 1 x 1¾ x 2⅛
BS65	20	300	375	1⅛ x 1¼ x 1¾ x 2⅛
BS81	8	500	650	1 x 1¾ x 2 x 2⅜
BS91	8	600	750	1 x 1¾ x 2 x 2⅜

*H—Height; W—Width; L—Length; Y—Mounting Centers.

1951 MALLORY VIBRATOR GUIDE

Long recognized as one of the most useful publications in the radio service field. Up-to-date, completely organized for quick, accurate reference. Contains all available information through early 1951 models of automobile and battery-operated home radio receivers as well as vibrator power supplies. See your Mallory Distributor.

P.R. MALLORY & CO. Inc. MALLORY DRY ELECTROLYTIC AND PAPER CAPACITORS



AC Motor Starting Capacitors Dry Electrolytic

APPLICATION—MSG types are for replacement of rectangular case type motor starting capacitors. MSG and PS types are applicable for intermittent duty in starting AC capacitor motors where round type cases are required.

DESCRIPTION—MSG types are dry electrolytic intermittent duty AC capacitors in rectangular cases with terminal arrangement similar to the original capacitors they replace.

PS types are dry electrolytic non-polarized capacitors in round cases. Rated at minimum capacity value with plus tolerance of 20% unless otherwise indicated. Type PS furnished in moisture-proof molded plastic containers.

TERMINALS—MSG types are equipped with two capacitor terminals and two dummy terminals (for convenience in wiring). Two solder lug terminals are at one end of the PS types.

MOUNTING—MSG types mount in original clamps or boxes used for original capacitors. PS types may be mounted interchangeably in any original mounting for units of equivalent size. Type PS (except those marked*) may also be mounted by means of a plastic end cap (type PL) and sturdy metal snap-in type bracket (type HB) furnished separately when desired. See page 20 for these and other mounting hardware.

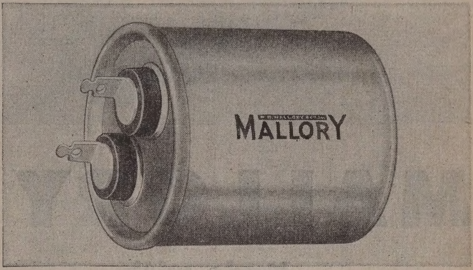
PACKAGING—Individual display carton.

Mallory Cat. No.	Mfd. New	Rating Old	Volts AC	Size Dia. Length
PS2010*	20	20-24	110	1 7/16 x 2¾
PS2610*	26	26-30	110	1 7/16 x 2¾
PS3210*	32	32-36	110	1 7/16 x 2¾
PS3810*	38	38-42	110	1 7/16 x 2¾
PS4310*	43	43-48	110	1 7/16 x 2¾
PS5310	53	53-60	110	1 7/16 x 3⅜
PS6410	64	64-72	110	1 7/16 x 3⅜
PS7010	70	70-78	110	1 7/16 x 3⅜
PS7510	75	75-84	110	1 7/16 x 3⅜
PS8610	86	86-96	110	1 7/16 x 3⅜
PS9710	97	97-107	110	1 7/16 x 3⅜
PS10810	108	108-120	110	1 7/16 x 3⅜
PS12410	124	124-138	110	1 7/16 x 3⅜
PS13010	130	130-157	110	1 7/16 x 3⅜
PS14510	145	145-162	110	1 7/16 x 3⅜
PS16110	161	161-180	110	1 7/16 x 3⅜
PS19410	194	194-216	110	1 7/16 x 3⅜
PS20010*	200	200-220	110	1 7/16 x 4⅜
PS21610	216	216-240	110	1 13/16 x 3⅜
PS24310	243	243-270	110	1 13/16 x 3⅜
PS27010	270	270-300	110	1 13/16 x 4⅜
PS32410	324	324-360	110	1 13/16 x 4⅜
PS34010	340	340-412	110	1 13/16 x 4⅜
PS37810	378	378-420	110	2 1/16 x 4⅜
PS40010	400	400-450	110	2 1/16 x 4⅜
PS43010	430	430-485	110	2 1/16 x 4⅜
PS48510	485	485-540	110	2 1/16 x 4⅜
PS2520	25	25-30	220	1 7/16 x 3⅜
PS3220	32	32-36	220	1 13/16 x 3⅜
PS3820	38	38-42	220	1 13/16 x 3⅜
PS4320	43	43-48	220	1 13/16 x 3⅜
PS5320	53	53-60	220	1 13/16 x 3⅜
PS6420	64	64-72	220	1 13/16 x 4⅜
PS7020	70	70-78	220	2 1/16 x 4⅜
PS7520	75	75-84	220	2 1/16 x 4⅜
PS8620	86	86-96	220	2 1/16 x 4⅜

*Cases will not accommodate PL caps and HB brackets.

Mallory Cat. No.	Mfd. New	Rating Old	Volts AC	Size* W L H
MSG222	64	64-72	110	2 x 3½ x 3½
MSG223	78	78-85	110	2 x 3½ x 3½
MSG225	97	97-107	110	2 x 3½ x 3½
MSG226	108	108-120	110	2 x 3½ x 3½
MSG228	124	124-138	110	2 x 3½ x 3½
MSG230	145	145-162	110	2 x 3½ x 3½
MSG231	161	161-180	110	2 x 3½ x 3½
MSG234	270	270-300	110	2 x 3½ x 3½

*W—Width; L—Length; H—Height.



Continuous Duty—Oil Impregnated—AC Capacitors

APPLICATION—Designed primarily for heavy duty AC applications. May be used as motor running capacitors, fluorescent light ballast, etc. where continuous duty and dependability are required.

DESCRIPTION—Supplied in metal cases, these units may be safely operated at voltages up to 10% above the rated values and at temperatures as high as 75°C. The impregnating oil, Mallatrol "A," is non-inflammable and non-oxidizable, which accounts for the high safety factor and long life of these capacitors.

TERMINALS—Two solder lug terminals at one end. Terminals feature a new all welded construction.

MOUNTING—Mounting may be accomplished by using the original housing or by means of type VR brackets. Complete description of available hardware is on page 20. Order separately as required.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Volts AC	Size Dia. Length
RP-3301	1	330	1⅜ x 1 15/16
RP-3302	2	330	1⅜ x 3 3/16
RP-3303	3	330	2 x 2⅜
RP-3304	4	330	2 x 2 15/16
RP-3305	5	330	2 x 3⅜
RP-3306	6	330	2 x 3⅞
RP-3307	7	330	2 x 4⅜
RP-3308	8	330	2 1/16 x 5 5/16
RP-3310	10	330	2½ x 4 9/16
RP-3312	12	330	2½ x 5 3/16
RP-3315	15	330	2½ x 6¼

MALLORY
AC CAPACITOR SELECTOR

Capacitor Selector

For determining correct capacity to use in making replacements of defective motor starting capacitors which have lost their identity.

For checking capacity ranges from 25 to 645 mfd. 110-125 VAC **Catalog No. MSS-101.**

MALLORY PLASTIC TUBULAR CAPACITORS

MALLORY
PLASCAP
.005 MFD 600 V.DC
OUT
FO

1st **TRISEAL CONSTRUCTION**—Sealed three ways—with moisture-free Mallotrol . . . tough outer shell . . . exclusive Mallocene!

1st **FASTITE LEADS**—Permanently fastened . . . sealed with Mallocene . . . unaffected by soldering iron heat!

1st **DISTORTION-FREE FOIL**—No flattened cartridges due to molding pressures . . . no failures due to "shorts"!

1st **TRU-CENTER CARTRIDGE** — Cartridge centered every time . . . uniform insulation guaranteed at all points!

MALLORY PLASCAP*

. . . Made with amazing Mallocene!

APPLICATION—For use in R.F. bypass and coupling circuits in all television, AM, FM receivers and other electronic equipment. Especially suited for applications where small size and ability to withstand heat are paramount.

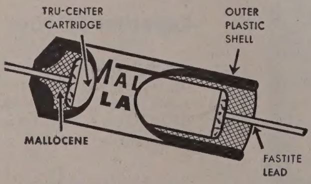
DESCRIPTION—Triple sealed plastic tubular capacitors. Unique impregnant results in stable capacity, low power factor and high insulation resistance over a wide range of temperatures. Will operate continuously at 85° C. Two bare tinned copper leads, one at each end, are sealed by MALLOCENE (exclusive Mallory plastic development). Each lead is fastened directly and solidly to the cartridge. The lead to outside foil is clearly marked. The Plascap is fashioned with a handsome yellow case bearing legible part numbers and ratings.

TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—By means of their leads. This mounting is adequate due to the capacitor's small size, light weight and mechanical strength. If desired, TH clips of applicable size may be used. See page 20 for mounting hardware.

PACKAGING—10 to a card, 1 card per display carton. 25 and 50 bulk packaged per display carton.

Mallory Cat. No.	Capacity Mfd.	Volts D.C.	Size Dia. Length
PT411	.01	400	⅜ x 1
PT412	.02	400	⅜ x 1¼
PT413	.03	400	7/16 x 1¼
PT415	.05	400	½ x 1¼
PT401	.1	400	½ x 1½
PT4025	.25	400	⅝ x 1⅞
PT621	.001	600	5/16 x 1
PT622	.002	600	5/16 x 1
PT623	.003	600	5/16 x 1
PT624	.004	600	⅜ x 1
PT625	.005	600	⅜ x 1
PT626	.006	600	⅜ x 1
PT611	.01	600	⅜ x 1¼
PT612	.02	600	7/16 x 1¼
PT613	.03	600	½ x 1¼
PT614	.04	600	½ x 1½
PT615	.05	600	½ x 1½
PT616	.06	600	½ x 1½
PT601	.1	600	⅝ x 1⅞
PT1621	.001	1600	⅜ x 1
PT1622	.002	1600	⅜ x 1
PT1623	.003	1600	⅜ x 1¼
PT1624	.004	1600	⅜ x 1¼
PT1625	.005	1600	⅜ x 1¼
PT1626	.006	1600	7/16 x 1¼
PT1627	.007	1600	7/16 x 1¼
PT16275	.0075	1600	7/16 x 1¼
PT1628	.008	1600	7/16 x 1¼
PT1611	.01	1600	½ x 1¼
PT16115	.015	1600	½ x 1½
PT1612	.02	1600	½ x 1½
PT1615	.05	1600	⅝ x 1⅞
PTD16115	.015-.015	1600	⅝ x 1⅞



THE SECRET OF MALLOCENE

There is only *one* logical way to build a molded type plastic tubular capacitor . . . with a plastic that sticks to the metal leads! But with ordinary construction methods, this has been impossible for such a plastic would stick to the mold!

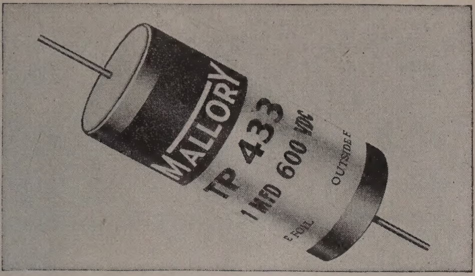
Mallory engineers refused to put an inferior plastic tubular on the market. Instead, they set in motion the vast Mallory research facilities and called in top consulting specialists. The final result . . . Mallocene, the *one* perfect plastic for capacitors, exclusive with the Mallory Plascap!

Here's the secret. First, an extremely tough plastic shell is molded. The cartridge is carefully centered within this shell. Then, the cartridge is surrounded with Mallocene! When Mallocene hardens, it actually becomes part of the outer shell, and *sticks to the metal leads!* Thus, Mallocene provides a solid plastic tubular capacitor with the *first* moisture-proof construction!

* REG. U.S. PAT. OFF.

Mallory Page 10 (See Mallory Page 2 for List Prices)

MALLORY PAPER, OIL, WAX IMPREGNATED, AND WAX FILLED CAPACITORS



Tubular Paper Capacitors

APPLICATION—For use in radio and electronic circuits, especially RF bypassing, where low cost and small size are paramount. Well protected from moisture but not hermetically sealed.

DESCRIPTION—Both TP and OW are compact paper tubular construction. Type TP is wax impregnated and filled. Type OW is oil impregnated and wax filled.

TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—By means of their lead wires or TH clips of applicable size. See page 20 for mounting hardware.

PACKAGING—25, 50 or 100 capacitors per display carton.

Wax impregnated tubular paper capacitors

Cap. Mfd.	400 Volts DC		600 Volts DC		1000 Volts DC	
	Mallory Cat. No.	S	Mallory Cat. No.	S	Mallory Cat. No.	S
.0001			TP401	1		
.00025			TP402	1		
.0005			TP403	1		
.001			TP404	19	TP455	19
.002			TP405	19	TP456	19
.003			TP406	19	TP457	20
.004			TP407	19	TP458	20
.005			TP408	19	TP459	3
.006			TP409	19	TP460	3
.007			TP445	2	TP461	5
.008			TP450	2	TP462	5
.01	TP421	19	TP410	2	TP434	3
.015	TP400	2	TP411	3	TP463	7
.02	TP423	3	TP412	5	TP435	8
.025			TP451	5		
.03	TP424	5	TP413	6	TP464	9
.04	TP425	5	TP414	8	TP465	9
.05	TP426	7	TP415	8	TP437	10
.06	TP427	7	TP416	8	TP466	10
.075			TP452	9	TP467	11
.1	TP428	8	TP418	9	TP439	12
.15			TP417	11		
.2	TP429	10	TP419	12		
.25	TP430	11	TP420	13		
.3	TP444	11	TP453	14		
.4	TP442	12	TP454	15		
.5	TP431	14	TP432	16		
1.0	TP422	17	TP433	18		

Type TP Size Chart

To save space in the main chart, the various sizes have been listed below. Column "S" refers to these sizes.

S	Size Dia. Length	S	Size Dia. Length
1	11/32 x 1	11	11/16 x 1⅞
2	7/16 x 1	12	¾ x 1⅞
3	7/16 x 1¼	13	13/16 x 1⅞
4	½ x 1 1/16	14	⅞ x 1⅞
5	½ x 1¼	15	⅞ x 2
6	9/16 x 1¼	16	1 x 2¼
7	½ x 1½	17	1 x 2½
8	17/32 x 1½	18	1¼ x 2½
9	⅝ x 1 9/16	19	.390 x 1
10	⅝ x 1⅞	20	.390 x 1¼

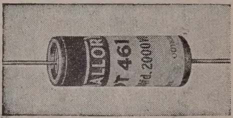
Oil Impregnated Tubular Paper Capacitors

MALLORY
OW 334
Mfd. 1600

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size Dia. Length
OW340	.0005	1600	½ x 1⅛
OW341	.001	1600	½ x 1⅛
OW331	.002	1600	9/16 x 1⅛
OW342	.003	1600	⅝ x 1⅛
OW343	.004	1600	9/16 x 1 5/16
OW332	.005	1600	9/16 x 1 5/16
OW344	.006	1600	9/16 x 1 9/16
OW345	.007	1600	9/16 x 1 9/16
OW346	.0075	1600	9/16 x 1 9/16
OW333	.008	1600	9/16 x 1 9/16
OW334	.01	1600	⅝ x 1 9/16
OW335	.015	1600	11/16 x 1 9/16
OW336	.02	1600	¾ x 1 9/16
OW337	.03	1600	¾ x 2
OW338	.04	1600	13/16 x 2
OW339	.05	1600	⅞ x 2
OWD335*	.015 .015	1600	¾ x 2
OW635*	.0005	6000	9/16 x 1¾
OW621*	.001	6000	11/16 x 1¾
OW622*	.002	6000	27/32 x 1¾
OW623*	.003	6000	1 x 1¾
OW625*	.005	6000	27/32 x 2½
OW6275*	.0075	6000	15/16 x 2½
OW611*	.01	6000	1 1/32 x 2½
OW612*	.02	6000	1 7/32 x 3
OW613*	.03	6000	1¼ x 3¾
OW615*	.05	6000	1⅜ x 4⅜

*Packaged in Individual Display Carton with Mounting Strap. All others packed 25, 50 or 100 capacitors per display carton.

Metal Cased Oil Impregnated Paper Capacitors



APPLICATION—For vibrator buffer, coupling, and other circuits where highest quality tubular type capacitors are required.

DESCRIPTION—Mineral oil impregnated hermetically sealed aluminum tubulars with external insulating sleeves.

TERMINALS—Two bar tinned copper leads, one at each end.

MOUNTING—Designed for mounting by its own leads, may also be mounted by use of the TH clip furnished with each capacitor. See page 20 for description of the TH clip and other hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size Dia. Length
OT101	.01	600	⅝ x 1 3/16
OT103	.02	600	⅝ x 1 3/16
OT106	.05	600	11/16 x 1⅜
OT110	.1	600	11/16 x 1 11/16
OT113	.25	600	13/16 x 2⅛
OT116	.5	600	1 1/16 x 2¼
OT301	.01	1000	⅝ x 1 3/16
OT303	.02	1000	11/16 x 1⅜
OT306	.05	1000	11/16 x 2 3/16
OT310	.1	1000	13/16 x 2 3/16
OT370	.002	1600	⅝ x 1⅜
OT377	.003	1600	⅝ x 1⅜
OT371	.005	1600	⅝ x 1⅜
OT372	.008	1600	⅝ x 1⅜
OT373	.01	1600	11/16 x 1⅜
OT375	.015	1600	11/16 x 1 11/16
OT376	.02	1600	11/16 x 1 11/16
OT378	.03	1600	11/16 x 2 3/16
OT379	.04	1600	11/16 x 2 3/16
OT380	.05	1600	11/16 x 2 7/16
OT458	.0025	2000	11/16 x 1⅜
OT459	.005	2000	11/16 x 1 11/16
OT460	.0075	2000	11/16 x 1⅝
OT461	.01	2000	11/16 x 1⅝
OT462	.0125	2000	11/16 x 1⅞
OT463	.015	2000	11/16 x 1⅞
OT464	.02	2000	11/16 x 2
OT465	.03	2000	13/16 x 2
OT466	.04	2000	13/16 x 2 9/16
OT467	.05	2000	13/16 x 2 9/16

MALLORY PAPER, OIL AND WAX IMPREGNATED CAPACITORS

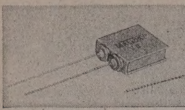


Fig. 1

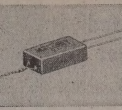


Fig. 2

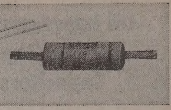


Fig. 3

Special Vibrator Buffer Capacitors

APPLICATION—Intended for replacement of original vibrator buffer and hash suppressor capacitors of similar design.

DESCRIPTION—Type VB is oil impregnated and housed in small rectangular metal case. Section is insulated from case. Type VD is dual wax impregnated unit in small rectangular waxed cardboard case. Type VO is wax impregnated and filled in oval waxed tube.

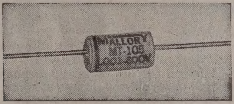
TERMINALS—VB has two bare-tinned copper leads out one end. VD has two bare tinned copper leads out one end and one similar common lead out the other end. VO has heavy copper braid at each end.

MOUNTING—In recess or clamp used in the original equipment.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size* W L H	Fig. No.
VB470	.0075	1600	5/16 x 5/8 x 7/8	1
VB471	.01	1600	5/16 x 5/8 x 7/8	1
VD491	.0008 .0008	1600	5/16 x 5/8 x 1 1/16	2
VO480	.5	120	7/16 x 3/4 x 2 1/8	3

*H—Height; W—Width; L—Length.



Miniature Metal Tubular Capacitors

APPLICATION—For hearing aid, personal radio, and other uses where very small size tubulars are desirable.

DESCRIPTION—Wax impregnated (100 volt units) or oil impregnated (600 volt units) tubular capacitors in minute hermetically sealed metal tubes with insulating sleeve.

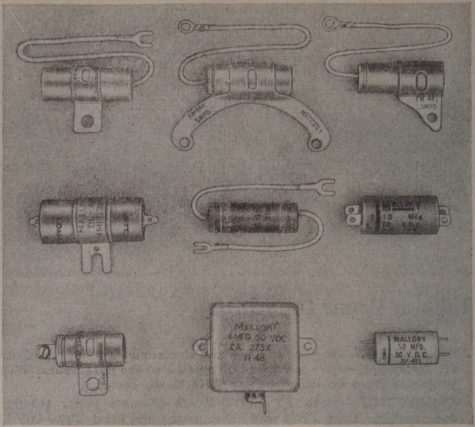
TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—By means of its own leads.

PACKAGING—Ten to a display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size Dia. Length
MT105*	.001	100	9/32 x 1/2
MT107*	.002	100	9/32 x 1/2
MT115*	.005	100	9/32 x 1/2
MT125*	.01	100	19/64 x 1/2
MT127*	.02	100	19/64 x 11/16
MT135*	.05	100	19/64 x 1 1/16
MT145*	.1	100	5/16 x 1 3/4
MT605†	.001	600	9/32 x 13/16
MT607†	.002	600	9/32 x 15/16
MT615†	.005	600	9/32 x 15/16
MT625†	.01	600	21/64 x 1 9/16

*Wax impregnated
†Oil impregnated



Top Row: All AG types; FM442; FM441
Center Row: DL445X; AM454; RF482
Bottom Row: All AS types; CA275X; RF481

Automotive Noise Suppression Capacitors

APPLICATION—For suppressing radio interference emanating from auto generators, oil gauges, ammeters, and other automotive, aircraft, or marine equipment.

AM—For ammeter and gauge suppression.

FM—For Ford generator suppression.

DL—For domelight suppression.

RF—For vibrator hash suppression.

CA—For general suppression in aircraft and marine application.

AS, AG—For generator, ammeter and contact spark suppression.

DESCRIPTION—Wax impregnated cartridges assembled in various style housings, as pictured. Type AG is round type with flexible lead, well protected from moisture, but not hermetically sealed. Type AS is hermetically sealed, provides low impedance, and is ideal for extreme climatic conditions.

TERMINALS—Various, as pictured.

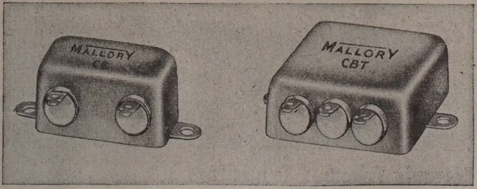
MOUNTING—Types AM 454 and RF 481 are held in place by the connecting wires or with TH clips. All others have own self-contained mounting features.

PACKAGING—Individual display cartons.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size Dia. Length	Signal Corps No.
RF481	.5	50	3/4 x 1 3/8	
RF482	1.0	50	7/8 x 1-3/32	
CA275X	4.0	50	2 x 2 x 1	
AS125‡	.01	100	.675 x 15/16	CA-432
AG442*	.05	100	3/8 x 1 1/4	
AG443	.05	100	7/16 x 1 3/16	
AS145‡	.1	100	.675 x 1 3/8	CA-442
AS165‡	.25	100	3/4 x 1 1/2	CA-452
AS185‡	.5	100	1 x 1 5/8	CA-462
FM441	.5	100	.675 x 1 7/8	
RF480	.5	100	13/16 x 1 5/16	
AG450	.5-.5	100	7/8 x 2	
FM442	.5	160	.675 x 1 7/8	
AG444	.25	200	5/8 x 1 3/4	
DL445X	.4	200	1 x 2 3/8	
AM454	.5	200	11/16 x 2	
AG451	.5	200	3/4 x 2	
AG453†	.5	200	3/4 x 2	
AG452	1.0	200	1 x 2 3/16	
AS525‡	.01	500 AC-DC	.675 x 1	CA-472
AS545‡	.1	500 AC-DC	1 x 2 1/2	CA-482
AS565‡	.25	500 AC-DC	1 x 2 1/2	CA-502

*For Midget Aircraft Motors
†Has shielded lead
‡Also marked with Signal Corps Number as shown.

P.R. MALLORY & CO. INC. MALLORY PAPER, OIL AND WAX IMPREGNATED, AND CERAMIC CAPACITORS



Steel Cased Oil Filled Capacitors

APPLICATION—For general use in aircraft, marine, geophysical and industrial electronic equipment where extreme dependability under severe conditions is desired.

DESCRIPTION—Oil impregnated single, dual, and triple section units housed in rugged, hermetically sealed, hot-tinned steel cases.

TERMINALS—Single section has two terminals. Dual section units have three terminals with left terminal common, and both are internally insulated from case. Triple units have three terminals with common grounded to case. All terminals protrude in a row on one long side of case.

MOUNTING—By means of flanges at each end.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size* H	W	L	X
CB403	.25	400	¾	⅞	1¾	2⅛
CB404	.5	400	⅞	1	1¾	2⅛
CB405	1.0	400	¾	1¾	2	2⅜
CB406	2.0	400	1⅛	2	2	2⅜
CB602	.1	600	¾	⅞	1¾	2⅛
CB603	.25	600	¾	1	1¾	2⅛
CB604	.5	600	⅞	1¼	1¾	2⅛
CB605	1.0	600	⅞	1¾	2	2⅜
CB1002	.1	1000	¾	⅞	1¾	2⅛
CB1003	.25	1000	¾	1¼	1¾	2⅛
CB1004	.5	1000	⅞	1¾	2	2⅜
CBD403	.25-.25	400	¾	1¼	1¾	2⅛
CBD404	.5-.5	400	¾	1¾	2	2⅜
CBD602	.1-.1	600	¾	⅞	1¾	2⅛
CBT403	3X .25	400	¾	1¾	2	2⅜
CBT404	3X .5	400	1	1¾	2	2⅜
CBT602	3X .1	600	⅞	1	1¾	2⅛

*H—Height; W—Width; L—Length; X—Mounting Centers.

Uncased Wax Capacitors

APPLICATION—Designed for replacement of defective sections in large paper capacitor blocks or other applications where sealing pitch is applied for final seal.

DESCRIPTION—Wax impregnated section wrapped in varnish paper for moisture protection until finally potted when installed.

TERMINALS—Two flexible insulated leads out one end.

MOUNTING—Held in place by pouring with hot pitch.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size* W	L	H
UB351	1	200	½	1⅜	2⅛
UB352	2	200	¾	1 9/16	2⅛
UB353	4	200	1 1/16	2 1/16	2⅛
UB354	1	400	9/16	1⅝	2⅛
UB355	2	400	1	1¾	2⅛
UB356	4	400	15/16	1⅝	4⅜
UB357	.5	600	½	1⅜	2⅛
UB358	1	600	¾	1 9/16	2⅛
UB359	2	600	1⅛	2 1/16	2⅛
UB364	4	600	1 1/16	1⅞	4¼
UB362	1	1000	11/16	1½	4⅜
UB363	2	1000	1⅛	1⅞	4⅜

*W—Width; L—Length; H—Height.

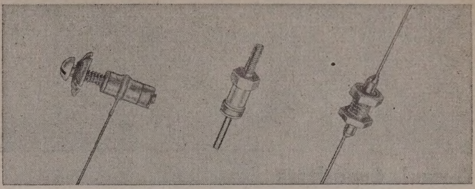


Fig. 1 Fig. 2 Fig. 3

Mallory Ceramic Tubular Trimmers

Mallory silvered steatite dielectric tubular trimmers are economical and compact units. Recommended for applications calling for a low minimum capacity and a high ratio of maximum to minimum capacity. 500 wkg. V. DC.

Mallory Cat. No.	mmf	Length of Body	Fig. No.
CT565A	.5-3	⅜″	1
CT565	.5-3	⅝″	1
CT551	1-4	⅝″	1
CT552	2-6	⅝″	1

Stand-Off Ceramic Capacitors

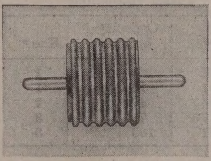
Recommended for the dual purpose of by-passing R. F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for V.H.F. and U.H.F. applications because of their low inductance electrical paths and resultant high frequency.

Mallory Cat. No.	Capacity mmfd	Tolerance	Fig. No.
SC-521	1000	20%	2
SC-535	500	20%	2

Feed-Thru Ceramic Capacitors

A well built, sturdy, feed-thru capacitor . . . used to by-pass R. F. to ground in feed-thru applications. Wire terminals are rugged and will serve as tie points for several connections . . . for supporting other circuit elements, and are sufficiently long for point to point wiring.

Mallory Cat. No.	Capacity mmfd	Tolerance	Fig.
FC5215	1500	20%	3

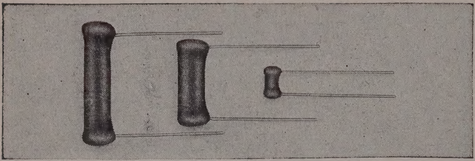


High Voltage Ceramic Capacitor

With a rating of 500 micro-micro-farads at 20,000 volts, this capacitor may be used as an exact replacement in the high voltage power circuit in many TV sets. A rigid case and built-in corona shield give an added safety factor. The capacitor is supplied with No. 6 copper terminals ½″ long. Interconnecting leads may be soldered or clipped to these terminals without damage to the capacitor. Overall dimensions are 1⅛″ diameter by ⅞″ long excluding terminals. Each capacitor is packaged in an individual display carton.

Catalog number HV-20035

MALLORY CERAMIC CAPACITORS



Ceramic Capacitors

APPLICATION—The small size and rugged construction of these capacitors make them ideal for by-passing, coupling, and other AM and FM-TV applications. The general purpose types "UC" may be used in all receiver applications except frequency determining circuits. They are particularly suitable for general replacement of molded mica and paper tubular capacitors. The zero temperature coefficient types "ZT" are ideally suited for use in precision radio and electronic circuits where a truly stable capacitor unaffected by temperature change is required. Negative temperature coefficient types "NT" are designed for use in precision radio and electronic circuits requiring a negative temperature coefficient of capacity.

DESCRIPTION—All Mallory ceramic capacitors are of low-loss ceramic construction, having a dipped phenolic coating for maximum protection from moisture. Their small physical size makes them ideal for replacement purposes when space is at a premium. Type "ZT," while similar in construction to the general purpose types "UC" have the important additional characteristic that their nominal capacity rating is substantially unaffected by a change in temperature of from —55°C through 85°C.

Type "NT" have a negative temperature coefficient of capacity of 750 parts/million/°C. temperature change. As a matter of convenience, they are rated in micro-microfarads at a temperature of 25°C. A rise in ambient temperature above 25°C will result in a proportional decrease of rated capacity. With lowering of temperature an automatic increase of capacity will be observed. In practical applications these capacitors should be mounted adjacent to the circuit components which require capacity compensation.

TERMINALS—One radial bare tinned copper lead 1¼" long at each end.

MOUNTING—By means of their wire leads.

PACKAGING—Five capacitors per display carton.

Voltage Rating—500 V DC

General Purpose ±20% Tolerance

Cat. No.	Capacity (mmfd)	Size*
UC-541	10	1
UC-5412	12	1
UC-5415	15	1
UC-5418	18	1
UC-5422	22	1
UC-5425	25	1
UC-5427	27	1
UC-5433	33	1
UC-5439	39	1
UC-5447	47	1
UC-545	50	1
UC-5456	56	1
UC-5468	68	1
UC-5475	75	1
UC-531	100	1
UC-5312	120	1
UC-5315	150	1
UC-532	200	1
UC-5322	220	1
UC-5325	250	1
UC-5327	270	1
UC-533	300	1
UC-5333	330	1
UC-5339	390	1
UC-5347	470	1
UC-535	500	1
UC-5356	560	1
UC-5368	680	1
UC-5375	750	2
UC-521	1000	2
UC-5212	1200	2
UC-5215	1500	2
UC-5218	1800	3
UC-522	2000	3
UC-5222	2200	3
UC-5225	2500	3
UC-5227	2700	3
UC-523	3000	3
UC-5233	3300	3
UC-5240	4000	3
UC-5247	4700	3
UC-525	5000	3

Zero Temperature Coefficient ±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*
ZT-553	3	1
ZT-555	5	1
ZT-541	10	1
ZT-542	20	1
ZT-5425	25	2
ZT-5433	33	2
ZT-545	50	3
ZT-5475	75	3
ZT-531	100	3

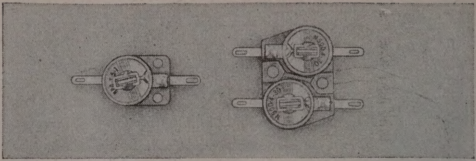
Cat. No.	Capacity (mmfd)	Size*	Tolerance
ZT-5675	.75	1	±.1
ZT-5515	1.5	1	±.5
ZT-5533	3.3	1	±.5
ZT-5547	4.7	1	±.5
ZT-5315	150	4	±15
ZT-5568	6.8	1	±.68
ZT-53175	.175	4	±17.5

Negative Temperature Coefficient 750 Parts/Million/°C ±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*
NT-555	5	1
NT-541	10	1
NT-5447	47	2
NT-5475	75	3
NT-531	100	3

***SIZE CHART**

Sizes	Diameter	Length
1	.240	.460
2	.240	.710
3	.315	1.250
4	.415	1.213



Ceramic Trimmer Capacitors

APPLICATION—Their small size and stable electrical characteristics make these capacitors ideal for use in high frequency FM-TV circuits.

DESCRIPTION—Each capacitor consists of fired silver electrodes on a ceramic rotor and base. They have a 360° rotor with a substantially constant capacity change and are completely sealed from dust and dirt. Single or dual units are available.

TERMINALS—Solder lug type at each end of capacitor.

MOUNTING—Two clearance holes are provided in each capacitor for screw mounting.

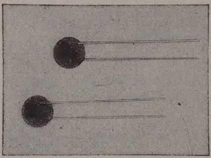
PACKAGING—One capacitor per display carton.

Single Units—Overall size 2 1/32" x 27/32" x 3/8" thick.
Voltage Rating—500 VDC

Catalog No.	Capacity Range (mmfd)	Temperature Coefficient
ST-5515-Z	1.5 to 7	Zero
ST-553-Z	3 to 12	Zero
ST-554-N	4 to 30	Neg. 500 Parts/Million/°C.
ST-557-N	7 to 45	Neg. 500 Parts/Million/°C.

Dual Units—Overall size 1 19/64" x 7/8" x 3/8" thick.
Voltage Rating—500 VDC

Catalog No.	Capacity Range Each Section (mmfd)	Temperature Coefficient
DT-5515-Z	1.5 to 7	Zero
DT-553-Z	3 to 12	Zero
DT-554-N	4 to 30	Neg. 500 Parts/Million/°C.
DT-557-N	7 to 45	Neg. 500 Parts/Million/°C.



Disc Ceramic Capacitors

Because of their small physical size, rugged construction, and excellent electrical characteristics these unique capacitors are particularly suitable for replacement of molded mica and paper tubular units. They have a dipped phenolic coating for maximum protection from moisture. Equipped with radial bare tinned copper wire leads they are easily and quickly mounted. Ten capacitors are packaged in each display carton. Rating stamped on each capacitor.

500 Working Volts DC

Cat. No.	Capacity (mfd)	Size Dia. Thickness
DC-525	.005	19/32 x 1/8
DC-511	.01	3/4 x 1/8
DC-521	.001	19/32 x 5/32
DC-5215	.0015	19/32 x 5/32
DC-522	.002	19/32 x 5/32
DCD-521	.001-.001	19/32 x 5/32
DCD-5215	.0015-.0015	19/32 x 5/32
DCD-522	.002-.002	19/32 x 5/32
DCD-524	.004-.004	3/4 x 5/32

Mallory Page 14 (See Mallory Page 3 for List Prices)

MALLORY CHOKE COILS AND NOISE FILTERS

MALLORY
RF-583
RF-CHOKE

Radio Frequency Choke Coils

APPLICATION—General purpose radio frequency choke coils for all circuits.

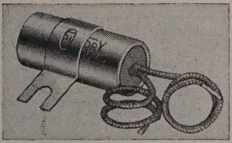
DESCRIPTION—Hour-glass wound for low distributed capacity and housed in compact insulating tubes.

TERMINALS—Two bare tinned copper wire leads, one at each end.

MOUNTING—By means of its leads or with TH clips, as described on page 20. Also may be mounted by means of a stud through a hole provided through the core of the choke coil.

PACKAGING—Individual display carton.

Mallory Cat. No.	Turns	Wire	Inductance Microhenries	Size Dia. Length
RF581	90	16	43	1 x 1½
RF582	55	16	26	1 x 1³⁄₁₆
RF583	55	12	25-30	1⁵⁄₁₆ x 1⅝



Motor Brush Noise Filters (Type W)

APPLICATION—Type W filters, while primarily designed for installation on motor brushes, may be used wherever a permanently installed dual capacity filter is desired. Where un-grounded motor frames or appliance cases are involved, type WSP is recommended for elimination of possible shock hazard.

DESCRIPTION—Dual wax impregnated capacitors housed in sealed metal tubes and specially designed to have low RF impedance. Case is grounded to common terminal of the included sections except in SP type where a shock limiting capacitor is employed between the common lead and case.

TERMINALS—Two flexible covered leads, case common ground.

MOUNTING—By means of attached tangential strap.

PACKAGING—Individual display cartons.

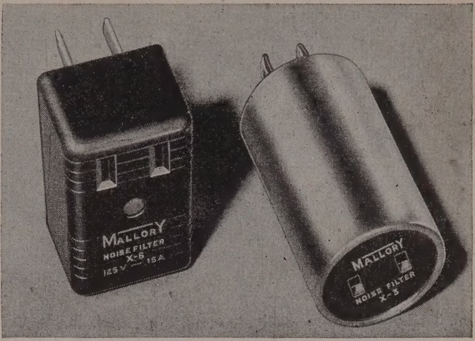
Type W7—115-220 Volts AC-DC for Light Interference
Size ⅞″ x 2″

Type W9—115-220 Volts AC-DC for Medium Interference
Size 1″ x 3″

Type W11—115-220 Volts AC-DC for Severe Interference
Size 1⅜″ x 3″

Type W7SP—115-220 Volts AC-DC for Light Interference
Size ⅞″ x 2″

Type W9SP—115-220 Volts AC-DC for Medium Interference
Size 1″ x 2⅝″



Appliance Noise Filters (Type X)

APPLICATION—For use with plug-in type appliances where straight capacity type filters are sufficient to produce desired noise suppression.

DESCRIPTION—Single and dual type capacitor filters in round metal housings designed for insertion between appliance cord and wall outlet. X-6 is furnished in attractive compact brown plastic case.

TERMINALS—Male prongs for insertion into wall outlet and slots for appliance plug.

MOUNTING—Self-supporting by its prongs.

PACKAGING—Individual display carton.

Type X1 is for relatively slight interference. Size 1⅜″ x 1¾″, rated 110 volts, 5 amperes.

Type X3 is a capacitor type filter having greater efficiency than Type X1. Size 1⅜″ x 2³⁄₁₆″, rated 110-220 volts, 5 amperes.

Type X5 is a triple capacity filter with provision for return lead to appliance. Special safety feature prevents possibility of shock and makes this unit ideal for use with vacuum cleaners, food mixers, etc. Size 1⅜″ x 2³⁄₁₆″, rated 110-220 volts, 5 amperes, and equipped with binding post for connection to appliance or motor frame.

Type X6 for medium interference. Furnished in an attractive, compact, rectangular brown plastic case. Size 1¼″ x 2″ x 1″. Rated at 125 volts AC-DC, 15 amperes.

Type X6D same as X6 except packaged on an attractive counter display card, six to a card.

IMPORTANT

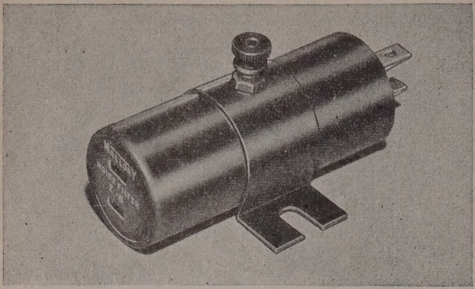
General Noise Elimination Information

● All radio noise suppression devices should be applied at the source of the noise. Filters inserted in radio receiver cords are usually ineffective.

The filters described herein are, therefore, designed for insertion at the offending device. They incorporate many improvements accomplished through the extensive research and war production experience of the P. R. Mallory Company. While there will be some exceptions, most of the types of interference found in the home can be effectively reduced by the Mallory filters described. Unusual cases should be referred to the Mallory Engineering Department for advice.

Each filter is supplied with a complete instruction sheet for proper installation.

MALLORY NOISE SUPPRESSION FILTERS



Appliance Noise Filters (Type Z)

APPLICATION—For use with plug-in type appliances where inductance-capacity continuation filters are necessary to accomplish desired noise suppression.

DESCRIPTION—Single and dual inductance-capacity filters housed in round metal containers designed for insertion between appliance cord and wall outlet.

TERMINALS—Male prongs and female receptacles. Types Z4, 6 and 8 have extra provision for return lead to ground or appliance frame.

MOUNTING—Self-supported by its prongs.

PACKAGING—Individual display carton.

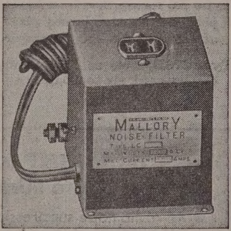
Type Z2 is a capacitor-inductance filter for medium interference. Use with electric razor or small appliances. Most effective on grounded line systems where reversal of plugs will affect operation. Size 1⅜″ x 2 13/16″, rated 110-220 volts, 3 amperes.

Type Z4 is a dual inductance-capacity filter for severe interference on appliances where a return lead from the filter is inconvenient. Ideal for electric razor, vibrators and household appliances. Size 1⅜″ x 2 13/16″, rated 110-220 volts, 3 amperes.

Type Z6 is a dual inductance-capacity filter with provision for return lead to ground. Recommended for suppressing severe interference. Size 1⅛″ x 3¼″. Rated 110-220 volts, 3 amperes.

Type Z8 is same as Z6 but with provision for return wire connection to motor or appliance frame rather than ground. An efficient filter equivalent to box type within 3 ampere rating.

Heavy-Duty Appliance Noise Filters (Type LC)



APPLICATION—For portable plug-in applications where severe interference is involved and ampere rating exceeds that of type Z.

DESCRIPTION—Combination inductance-capacity filter housed in rectangular metal case. Size 2 15/16″ x 3 1/16″ x 3 9/16″.

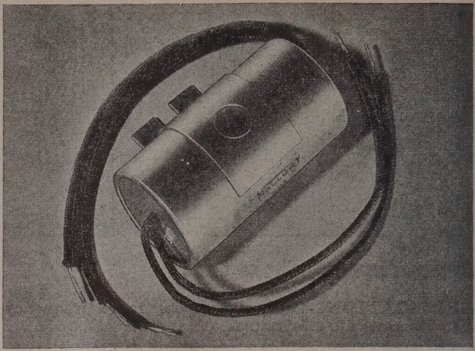
TERMINALS—Ample line cord with male plug for insertion in wall outlet. Female receptacle for appliance cord plug. Binding post for return wire lead to appliance or motor frame.

MOUNTING—Two metal flanges (when permanent mounting is desired).

PACKAGING—Individual carton.

Type LC5 rated 115-220 volts AC-DC, 5 amperes.

Type LC10 rated 115-220 volts AC-DC, 10 amperes.



Fluorescent Lighting Noise Filter

APPLICATION—Specially designed for fluorescent lights where permanent installation on or in the light fixture is desired.

DESCRIPTION—Dual inductance-capacity filter housed in round metal tubes. Contains shock limiting capacitor. Size 1 7/16″ x 2¾″.

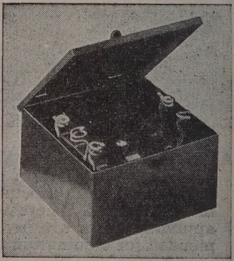
TERMINALS—Flexible covered wire leads, two at one end for input—three at other end for output of which the red lead is for grounding to light frame.

MOUNTING—By means of attached tangential strap.

PACKAGING—Individual display carton.

Type Z8A, 115-220 volts, AC-DC, 3 amperes. For fluorescent lights

Heavy-Duty Appliance Noise Filters (Type LB)



APPLICATION—For permanent installation wherever heavy-duty filters are required, such as outdoor signs, large motors, or at meter board.

DESCRIPTION—Heavy-duty choke-capacity combination filters sealed in rectangular case and housed in standard heavy gauge metal cut-out boxes.

TERMINALS—Heavy, flexible insulated wire leads for splicing with house or motor wiring.

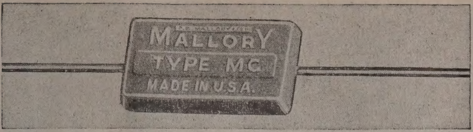
MOUNTING—Mounts by means of screws through bottom of cut-out box.

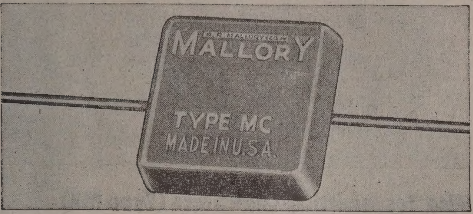
PACKAGING—Individual carton.

Type	Rating	Size
LB-10	220V-10 Amp.	6½ x 6½ x 4
LB-20	220V-20 Amp.	10¼ x 10¼ x 6
LB-40	220V-40 Amp.	12 x 10¼ x 6

Mallory Page 16 (See Mallory Page 3 for List Prices)

MALLORY MICA CAPACITORS





Mica Receiver Capacitors

APPLICATION—Designed primarily for radio receiving applications, or in television and other electronic circuits within their voltage range.

DESCRIPTION—Made with carefully selected mica and foil and housed in high quality compact rectangular bakelite case with standard RMA color coding for identification.

TERMINALS—Bare tinned copper leads.

MOUNTING—By means of its leads.

PACKAGING—5 or 10 capacitors per display carton.

Case Size—7/16″ x 25/32″ x 7/32″ with 1⅛″ Wire Leads
Voltage Rating = 500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance Mallory Cat. No.	Silver Mica ±10% Cap. Tolerance Mallory Cat. No.	Silver Mica ±2% Cap. Tolerance Mallory Cat. No.
.000005	**MC205**	**MCB205**	
.00001	**MC215**	**MCB215**	**MCE215**
.000025	**MC220**	**MCB220**	**MCE220**
.00004	**MC223**	**MCB223**	**MCE223**
.00005	**MC225**	**MCB225**	**MCE225**
.000075	**MC230**	**MCB230**	**MCE230**
.0001	**MC235**	**MCB235**	**MCE235**
.00015	**MC236**	**MCB236**	**MCE236**
.0002	**MC237**	**MCB237**	**MCE237**
.00025	**MC240**	**MCB240**	**MCE240**
.0003	**MC241**	**MCB241**	**MCE241**
.0004	**MC243**	**MCB243**	**MCE243**
.0005	**MC245**	**MCB245**	**MCE245**
.0008	**MC251**	**MCB251**	**MCE251**
.001	**MC255**	**MCB255**	**MCE255**
.0015	**MC256**		

Case Size—13/16″ x 13/16″ x 5/16″ with 1⅛″ Wire Leads
Voltage Rating = 500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance Mallory Cat. No.	Silver Mica ±10% Cap. Tolerance Mallory Cat. No.	Silver Mica ±2% Cap. Tolerance Mallory Cat. No.
.0005	**MC445**	**MCB445**	**MCE445**
.0008	**MC451***	**MCB451***	**MCE451***
.0015	**MC456**	**MCB456**	**MCE456**
.002	**MC457**	**MCB457**	**MCE457**
.0025	**MC460**	**MCB460**	**MCE460**
.003	**MC461**	**MCB461**	**MCE461**
.004	**MC463**	**MCB463**	**MCE463**
.005	**MC465**	**MCB465**	**MCE465**
.006	**MC467**	**MCB467**	**MCE467**
.007	**MC469**	**MCB469**	**MCE469**
.008	**MC471**	**MCB471**	**MCE471**
.01	**MC475**	**MCB475**	**MCE475**

*Will be discontinued when present stocks are exhausted.

High-Voltage Mica Capacitors for TV Replacement

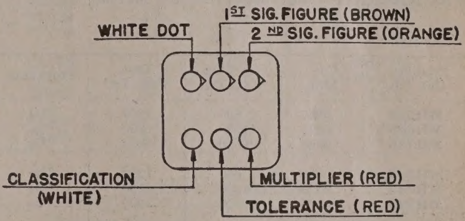
Capacity mmfd	Mallory Cat. No.	Working Volts DC	Size
5	**MCP550**	3000	1 x ⅝ x 11/32
10	**MCP410**	3000	1 x ⅝ x 11/32
22	**MCM422**	2500	25/32 x 7/16 x 7/32
33	**MCM433**	2500	25/32 x 7/16 x 7/32
47	**MCL447**	2000	25/32 x 7/16 x 7/32
68	**MCL468**	2000	25/32 x 7/16 x 7/32
75	**MCK475**	1500	25/32 x 7/16 x 7/32
100	**MCK310**	1500	25/32 x 7/16 x 7/32
150	**MCK315**	1500	25/32 x 7/16 x 7/32
180	**MCK318**	1500	25/32 x 7/16 x 7/32
220	**MCK322**	1500	25/32 x 7/16 x 7/32
270	**MCK327**	1500	25/32 x 7/16 x 7/32
330	**MCK333**	1500	25/32 x 7/16 x 7/32
470	**MCK347**	1500	25/32 x 7/16 x 7/32
680	**MCK368**	1500	1 x ⅝ x 11/32
820	**MCK382**	1500	1 x ⅝ x 11/32
1000	**MCK210**	1500	1 x ⅝ x 11/32
1500	**MCK215**	1500	1 x ⅝ x 11/32
2000	**MCK220**	1500	1 x ⅝ x 11/32
2400	**MCK224**	1500	1 x ⅝ x 11/32

New RMA Color Code

● The new RMA color code, shown below, permits positive identification of the mica capacitors listed.

Reading across the top from left to right with the arrow pointing to the right, the first dot shall always be white to indicate standard RMA molded mica capacitor. The second and third dots become the first two significant figures in the capacitance. The second row is read from right to left. The lower right dot should be the multiplier. The lower second dot indicates the tolerance and the lower left dot indicates the class.

The key to color significance is as follows:



Example shown above = 1300 mmfd. ±2%, 500 V.W.

Note: When any Mallory mica capacitor has a white dot in the upper left hand corner (when the arrows point to the right) that capacitor is coded under the **new** RMA color code, as shown above. Any other color in the upper left hand corner indicates the **old** color code, which may be found in Catalogue No. 467-A.

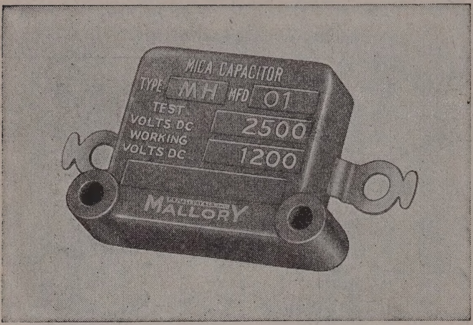
Color	Sig. Fig.	Mult.	Tol.	Class.*
Black	0	1	±20%	A
Brown	1	10		B
Red	2	100	± 2%	C
Orange	3	1000	± 3%	D
Yellow	4	10000		
Green	5		± 5%	
Blue	6			
Violet	7			
Gray	8			I
White	9			J
Gold		0.1		
Silver		0.01	± 10%	

*Denotes various electrical characteristics.

Voltage ratings vary with capacitance as shown in RMA Specification—April, 1946.

Mallory Page 17 (See Mallory Page 3 for List Prices)

MALLORY MICA CAPACITORS



Mica Transmitting Capacitors (Type MH)

APPLICATION—For use in transmitting and power amplifier circuits where voltage exceeds the 500-volt rating of type MC.

DESCRIPTION—Made with accurately gauged high-quality India mica in bakelite molded case providing insulated mounting. Capacity tolerance ±20%. Only size variation for various ratings is the thickness as shown in the chart. **Case size**—1⅝″ x 1⅛″ (Minus terminals). Mounting centers—1⁵⁄₁₆″. Terminal lengths—⁹⁄₁₆″.

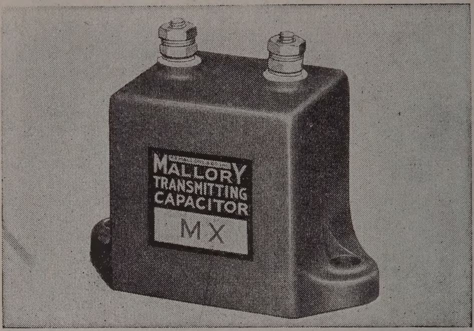
TERMINALS—Short, heavy tinned copper solder lugs for minimum RF and contact resistance.

MOUNTING—Insulated mounting by means of screws through holes molded in case.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Test Volts DC	Thickness
MH535	.0001	600	1200	²³⁄₆₄
MH635	.0001	1200	2500	²³⁄₆₄
MH735	.0001	2500	5000	²³⁄₆₄
MH545	.0005	600	1200	²³⁄₆₄
MH645	.0005	1200	2500	²³⁄₆₄
MH745	.0005	2500	5000	²³⁄₆₄
MH555	.001	600	1200	²³⁄₆₄
MH655	.001	1200	2500	²³⁄₆₄
MH755	.001	2500	5000	²³⁄₆₄
MH557	.002	600	1200	²³⁄₆₄
MH657	.002	1200	2500	²³⁄₆₄
MH757	.002	2500	5000	²³⁄₆₄
MH565	.005	600	1200	²³⁄₆₄
MH665	.005	1200	2500	²⁹⁄₆₄
MH765	.005	2500	5000	²⁹⁄₆₄
MH575	.01	600	1200	²³⁄₆₄
MH675	.01	1200	2500	²⁹⁄₆₄
MH577	.02	600	1200	²⁹⁄₆₄

MALLORY
RADIO SERVICE ENCYCLOPEDIA
552 pages of replacement information
for all pre-war and post-war receivers



Mica Transmitting Capacitors (Type MX)

APPLICATION—Ideal for amateur transmitting equipment. They may also be used in coupling, tank, and bypass circuits at radio frequencies within their rating. (Note that the maximum amperes for several radio frequencies are given in the chart. The operating current should be kept within these limits.)

DESCRIPTION—Heavy-duty mica construction, supplied in attractive rectangular porcelain cases. **Case size**—4¹⁄₁₆″ x 2¾″ x 2⅛″ (Minus terminals). Mounting centers—3⁹⁄₃₂″. Terminal heights—⅜″.

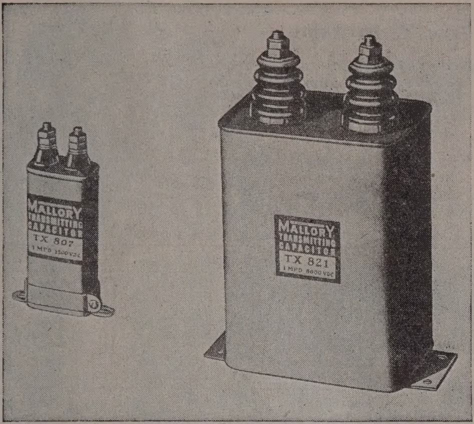
TERMINALS—Two screw type with complete washer and nut assembly.

MOUNTING—Two flanges with ample holes for machine screw mounting.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Test Volts DC	Max. Amps.	Freq. KC.
MX855	.001	12,500	9.0 10.0 11.0 12.0	15000 7500 3750 1875
MX857	.002	12,500	9.0 12.0 13.0 15.0	15000 7500 3750 1875
MX865	.005	10,000	10.0 13.0 14.0 15.0	15000 7500 3750 1875
MX875	.01	7,000	10.0 13.0 15.0 15.0	15000 7500 3750 1875
MX877	.02	3,500	10.0 13.0 17.0 17.0	15000 7500 3750 1875
MX885	.05	3,500	11.0 14.0 16.0 18.0	15000 7500 3750 1875
MX895	.1	2,000	11.0 14.0 16.0 18.0	15000 7500 3750 1875

MALLORY OIL FILLED AND IMPREGNATED CAPACITORS



Transmitting Capacitors (Type TX)

APPLICATION—For radio, television, transmitting, and all circuits requiring high voltage capacitors.

DESCRIPTION—Compact rectangular oil filled capacitors of sturdy construction.

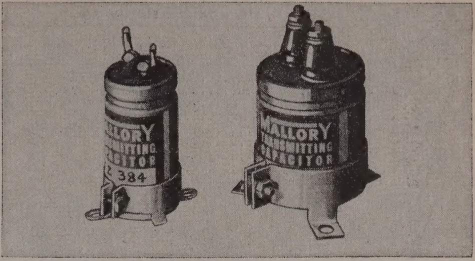
TERMINALS—Suitable standoff insulated terminals at one end to safely cover maximum voltage rating of each unit.

MOUNTING—Base dimensions less than 3½ x 5⅛, by rectangular clamp providing either upright or inverted position. Base sizes of 3½ x 5⅛ and above, by permanent flanges at the unit base.

PACKAGING—Individual carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size* W L H
TX801	1	600	1 x 1¾ x 2⅛
TX802	2	600	1 x 1¾ x 2⅝
TX803	4	600	1 x 1¾ x 4¼
TX816	6	600	1 3/16 x 2½ x 4⅝
TX817	10	600	1¼ x 3¾ x 4⅝
TX822	.5	1000	1 x 1¾ x 2⅛
TX804	1	1000	1 x 1¾ x 2⅝
TX805	2	1000	1 x 1¾ x 3⅞
TX806	4	1000	1 3/16 x 2½ x 4⅝
TX824	6	1000	1¼ x 3¾ x 4⅝
TX825	10	1000	1¾ x 3¾ x 4⅝
TX807	1	1500	1 x 1¾ x 4¼
TX808	2	1500	1 3/16 x 2½ x 4⅝
TX809	4	1500	1½ x 3¾ x 4⅝
TX829	6	1500	1¾ x 3¾ x 4⅝
TX830	10	1500	3 3/16 x 3¾ x 4⅝
TX831	.25	2000	1 x 1¾ x 2⅛
TX832	.5	2000	1 x 1¾ x 2⅞
TX810	1	2000	1 3/16 x 2½ x 3⅜
TX811	2	2000	1¼ x 3¾ x 4¼
TX823	4	2000	2¼ x 3¾ x 4¾
TX833	6	2000	3 3/16 x 3¾ x 4⅝
TX834	10	2000	4 9/16 x 3¾ x 4⅝
TX812	1	2500	1 3/16 x 2½ x 4¼
TX813	2	2500	1¼ x 3 23/32 x 4 7/32
TX835	.1	3000	1 3/16 x 2½ x 2⅜
TX836	.25	3000	1 3/16 x 2½ x 3⅜
TX837	.5	3000	1 3/16 x 2½ x 4⅝
TX814	1	3000	1¾ x 3¾ x 4⅝
TX815	2	3000	3 3/16 x 3¾ x 4⅝
TX838	4	3000	4 9/16 x 3¾ x 5½
TX839	1	4000	2¼ x 3¾ x 4¾
TX827	2	4000	4 9/16 x 3¾ x 4¾
TX818	1	5000	5⅛ x 3½ x 5⅝
TX819	2	5000	5⅛ x 3½ x 9
TX820	.5	6000	4⅜ x 5⅛ x 3½
TX821	1	6000	3 15/16 x 4 13/16 x 6 13/16

*W—Width; L—Length; H—Height.



Transmitting Capacitors (Type TZ)

APPLICATION—For filter and bypass circuits in power amplifiers, television and transmitting equipment where compact round can units are desired.

DESCRIPTION—Oil impregnated type capacitor furnished in round containers for upright or inverted mounting. All units internally insulated from case.

TERMINALS—The 1⅜″ diameter units have two solder lug terminals with ample insulation for the voltage ratings involved. The 2″ diameter units have special standoff insulated terminals.

MOUNTING—Supplied with type VR bracket for inverted or upright mounting.

PACKAGING—Individual carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size Dia. Height
TZ382	2.0	600	1 x 2⅝
TZ383	4.0	600	1⅜ x 4⅛
TZ384	1.0	1000	1⅜ x 2⅝
TZ385	2.0	1000	1⅜ x 4⅛
TZ389	4.0	1000	2 x 4
TZ386	.5	1500	1⅜ x 3⅛
TZ387	1.0	1500	1⅜ x 4 11/16
TZ388	2.0	1500	2 x 4
TZ390	1.0	2000	2 x 3¼
TZ391	2.0	2000	2 x 4½

TERMINAL HEIGHTS

TX Capacitors	TZ Capacitors
600 through 2500V—1¼	600 V—⅝
	1 and 2 mfd at 1000V—⅝
3000 through 4000V—1⅝	.5 and 1 mfd at 1500V—⅝
	4 mfd at 1000V—1⅜
5000 through 6000V—2½	2 mfd at 1500V—1⅜
	1 mfd at 2000V—1⅜
	2 mfd at 2000V—1⅜

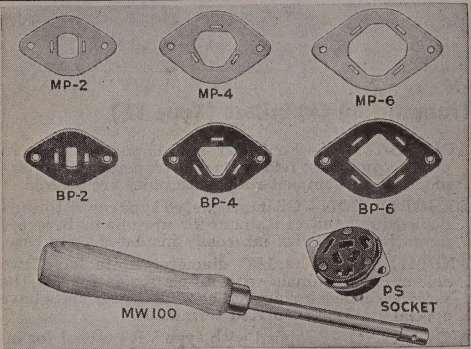
MALLORY TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems. Contains page after page of information profusely illustrated. It's worth far more than its price. Your Mallory Distributor has copies—order from him.

MALLORY CAPACITOR HARDWARE

Type "MSU," P, HC and NP Hardware

Mallory Cat. No.	Description	Size
115-1	Top Cap	1⅜
116-1	Top Cap	2
118-1	Bottom Cap	1⅜
119-1	Bottom Cap	2
121-1	Bracket	1⅜ x 3¼
122-1	Bracket	1⅜ x 4¼
123-1	Bracket	2 x 3⅛
124-1	Bracket	2 x 4⅛



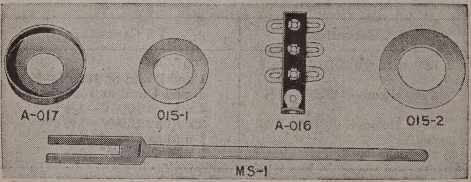
Type MP—Metal plates for grounded mounting of FP and WP capacitors.

Type BP—Bakelite plates for insulated mounting of FP and WP capacitors.

Type PS—Molded plastic sockets for plug-in mounting FP or WP capacitors. (Blank ear on capacitor should be removed to permit polarization with respect to socket.)

Type MW-100—Special wrench for twisting mounting ears on FP or WP capacitors.

Cat. No.	Description	Size
MP-2	Metal mounting wafer for FP	¾
MP-4	Metal mounting wafer for FP	1
MP-6	Metal mounting wafer for FP	1⅜
BP-2	Bakelite mounting wafer for FP	¾
BP-4	Bakelite mounting wafer for FP	1
BP-4A	Bakelite mounting wafer for FP (To mount 1″ FP in chassis punched for 1⅜″ wafer)	1
BP-6	Bakelite mounting wafer for FP	1⅜
PS-4	Plug-in socket for FP	1
PS-6	Plug-in socket for FP	1⅜
PSC-4	Retainer clamp for PS-4 socket	
MW-100	Mounting wrench for FP	



Type MS-1—Adjustable metal strap for horizontal mounting tubular types up to 1⅜″ diameter.

Type A-016—Terminal connector or anchor strap for general use where required.

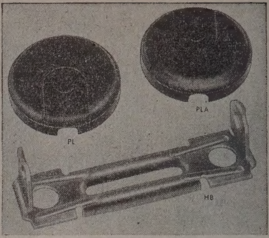
Type 015-1—Washer for RS type ⅝″ neck when used in over-size chassis hole.

Type 015-2—Washer for use with RS, RM or HS units where chassis hole is too large for regular mounting. Use two washers, one above and one below chassis.

Type A-017—Special washer with turned-over edge for ring clamp mounting 1″ RS type in 1⅜″ ring clamp.

Cat. No.	Description	Size
015-1	Washer for ⅝″ neck in ⅞″ hole	Var.
015-2	Washer for ¾″ neck in 1″ hole	Var.
MS-1	Adjustable mounting strap	Var.
A-016	Terminal connector	Var.
A-017	Washer for clamp mounting neck cans	Var.

Type "P" Hardware



Types PL and PL-A—Plastic end cap to protect terminals on HC, NP or P units when desired.

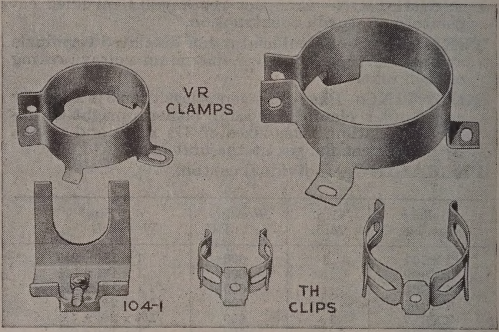
Type HB—Horizontal bracket for mounting HC, NP or P units, using end cap type PL or PLA.

Cat. No.	Description		Size
PL-3	Plastic end cap	For "On Motor" mounting	1⁷⁄₁₆
PL-6	Plastic end cap		1¹³⁄₁₆
PL-8	Plastic end cap		2¹⁄₁₆
PL-3A	Plastic end cap	For "Off Motor" mounting	1⁷⁄₁₆
PL-6A	Plastic end cap		1¹³⁄₁₆
PL-8A	Plastic end cap		2¹⁄₁₆
HB-4	Horizontal bracket (plastic cases)		3⅜
HB-8	Horizontal bracket (plastic cases)		4⅜

Type TH—Special clips for horizontal mounting of any tubular or FP unit within the diameter range shown. Designed primarily to mount without tools under special chassis lances in original equipment, they may also be attached to chassis with 5-32 screw and nut in any ⅛″ hole.

Type VR—Brackets for vertical mounting round units.

Type 104-1—Special bracket with spade bolt for mounting RS and RM units where spade bolt mounting was used.



Cat. No.	Description	Size
TH-13	Spring clip for TC	⅜
TH-15	Spring clip for TC	½ to ⁹⁄₁₆
TH-17	Spring clip for TC	⅝ to ¹¹⁄₁₆
TH-19	Spring clip for TC and FP	¾ to ¹³⁄₁₆
TH-21	Spring clip for TC	⅞ to ¹⁵⁄₁₆
TH-23	Spring clip for TC and FP	1 to 1¹⁄₁₆
TH-25	Spring clip for TC and FP	1⅜ to 1⁷⁄₁₆
VR-1	Clamp for vertical mounting	1 to 1¹⁄₁₆
VR-3	Clamp for vertical mounting	1⅜ to 1⁷⁄₁₆
VR-4	Clamp for vertical mounting	1½ to 1⁹⁄₁₆
VR-6	Clamp for vertical mounting	1¾ to 1¹³⁄₁₆
VR-8	Clamp for vertical mounting	2 to 2¹⁄₁₆
VR-10	Clamp for vertical mounting	2½
104-1	Spade bolt mounting for neck type cans	Variable

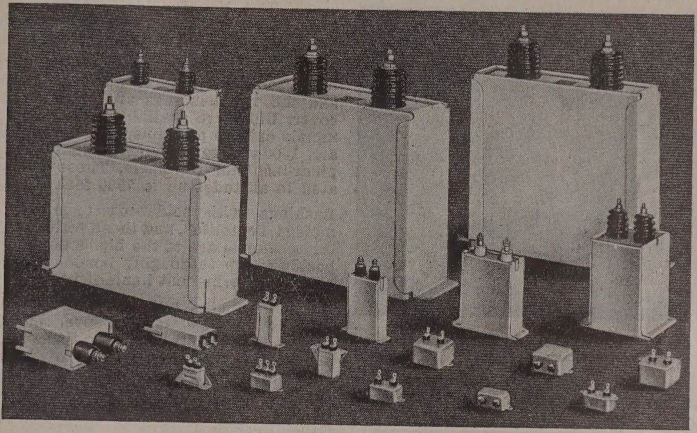
OE and CE Insulating Sleeve

Cat. No.	Description	Size
OE-1	Open end FP insulating sleeve	¾ x 2
OE-3	Open end FP insulating sleeve	1 x 2
OE-4	Open end FP insulating sleeve	1 x 3
OE-5	Open end FP insulating sleeve	1⅜ x 2
OE-6	Open end FP insulating sleeve	1⅜ x 3
CE-1	Closed end FP insulating sleeve	¾ x 2
CE-3	Closed end FP insulating sleeve	1 x 2
CE-4	Closed end FP insulating sleeve	1 x 3
CE-5	Closed end FP insulating sleeve	1⅜ x 2
CE-6	Closed end FP insulating sleeve	1⅜ x 3
CE-7	Closed end FP insulating sleeve	1 x 2½
CE-8	Closed end FP insulating sleeve	1 x 4
CE-9	Closed end FP insulating sleeve	1⅜ x 2½
CE-10	Closed end FP insulating sleeve	1⅜ x 4

PYRANOL* CAPACITORS

*Registered Trade-mark of General Electric Co.

In accordance with proposed joint Army-Navy specifications JAN-C-25 Amendment-1.



Case style CP 40-cylindrical (not shown)

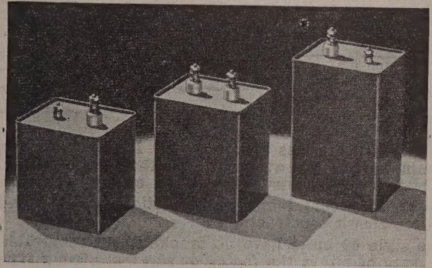
CP 53, 54, 55—Bathtub style
CP 70—Large Rectangular

CP 61, 63, 65, 67, 69—Miniature Rectangular

All case styles are available in characteristic D, E and F. Single-section units are supplied with a capacitance tolerance of ±10 per cent (K), and two- and three-section units with a capacitance tolerance of +20 per cent, —10 per cent (V). Spade-lug and footed mounting brackets are available for use with capacitors on which the mounting bracket is not an integral part.

Write for Bulletin GEA-4357.

Energy-storage discharge capacitors



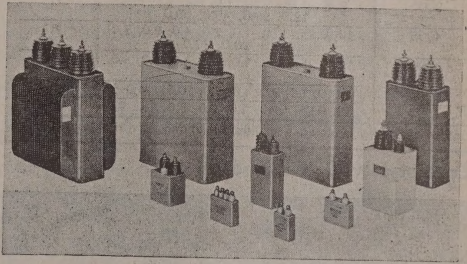
G-E light-duty energy-storage capacitors are made in a wide range of ratings to fit practically every requirement of high-speed flash photography, as well as home and industrial welders for light metals. Careful construction, high-quality materials, and skillful design contribute to long life and efficient operation.

Write for Bulletin GEA-4646.

STANDARD RATINGS

Max. D-c volts	Capacitance, Microfarads	Max. D-c volts	Capacitance, Microfarads
2000	28	4000	12.5
2500	14	4000	25/50
3000	60	4000	100
4000	12.5	5000	25/50
		6000	55
		6000	25

Capacitor networks



General Electric pioneered in the development of mineral-oil-treated paper dielectric capacitor networks for air, sea, and land radar, and was a prime supplier for the government services. The products supplied varied from the miniature types used with aircraft radar to the large land station designs.

All of the general facilities and the highly specialized test equipment involved are being retained for further work in this field and inquiries on new requirements are solicited.

PYRANOL* CAPACITORS

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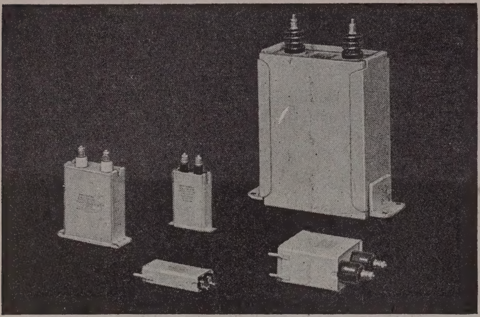
Case Style 70



Case style 70 units with various types of terminals and removable mounting brackets

These Pyranol fixed-paper-dielectric capacitors in case style 70 are hermetically sealed in rectangular cases. This line includes standard ratings, ranging from very small units weighing only three ounces to large high-voltage units weighing up to 175 pounds.

All are of single-section construction, with a capacitance tolerance of ±10 per cent. Cases are isolated and the two bushings are brought out through the cover. Units are available with either solder-lug terminals or with pillar-insulator terminals in 600-, 1000-, and 1500-volt ratings. All higher-voltage ratings have pillar-insulator terminals. These units may be operated in altitudes up to 7500 feet.

Bushings with solder-lug terminals are made of molded Textolite*, and those which have pillar-insulator terminals are of the highest-quality porcelain. All bushings are thoroughly bonded to the container to provide a permanent liquid-tight seal.

All units can be supplied with removable mounting brackets, as illustrated above. In addition to the screw-spade-lug brackets, two types of footed brackets are also available—one with a straight "L"-shaped foot and the other with a "U"-shaped foot that grips the bottom of the unit. The brackets can be attached to either the top or bottom of the unit, permitting either upright or inverted mounting.

Write for Bulletin GEA-2621.

*Registered trade-mark of General Electric Co.

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads	Type of Terminals
400	4.0, 6.0, 8.0, 10.0	SI*
600	1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 15.0, 20.0, 25.0	SI or PI†
1000	1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0,§ 15.0	SI or PI
1500	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0,¶ 15.0	SI or PI
2000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0	PI
2500	0.50, 1.0, 2.0, 4.0, 10.0, 20.0, 25.0, 55.0, 75.0	PI
3000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 8.0, 12.0, 20.0, 45.0, 60.0	PI
4000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 7.0, 13.0, 20.0, 30.0	PI
5000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 14.0, 18.0	PI
6000	0.10, 1.0, 2.0, 4.0, 5.0, 10.0, 14.0	PI
7500	0.10, 0.25, 0.50, 1.0, 2.0, 3.0, 7.0, 9.0	PI

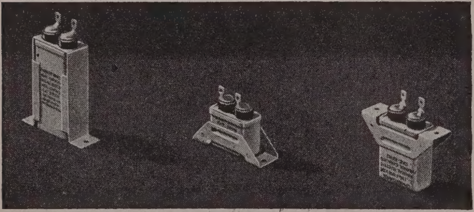
*Solder lug. †Pillar insulator. §Available in SI only ¶Available in PI only

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads	Type of Terminals
10,000	0.10, 0.25, 0.50, 1.0, 1.5, 2.0, 3.5, 5.0	PI
12,500	0.10, 0.25, 0.50, 0.75, 1.0, 1.75, 2.5, 3.3	PI
15,000	0.25, 0.50, 0.75, 0.90, 1.75, 2.25	PI
20,000	0.15, 0.25, 0.50, 1.0, 1.25	PI
25,000	0.10, 0.25, 0.60, 1.0	PI
30,000	0.25, 0.5, 0.75	PI
40,000	0.10, 0.20, 0.25, 0.35	PI
50,000	0.17, 0.25	PI
75,000‡	0.25	PI
100,000‡	0.125	PI

‡ Mid-point connected to case.

Case styles 60, 62, and 64



These small rectangular-case fixed-paper-dielectric units are of narrower width than the "bathtub" units, and will fit into a very restricted panel surface, where case height is not the limiting dimension. Mounting lugs, of either the removable or attached type, are of very sturdy construction.

All three case styles are constructed with solder-lug terminals, and are available in either single-section or two-section construction for all circuit diagrams. The metallic containers are hermetically sealed, and of deep drawn construction.

Case style 60 units have no brackets, but removable brackets of either the footed or screw-spade-lug type can be supplied, while the case style 62 and case style 64 units have soldered-on brackets for upright or inverted mounting, respectively.

STANDARD RATINGS

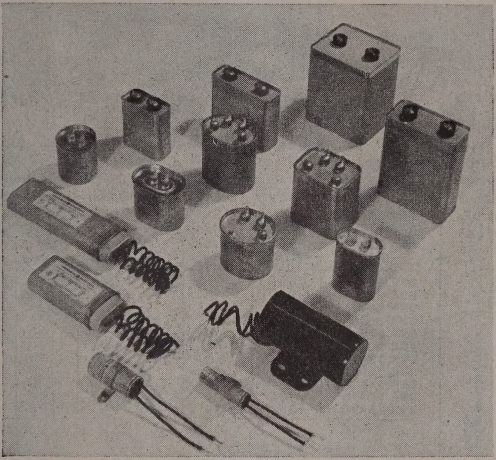
Type of Construction	Nominal Direct Voltage Rating*	Capacitance Ratings, Miscofarads*	Capacitance Tolerance
Single-section units	400	2.0	±10%
	600	0.05, 0.10, 0.25, 0.50, 1.0	
	1000	0.01, 0.02, 0.05, 0.10, 0.25 0.50	
Two-section units	600	0.10, 0.50	+20% —10%
	1000	0.02, 0.05 0.10	

* Capacitance per section of two-section units.

PYRANOL* CAPACITORS

*Registered Trade-mark of General Electric Co.

FOR GENERAL-PURPOSE A-C APPLICATIONS



Small a-c Pyranol capacitors are recommended for use with motors, luminous-tube transformers, industrial control, and other equipment.

The use of Pyranol as a treating material, because of its high dielectric strength, high permittivity, and exceptional stability, has made possible a marked reduction in physical size, as well as a capacitor far superior to those formerly available.

Design advantages

(1) Small and compact units, because of the use of Pyranol.

(2) Wide range of ratings available in rectangular, cylindrical and oval cases.

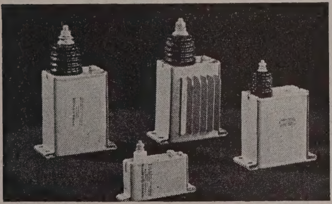
(3) Three styles of mounting brackets are available and supplied separate from the units. Units may be operated in any position.

Write for Bulletin GEA-2027

STANDARD RATINGS

Rated Voltage 60 Cycles	Fabricated Rectangular	Drawn Rectangular	Drawn Cylindrical	Shallow Drawn	Oval Drawn
220	1–15 muf	....	....	....	2–6 muf
236	1–20 muf	....	....	....	....
250	....	....	....	2–3.5 muf	....
330	1–50 muf	1–17.5 muf	2.5–11 muf	....	2–3.5 muf
440	1–28 muf	....	....	....	2–4 muf
660	1–15 muf	....	....	....	1.75 muf

CAPACITORS FOR OSCILLATOR TANK CIRCUITS



This line of fixed-paper-dielectric capacitors has been developed primarily for grid and plate blocking service in the electronic oscillator circuits of high-frequency induction-heating equipments. They can also be used to advantage in other high-frequency oscillator circuits of a similar nature.

G-E high-voltage paper-dielectrics capacitors are of relatively high capacitance (0.01 mu f) for high-frequency units, and yet they are more economical than conventional high-frequency units of considerably smaller capacitance values. They can, therefore, be applied with savings in cost as well as reduced losses and lower voltage drop across the capacitor.

features

Hermetically sealed in metallic cases.

Single-bushing construction for minimum size.

Removable mounting brackets.

Internal lead connections arranged for minimum inductance.

Write for Bulletin GEA-4388.

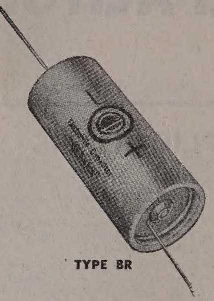
STANDARD RATINGS

D-C Voltage Rating	Microfarad Rating
5000	0.01
15,000	0.01
20,000	0.01
20,000*	0.01

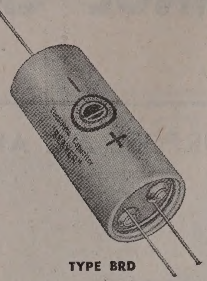
* With cooling fins for higher current-carrying capacity.
Capacitance tolerance ±10%.

CORNELL-DUBILIER

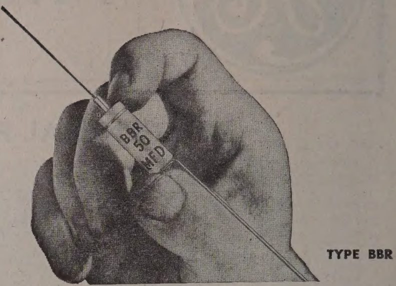
"BLUE BEAVER" ELECTROLYTIC TUBULARS



TYPE BR



TYPE BRD



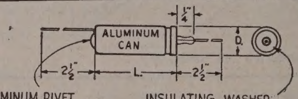
TYPE BBR

Types BR and BRD "BLUE BEAVERS" are the most popular can-type electrolytic tubulars employed for all applications where capacitors are required for convenient mounting in small spaces beneath a chassis or connected directly in the wiring assembly. They are small in physical size and self-supporting by means of strong, bare tinned-copper wire leads. Larger sizes may be mounted with a metal strap.

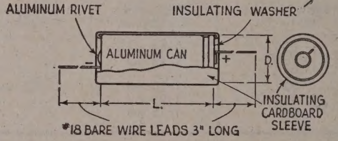
Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		25 V. D.C.		
BR 102A	10	5/8 x 1 1/16	$1.00	**$ .60**
BR 202A	20	5/8 x 1 1/16	1.00	**.60**
BR 252A	25	5/8 x 1 1/16	1.00	**.60**
BR 502A	50	5/8 x 1 1/16	1.10	**.66**
		50 V. D.C.		
BR 550	5	5/8 x 1 1/16	1.00	**.60**
BR 105	10	5/8 x 1 1/16	1.00	**.60**
BR 205A	20	5/8 x 1 1/16	1.00	**.60**
BR 255A	25	5/8 x 1 1/16	1.05	**.63**
BR 505	50	5/8 x 1 11/16	1.20	**.72**
		150 V. D.C.		
BR 415	4	5/8 x 1 1/16	1.00	**.60**
BR 815	8	5/8 x 1 1/16	1.05	**.63**
BR 1015	10	5/8 x 1 1/16	1.05	**.63**
BR 1215	12	5/8 x 1 7/16	1.10	**.66**
BR 1615	16	5/8 x 1 7/16	1.15	**.69**
BR 2015A	20	5/8 x 1 7/16	1.20	**.72**
BR 2515	25	3/4 x 1 7/16	1.25	**.75**
BR 3015A	30	3/4 x 1 7/16	1.30	**.78**
BR 4015A	40	3/4 x 1 11/16	1.35	**.81**
BR 5015A	50	7/8 x 1 11/16	1.40	**.84**
BR 6015	60	7/8 x 2	1.50	**.90**
BR 8015A	80	7/8 x 2	1.60	**.96**
BR 10015	100	1 x 2 1/2	1.75	**1.05**
BR 15015	150	1 x 3	1.90	**1.14**
		250 V. D.C.		
BR 425	4	5/8 x 1 1/16	1.00	**.60**
BR 825	8	5/8 x 1 7/16	1.15	**.69**
BR 1225A	12	5/8 x 1 11/16	1.25	**.75**
BR 1625	16	3/4 x 1 11/16	1.30	**.78**
BR 2025	20	3/4 x 1 11/16	1.35	**.81**
BR 3025A	30	7/8 x 1 11/16	1.45	**.87**
BR 4025A	40	7/8 x 2	1.55	**.93**
BR 5025	50	1 x 2	1.70	**1.02**
		350 V. D.C.		
BR 435	4	5/8 x 1 7/16	1.05	**.63**
BR 835A	8	5/8 x 1 11/16	1.20	**.72**
BR 1235A	12	3/4 x 1 11/16	1.30	**.78**
BR 1635A	16	7/8 x 1 11/16	1.40	**.84**
BR 2035A	20	7/8 x 1 11/16	1.45	**.87**
BR 3035A	30	1 x 2	1.65	**.99**
BR 4035	40	1 x 2 1/2	1.75	**1.05**
		450 V. D.C.		
BR 145	1	5/8 x 1 1/16	1.10	**.66**
BR 245	2	5/8 x 1 1/16	1.10	**.66**
BR 445	4	5/8 x 1 7/16	1.15	**.69**
BR 845A	8	3/4 x 1 7/16	1.25	**.75**
BR 1045A	10	3/4 x 1 11/16	1.30	**.78**
BR 1245A	12	3/4 x 1 11/16	1.35	**.81**
BR 1645A	16	7/8 x 2	1.40	**.84**
BR 2045A	20	7/8 x 2	1.55	**.93**
BR 3045A	30	1 x 2 1/2	1.70	**1.02**
BR 4045A	40	1 x 2 1/2	1.80	**1.08**
		500 V. D.C.		
BR 450A	4	5/8 x 1 11/16	1.20	**.72**
BR 850A	8	3/4 x 1 11/16	1.30	**.78**
BR 1650A	16	1 x 2	1.50	**.90**
BR 2050A	20	1 x 2	1.60	**.96**
BR 3050A	30	1 x 2 1/2	1.75	**1.05**

Type BBR "BLUE BEAVERS" — especially popular for those cramped and limited space installations in television receivers, hearing aids, miniature radios and other small assemblies. They are hermetically sealed in tubular aluminum containers and ideally suited to meet requirements in low voltage circuits.

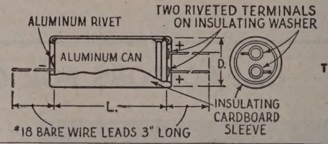
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BBR 50-3	50	3	3/8 x 1 1/16	$ .95	**$ .57**
BBR 25-3	25	3	3/8 x 1 1/16	.85	**.51**
BBR 50-6	50	6	3/8 x 1 1/16	.95	**.57**
BBR 25-6	25	6	3/8 x 1 1/16	.85	**.51**
BBR 5-6	5	6	3/8 x 1 1/16	.80	**.48**
BBR 20-25	20	25	3/8 x 1 1/16	1.00	**.60**
BBR 10-25	10	25	3/8 x 1 1/16	1.00	**.60**
BBR 10-50	10	50	3/8 x 1 1/16	1.00	**.60**
BBR 5-50	5	50	3/8 x 1 1/16	1.00	**.60**
BBR 10-90	10	90	1/2 x 1 1/16	1.10	**.66**
BBR 16-90	16	90	1/2 x 1 7/16	1.10	**.66**



TYPE BBR



TYPE BR


ALUMINUM RIVET
TWO RIVETED TERMINALS ON INSULATING WASHER
ALUMINUM CAN
+
+
D.
L.
INSULATING CARDBOARD SLEEVE
#18 BARE WIRE LEADS 3" LONG

TYPE BRD

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BRD 202B	20–20	25	3/4 x 1 1/16	$1.40	**$ .84**
BRD 105	10–10	50	3/4 x 1 1/16	1.40	**.84**
BRD 16815	16–8	150	3/4 x 1 1/16	1.55	**.93**
BRD 2215A	20–20	150	7/8 x 1 7/16	1.65	**.99**
BRD 3315A	30–30	150	7/8 x 1 11/16	1.80	**1.08**
BRD 4215A	40–20	150	7/8 x 1 11/16	1.75	**1.05**
BRD 4415A	40–40	150	1 x 1 11/16	1.85	**1.11**
BRD 5315A	50–30	150	1 x 1 11/16	1.95	**1.17**
BRD 5515A	50–50	150	1 x 2 1/2	2.10	**1.26**
BRD 8415	80–40	150	1 x 2 1/2	2.25	**1.35**
BRD 2125	20–10	250	7/8 x 1 11/16	1.75	**1.05**
BRD 2225A	20–20	250	1 x 1 11/16	1.85	**1.11**
BRD 4225	40–20	250	1 x 2 1/2	2.15	**1.29**
BRD 8D35	8–8	350	7/8 x 1 11/16	1.65	**.99**
BRD 2235A	20–20	350	1 x 2 1/2	2.25	**1.35**
BRD 8D45	8–8	450	1 x 1 11/16	1.70	**1.02**
BRD 1145A	10–10	450	1 x 1 11/16	1.85	**1.11**
BRD 16845	16–8	450	1 x 2	2.10	**1.26**
BRD 16D45A	16–16	450	1 x 2 1/2	2.25	**1.35**
BRD 2245	20–20	450	1 x 3	2.50	**1.50**
BRD 1150	10–10	500	1 x 2	1.90	**1.14**

Printed in U.S.A.

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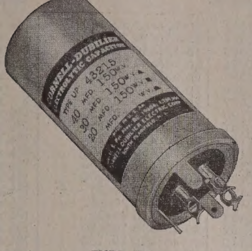
UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS



TYPE UP

Type UP capacitors are small, conveniently-mounted, round can-type electrolytic units furnished with bakelite and metal mounting washers. Terminals are tinned for soldering.

They are dependable in operation over wide temperature variations with minimum capacity change.

Type UPT, "Hi-Temp", units are especially designed for use in television, auto radio, amplifier and other equipment where extremely high temperatures, voltage surges and ripple currents are encountered. They are particularly popular as replacement capacitors for all standard television receivers.§

Type UPE units are designed for use in selenium rectifier circuits. When using selenium rectifiers in television, radio or other equipment, care must be taken to employ only this type electrolytic capacitor and protective resistor–

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPT 102	A001	10Ω 30 CPS.	¾ x 2	$2.00	**$1.20**
UPT 100	A002	.5Ω 15.750 CPS.	1 x 2	2.20	**1.36**
UPT 101	A003	1Ω 60 CPS.	1⅜ x 3	2.80	**1.68**
UPT 2M-6	A004	2000/6	1⅜ x 2	2.55	**1.53**
UP 3M-10	A005	3000/10	1⅜ x 2½	2.90	**1.74**
UP 1M-15	A006	1000/15	1 x 2½	2.55	**1.53**
UP 2M-15	A007	2000/15	1 x 2½	3.45	**2.07**
UP 3M-15	A008	3000/15	1⅜ x 2½	3.52	**2.11**
UP 40-25	A009	40/25	1⅜ x 3	1.35	**.81**
UP 100-25	A010	100/25	¾ x 2	1.60	**.96**
UPT 103	A011	500/25	1 x 2½	2.55	**1.53**
UP 500-25	A012	500/25	1 x 2	2.55	**1.53**
UP 1M-25	A013	1000/25	1⅜ x 2	3.55	**2.13**
UP 100-50	A014	100/50	¾ x 2	1.65	**.99**
UP 150-50	A015	150/50	1 x 2	1.80	**1.08**
UP 500-50	A016	500/50	1⅜ x 2	2.65	**1.59**
UP 1M-50	A017	1000/50	1⅜ x 3⅝	2.80	**1.68**
UP 3015	A018	30/150	¾ x 2	1.55	**.93**
UP 4015	A019	40/150	1 x 2	1.60	**.96**
UP 5015	A020	50/150	1 x 2	1.65	**.99**
UP 6015	A022	60/150	1 x 2	1.75	**1.05**
UPT 8015	A023	80/150	1 x 2	1.85	**1.11**
UP 10015	A024	100/150	1 x 2½	2.00	**1.20**
UPT 12015	A025	120/150	1⅜ x 2	2.10	**1.26**
UP 15015	A026	150/150	1 x 3	2.15	**1.29**
UP 2025	A027	20/250	¾ x 2	1.60	**.96**
UP 3025	A028	30/250	1 x 2	1.70	**1.02**
UP 4025	A029	40/250	1 x 2	1.80	**1.08**
UP 6025	A030	60/250	1 x 2½	2.05	**1.23**
UP 8025	A031	80/250	1 x 3	2.15	**1.29**
UP 5030	A032	50/300	1 x 2½	2.05	**1.23**
UP 8030	A033	80/300	1 x 3	2.55	**1.53**
UPT 10030	A034	100/300	1⅜ x 3	2.90	**1.74**
UPT 104	A035	100/300	1 x 3⅝	2.90	**1.74**
UP 1535	A036	15/350	1 x 2	1.65	**.99**
UP 3035	A037	30/350	1 x 2	1.90	**1.14**
UP 4035	A038	40/350	1 x 2½	2.00	**1.20**
UP 5035	A039	50/350	1 x 3	2.10	**1.26**
UP 8035	A040	80/350	1⅜ x 2½	2.85	**1.71**
UP 12535	A041	125/350	1⅜ x 3	3.65	**2.19**
UP 8040	A042	80/400	1⅜ x 3	2.95	**1.77**
UP 1045	A043	10/450	1 x 2	1.55	**.93**
UP 1AJ57	A044	10/450	¾ x 2	$1.55	**$ .93**
UP 1545	A045	15/450	1 x 2	1.70	**1.02**
UP 2045	A046	20/450	1 x 2	1.80	**1.08**
UP 3045	A047	30/450	1 x 2½	1.95	**1.17**
UPT 4045	A048	40/450	1 x 3	2.05	**1.23**
UP 5045	A049	50/450	1 x 3⅝	2.35	**1.41**
UP 6045	A050	60/450	1⅜ x 2½	2.60	**1.56**
UP 8045	A051	80/450	1⅜ x 3	3.05	**1.83**
UP 1050	A052	10/500	1 x 2	1.60	**.96**
UP 2050	A053	20/500	1 x 2½	1.85	**1.11**
UP 3050	A054	30/500	1 x 3	2.00	**1.20**
UP 4050	A055	40/500	1 x 3⅝	2.50	**1.50**
UP 8050	A056	80/500	1⅜ x 3⅝	3.20	**1.92**
UP 9050	A057	90/500	1⅜ x 3⅝	3.50	**2.10**

Dual Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPT 202	B001	.5Ω 15.750 CPS. 2.5Ω 60 CPS.	1⅜ x 2	$3.90	**$2.34**
UPT 203	B002	1000-500/6 VNP	1⅜ x 2	3.85	**2.31**
UPT 201	B003	1000-1000/15	1 x 3⅝	4.40	**2.64**
UP 11m-15	B004	1000-1000/15	1⅜ x 2½	4.40	**2.64**
UP 22-25	B005	20-20/25	1 x 2	1.45	**.87**
UP 44-25	B006	40-40/25	1 x 2	1.60	**.96**
UPT 205	B007	150-50/25	1 x 2	1.90	**1.14**
UP 55-50	B008	50-50/50	1 x 2	1.70	**1.02**
UP 2215	B009	20-20/150	1 x 2	1.70	**1.02**
UP 3215	B010	30-20/150	1 x 2	1.75	**1.05**
UP 3315	B011	30-30/150	1 x 2	1.85	**1.11**
UP 4215	B012	40-20/150	1 x 2	1.80	**1.08**
UP 4315	B013	40-30/150	1 x 2	1.85	**1.11**
UP 4415	B014	40-40/150	1 x 2	1.90	**1.14**
UP 5315	B015	50-30/150	1 x 2	2.00	**1.20**
UP 5515	B016	50-50/150	1 x 2½	2.15	**1.29**
UP 75D15	B017	75-75/150	1 x 3	2.60	**1.56**
UP 8415	B018	80-40/150	1 x 2½	2.30	**1.38**
UPT 6620	B019	60-60/200	1⅜ x 2	2.55	**1.53**
UP 1125	B020	10-10/250	1 x 2	1.70	**1.02**
UP 2225	B021	20-20/250	1 x 2	1.90	**1.14**
UP 3325	B022	30-30/250	1 x 2½	2.30	**1.38**
UP 4225	B023	40-20/250	1 x 2½	2.20	**1.32**
UP 4425	B024	40-40/250	1 x 3	2.55	**1.53**
UPT 150D25	B025	150-150/250	1⅜ x 4⅛	5.15	**3.09**
UP 5530	B026	50-50/300	1⅜ x 2½	3.35	**2.01**
UP 8830	B027	80-80/300	1⅜ x 3	4.05	**2.43**
UPT 12230	B028	120-20/300	1⅜ x 3	3.80	**2.28**
UP 15D35	B029	15-15/350	1 x 2	2.25	**1.35**
UP 2235	B030	20-20/350	1 x 2½	2.30	**1.38**
UP 3335	B031	30-30/350	1 x 3	2.90	**1.74**
UP 5335	B032	50-30/350	1⅜ x 2½	3.15	**1.89**
UPT 8835	B033	80-80/350	1⅜ x 3⅝	4.70	**2.82**
UPT 6640	B034	60-60/400	1⅜ x 3⅝	4.40	**2.64**
UP 8140	B035	80-10/400	1⅜ x 3	3.40	**2.04**
UPT 4D45	B036	4-4/450	1 x 2	1.65	**.99**
UPT 1145	B037	10-10/450	1 x 2	1.90	**1.14**
UP 15D45	B038	15-15/450	1 x 2½	2.25	**1.35**
UP 2145	B039	20-10/450	1 x 2½	2.25	**1.35**
UP 2245	B040	20-20/450	1 x 3	2.55	**1.53**
UPT 3145	B041	30-10/450	1 x 3	2.50	**1.50**
UPT 206	B042	30-10/450	1⅜ x 2	2.40	**1.44**
UP 3345	B043	30-30/450	1⅜ x 2½	3.05	**1.83**
UP 4245	B044	40-20/450	1⅜ x 2½	3.00	**1.80**
UPT 4445	B045	40-40/450	1⅜ x 3	3.45	**2.07**
UPT 6245	B046	60-20/450	1⅜ x 3	3.55	**2.13**
UPT 8145	B047	80-10/450	1⅜ x 3	3.60	**2.16**
UP 8445	B048	80-40/450	1⅜ x 3⅝	4.35	**2.61**
UP 1150	B049	10-10/500	1 x 2½	1.95	**1.17**
UP 2250	B050	20-20/500	1⅜ x 2½	2.85	**1.71**
UPT 25S450	B051	25-40/500	1⅜ x 3	3.65	**2.19**
UPT 3150	B052	30-10/500	1⅜ x 2½	2.60	**1.56**
UP 4450	B053	40-40/500	1⅜ x 3⅝	4.30	**2.58**
UPT 6450	B054	60-40/500	1⅜ x 3⅝	4.60	**2.76**
UPT 200	B055	250/10 1000/6	1⅜ x 2	2.85	**1.71**
UP 4015V2	B056	40/150 20/50	1 x 2	1.70	**1.02**
UP 4015C15	B057	40/150 150/25	1 x 2	2.05	**1.23**
UP 4025C	B058	40/250 20/25	1 x 2	2.00	**1.20**
UPT 5025V10	B059	50/250 100/50	1⅜ x 2	2.60	**1.56**
UPT 10025V15	B060	100/250 150/50	1⅜ x 3	3.65	**2.19**
UP 2035C	B061	20/350 20/25	1 x 2	1.90	**1.14**
UP 4035C	B062	40/350 20/25	1 x 2½	2.35	**1.41**
UP 1045C	B063	10/450 20/25	1 x 2	1.70	**1.02**
UP 2045C	B064	20/450 20/25	1 x 2	2.00	**1.20**
UP 4045C	B065	40/450 20/25	1 x 3	2.45	**1.47**
UP 8045C	B066	80/450 20/25	1⅜ x 3	3.40	**2.04**
UPT 204	B067	10/450 100/50	1⅜ x 2	2.05	**1.23**
UPT 245-835	B068	20/450 80/350	1⅜ x 3	3.65	**2.19**
UPT 245-1010	B069	20/450 100/100	1⅜ x 2	2.65	**1.59**
UPT 345-415	B070	30/450 40/150	1⅜ x 2	2.50	**1.50**
UPT 445-135	B071	40/450 10/350	1⅜ x 2	2.60	**1.56**
UPT 8045V5	B072	80/450 50/50	1⅜ x 3	3.50	**2.10**
UPT 15S50-230	B073	15/500 20/300	1 x 2½	2.30	**1.38**
UPT 250-1030	B074	20/500 100/300	1⅜ x 3	3.95	**2.37**
UPT 450-520	B075	40/500 50/200	1⅜ x 2½	3.35	**2.01**
UPT 650-815	B076	60/500 80/150	1⅜ x 3⅝	3.75	**2.25**
UPT 8050V5	B077	80/500 50/50	1⅜ x 3⅝	3.80	**2.28**

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Triple Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UP 222-25	C001	20-20-20/25	1 x 2	$1.95	$1.17
UP 444-25	C002	40-40-40/25	1 x 2	2.15	1.29
UP 333-50	C003	30-30-30/50	1 x 2	2.15	1.29
UP 22215	C004	20-20-20/150	1 x 2	2.35	1.41
UP 33115	C005	30-30-10/150	1 x 2	2.35	1.41
UP 42115	C006	40-20-10/150	1 x 2	2.35	1.41
UP 42215	C007	40-20-20/150	1 x 2	2.40	1.44
UP 43215	C008	40-30-20/150	1 x 2	2.50	1.50
UP 44415	C009	40-40-40/150	1 x 2½	2.60	1.56
UP 47415	C010	40-70-40/150	1 x 3	2.95	1.77
UP 64215	C011	60-40-20/150	1 x 3	2.75	1.65
UP 84215	C012	80-40-20/150	1 x 2½	2.90	1.74
UP 22125	C013	20-20-10/250	1 x 2	2.50	1.50
UP 32125	C014	30-20-10/250	1 x 2½	2.70	1.62
UPT 42125	C015	40-20-10/250	1⅜ x 2	2.85	1.71
UP 42225	C016	40-20-20/250	1 x 3	2.90	1.74
UPT 88625	C017	80-80-60/250	1⅜ x 3⅝	4.90	2.94
UPT 28130	C018	20-80-10/300	1⅜ x 2½	3.80	2.28
UPT 62130	C019	60-20-10/300	1⅜ x 2½	3.45	2.07
UPT 125430	C020	120-50-40/300	1⅜ x 4⅛	5.65	3.39
UP 11135	C021	10-10-10/350	1 x 2	2.40	1.44
UP 22135	C022	20-20-10/350	1 x 3	2.95	1.77
UPT 64235	C023	60-40-20/350	1⅜ x 3	4.25	2.55
UP 11145	C024	10-10-10/450	1 x 2½	2.60	1.56
UP 15D145	C025	15-15-10/450	1 x 3	2.95	1.77
UP 21145	C026	20-10-10/450	1 x 3	2.95	1.77
UP 22245	C027	20-20-20/450	1⅜ x 2½	3.60	2.16
UP 32245	C028	30-20-20/450	1⅜ x 3	3.85	2.31
UPT 33245	C029	30-30-20/450	1⅜ x 3	4.10	2.46
UPT 33345	C030	30-30-30/450	1⅜ x 3	4.35	2.61
UPT 36145	C031	30-60-10/450	1⅜ x 3⅝	4.50	2.70
UPT 41145	C032	40-10-10/450	1⅜ x 3	3.35	2.01
UP 43245	C033	40-30-20/450	1⅜ x 3	4.30	2.58
UPT 44145	C034	40-40-10/450	1⅜ x 3	4.15	2.49
UPT 44445	C035	40-40-40/450	1⅜ x 3⅝	4.90	2.94
UPT 62245	C036	60-20-20/450	1⅜ x 3⅝	4.60	2.76
UPT 84245	C037	80-40-20/450	1⅜ x 4⅛	5.40	3.24
UP 11150	C038	10-10-10/500	1 x 3	2.70	1.62
UPT 32250	C039	30-20-20/500	1⅜ x 3	4.20	2.52
UPT 41150	C040	40-10-10/500	1⅜ x 3	3.90	2.34
UPT 44150	C041	40-40-10/500	1⅜ x 3⅝	5.05	3.03
UP 4CJ69	C042	15-15/150 1200/1.5	1 x 2	3.05	1.83
UP 2215C	C043	20-20/150 20/25	1 x 2	2.20	1.32
UP 2215X10	C044	20-20/150 100/10	1 x 2	2.35	1.41
UP 2215X25	C045	20-20/150 250/10	1 x 2	2.60	1.56
UP 3315C	C046	30-30/150 20/25	1 x 2	2.35	1.41
UP 3315X20	C047	30-30/150 200/10	1 x 2	2.50	1.50
UP 4215C	C048	40-20/150 20/25	1 x 2	2.30	1.38
UP 4215C10	C049	40-20/150 100/25	1 x 2	2.50	1.50
UP 4215X10	C050	40-20/150 150/10	1 x 2	2.40	1.44
UP 4215C20	C051	40-20/150 200/25	1 x 2½	2.70	1.62
UP 4215X20	C052	40-20/150 200/10	1 x 2	2.50	1.50
UP 4215X25	C053	40-20/150 250/10	1 x 2	2.70	1.62
UP 4315C	C054	40-30/150 20/25	1 x 2	2.35	1.41
UP 4415C	C055	40-40/150 20/25	1 x 2	2.40	1.44
UP 5315C	C056	50-30/150 20/25	1 x 2	2.50	1.50
UP 5315C10	C057	50-30/150 100/25	1 x 2½	2.70	1.62
UP 5515C	C058	50-50/150 20/25	1 x 2½	2.65	1.59
UP 6215C	C059	60-20/150 20/25	1 x 2	2.55	1.53
UP 6415C	C060	60-40/150 20/25	1 x 2½	2.65	1.59
UP 8415C	C061	80-40/150 20/25	1 x 2½	2.80	1.68
UPT 12615C	C062	120-60/150 20/25	1⅜ x 2½	3.35	2.01
UP 3220C	C063	30-20/200 20/25	1 x 2	2.55	1.53
UPT 10120V4	C064	100-10/200 40/50	1⅜ x 2	3.15	1.89
UP 15D25C	C065	15-15/250 20/25	1 x 2	2.35	1.41
UP 215S25C	C066	20-15/250 20/25	1 x 2	2.35	1.41
UP 3325C	C067	30-30/250 20/25	1 x 2½	2.80	1.68
UPT 7725V2	C068	70-70/250 20/50	1⅜ x 3	3.90	2.34
UPT 8825-145	C069	80-80/250 10/450	1⅜ x 3⅝	4.20	2.52
UPT 309	C070	10-10/300 15/250	1 x 2	2.45	1.47
UP 2230C	C071	20-20/300 20/25	1 x 2	2.75	1.65
UP 3330V2	C072	30-30/300 25/50	1 x 3	2.90	1.74
UP 415S30C	C073	40-15/300 20/25	1 x 3	2.95	1.77
UPT 316	C074	10-5/350 150/50	1 x 3	2.70	1.62
UP 1135C	C075	10-10/350 20/25	1 x 2	2.25	1.35
UP 115S35C	C076	10-15/350 20/25	1 x 2	2.50	1.50
UP 15S135C	C077	15-10/350 20/25	1 x 2	2.50	1.50
UP 2135C	C078	20-10/350 20/25	1 x 2	2.55	1.53
UP 4CJ66	C079	20-10/350 5/250	1 x 2	2.55	1.53
UP 2235C	C080	20-20/350 20/25	1 x 2½	2.80	1.68
UP 3135C	C081	30-10/350 20/25	1 x 2½	2.85	1.71
UP 3135-225	C082	30-10/350 20/250	1 x 3	3.05	1.83
UPT 3235C	C083	30-20/350 20/25	1 x 3	3.10	1.86
UP 3335C	C084	30-30/350 20/25	1⅜ x 2	3.40	2.04
UPT 4235-110	C085	40-20/350 10/100	1⅜ x 2	2.85	1.71
UPT 2435-115	C086	20-40/350 10/150	1 x 3	3.20	1.92
UPT 4435C5	C087	40-40/350 50/25	1⅜ x 2½	3.75	2.25
UPT 3140V15	C088	30-10/400 150/50	1⅜ x 2½	3.40	2.04
UPT 8440V15	C089	80-40/400 150/50	1⅜ x 3⅝	5.15	3.09
UP 6CJ68	C090	15-5/450 15/350	1 x 3	2.85	1.71
UP 1145C	C091	10-10/450 20/25	1 x 2	2.40	1.44
UPT 1145V4	C092	10-10/450 40/50	1 x 2½	2.50	1.50
UPT 1145-510	C093	10-10/450 50/100	1⅜ x 2	$2.65	$1.59
UP 15D45C	C094	15-15/450 20/25	1 x 2½	2.75	1.65
UP 15D45-130	C095	15-15/450 10/300	1 x 3	2.90	1.74
UP 2145C	C096	20-10/450 20/25	1 x 2½	2.75	1.65
UPT 2145V5	C097	20-10/450 50/50	1 x 3	2.85	1.71
UP 215S45C	C098	20-15/450 20/25	1 x 3	2.90	1.74
UP 2245C	C099	20-20/450 20/25	1 x 3	3.05	1.83
UPT 2245-635	C100	20-20/450 60/350	1⅜ x 3	4.05	2.43
UPT 3245-315	C101	30-20/450 30/150	1⅜ x 2½	3.50	2.10
UPT 3345C	C102	30-30/450 20/25	1⅜ x 2½	3.55	2.13
UP 3345V4	C103	30-30/450 40/50	1⅜ x 3	3.65	2.19
UPT 4145V10	C104	40-10/450 100/50	1⅜ x 3	3.55	2.13
UPT 4145-820	C105	40-10/450 80/200	1⅜ x 3	3.90	2.34
UP 4245C	C106	40-20/450 20/25	1⅜ x 2½	3.50	2.10
UP 4445C	C107	40-40/450 20/25	1⅜ x 3	3.95	2.37
UPT 4445C4	C108	40-40/450 40/25	1⅜ x 3	2.45	1.47
UPT 4445V10	C109	40-40/450 100/50	1⅜ x 3⅝	4.30	2.58
UPT 4445-415	C110	40-40/450 40/150	1⅜ x 3⅝	4.15	2.49
UPT 8445C10	C111	80-40/450 100/25	1⅜ x 4⅛	5.10	3.06
UPT 1150V10	C112	10-10/500 100/50	1 x 3	2.85	1.71
UPT 318	C113	10-10/500 4/350	1 x 2½	2.50	1.50
UPT 2150C10	C114	20-10/500 100/25	1 x 3⅝	3.10	1.86
UPT 2250-640	C116	20-20/500 60/400	1⅜ x 3⅝	4.80	2.88
UPT 3150V2	C117	30-10/500 20/50	1⅜ x 2½	3.10	1.86
UPT 4450-1020	C118	40-40/500 100/200	1⅜ x 4⅛	5.85	3.51
UPT 308	C119	100/100 50-25/25	1 x 3	2.65	1.59
UPT 310	C120	20/150 250-100/15	1⅜ x 2	2.90	1.74
UPT 305	C121	120/300 15-10/450	1⅜ x 3⅝	4.50	2.70
UP 335-2125	C122	30/350 20-10/250	1 x 3	3.00	1.80
UPT 840-2130	C123	80/400 20-10/300	1⅜ x 3⅝	4.25	2.55
UPT 245-4125	C124	20/450 40-10/250	1⅜ x 2	3.15	1.89
UPT 304	C125	30/450 100-25/25	1⅜ x 2	3.00	1.80
UPT 445-9515	C126	40/450 90-50/150	1⅜ x 3	4.00	2.40
UPT 314	C127	40/150 25/25 130/15	1 x 3	2.35	1.41
UPT 825-415V5	C128	80/250 40/150 50/50	1⅜ x 2½	3.30	1.98
UPT 1030-615C	C129	100/300 60/150 20/25	1⅜ x 3	4.20	2.52
UPT 307	C130	20/350 50/100 100/75	1 x 3	3.10	1.86
UP 335-330C	C131	30/350 30/300 20/25	1 x 3	3.15	1.89
UPT 302	C132	50/350 10/250 500/5	1⅜ x 2½	3.60	2.16
UPT 140-535C3	C133	10/400 50/350 30/25	1 x 3	3.10	1.86
UPT 640-430C	C134	60/400 40/300 20/25	1⅜ x 3⅝	4.20	2.52
UPT 313	C135	10/450 50/150 100/25	1 x 3	2.75	1.65
UPT 306	C136	10/450 40/300 10/150	1⅜ x 2	3.10	1.86
UPT 301	C137	10/450 30/400 30/300	1⅜ x 2½	3.35	2.01
UP 6CJ17	C138	15/450 20/350 20/250	1 x 3	3.00	1.80
UPT 312	C139	20/450 60/250 100/25	1⅜ x 2½	3.65	2.19
UP 6CJ67	C140	20/450 15/350 10/300	1 x 3	3.05	1.83
UPT 317	C141	20/450 80/350 100/50	1⅜ x 3⅝	4.50	2.70
UPT 345-540C4	C142	30/450 50/400 40/25	1⅜ x 3	3.95	2.37
UPT 300	C143	40/450 40/150 130/50	1⅜ x 3	3.65	2.19
UPT 311	C144	40/450 100/150 50/50	1⅜ x 3	3.95	2.37
UPT 315	C145	10/500 100/200 40/50	1⅜ x 2½	3.35	2.01
UPT 250-230C4	C146	20/500 20/300 40/25	1⅜ x 2	3.10	1.86
UPT 303	C147	40/500 40/250 100/50	1⅜ x 3	4.30	2.58
UPT 450-440V2	C148	40/500 40/400 25/50	1⅜ x 3	4.30	2.58
UPT 345-435C5	C149	30/450 40/350 50/25	1 x 4⅛	3.70	2.22

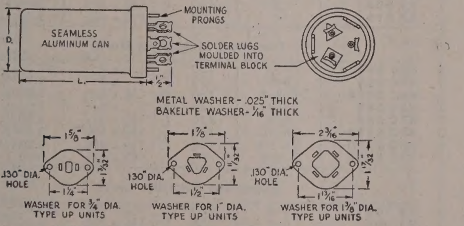
Quadruple Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UP 444315	D001	40-40-40-30/150	1⅜ x 2	$3.35	$2.01
UPT 442130	D002	40-40-20-10/300	1⅜ x 2½	4.55	2.73
UPT 111135	D003	10-10-10-10/350	1⅜ x 2	3.10	1.86
UPT 811135	D004	80-10-10-10/350	1⅜ x 3⅝	4.60	2.76
UPT 332240	D005	30-30-20-20/400	1⅜ x 3	4.85	2.91
UPT 821140	D006	80-20-10-10/400	1⅜ x 3⅝	5.05	3.03
UPT 4Q45	D007	4-4-4-4/450	1⅜ x 2	2.90	1.74
UP 5Q45	D008	5-5-5-5/450	1⅜ x 2	3.00	1.80
UPT 111145	D009	10-10-10-10/450	1⅜ x 2	3.35	2.01
UPT 15S33145	D010	15-30-30-10/450	1⅜ x 3	4.70	2.80
UPT 15S33345	D011	15-30-30-30/450	1⅜ x 3⅝	5.30	3.18
UPT 211145	D012	20-10-10-10/450	1⅜ x 2½	3.70	2.22
UPT 222245	D013	20-20-20-20/450	1⅜ x 3	4.70	2.82
UPT 315T45	D014	30-15-15-15/450	1⅜ x 3	4.45	2.67
UPT 420	D015	35-35-10-5/450	1⅜ x 3⅝	4.65	2.79
UP 411145	D016	40-10-10-10/450	1⅜ x 3	4.15	2.49
UPT 421145	D017	40-20-10-10/450	1⅜ x 3	4.45	2.67
UPT 111150	D018	10-10-10-10/500	1⅜ x 2	3.50	2.10
UP 22215C	D019	20-20-20/150 20/25	1⅜ x 2	2.90	1.74
UP 32215X20	D020	30-20-20/150 200/10	1⅜ x 2	3.10	1.86
UP 33315C4	D021	30-30-30/150 40/25	1⅜ x 2	3.10	1.86
UPT 42215C	D022	40-20-20/150 20/25	1⅜ x 2	2.95	1.77
UP 44215X20	D023	40-40-20/150 200/10	1⅜ x 2	3.25	1.95
UP 44315C	D024	40-40-30/150 20/25	1⅜ x 2	3.10	1.86
UP 44415C	D025	40-40-40/150 20/25	1⅜ x 2	3.15	1.89
UP 44415C10	D026	40-40-40/150 100/25	1⅜ x 2	3.35	2.01
UP 44415C16	D027	40-40-40/150 160/25	1⅜ x 2	3.55	2.13
UP 53315C10	D028	50-30-30/150 100/25	1⅜ x 2	3.45	2.07
UP 55515C	D029	50-50-50/150 20/25	1⅜ x 2	3.55	2.13
UP 64215X20	D030	60-40-20/150 200/10	1⅜ x 2	3.50	2.10
UP 75T15C3	D031	75-75-75/150 30/25	1⅜ x 3	4.30	2.58
UP 84415C	D032	80-40-40/150 20/25	1⅜ x 2	3.55	2.13
UP 84415C10	D033	80-40-40/150 100/25	1⅜ x 2½	3.75	2.25
UP 42125C	D034	40-20-10/250 20/25	1⅜ x 2	3.40	2.04
UPT 86425-215	D035	80-60-40/250 20/150	1⅜ x 3⅝	5.10	3.06

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
PT 415	D036	100-40-10/250 100/50	1⅜ x 3⅝	$5.15	$3.09
PT 44430-215	D037	40-40-40/300 20/150	1⅜ x 3	4.90	2.94
PT 64230C5	D038	60-40-20/300 50/25	1⅜ x 3	4.70	2.82
P 11135C	D039	10-10-10/350 20/25	1⅜ x 2	2.95	1.77
PT 15T35V5	D040	15-15-15/350 50/50	1⅜ x 2	3.80	2.28
P 21535C	D041	20-10-5/350 20/25	1⅜ x 2	3.10	1.86
P 32235C	D042	30-20-20/350 20/25	1⅜ x 2½	4.10	2.46
P 44235C	D043	40-40-20/350 20/25	1⅜ x 3	4.70	2.82
PT 42235C	D044	40-20-20/350 25/25	1⅜ x 2½	4.25	2.55
PT 43135V5	D045	40-30-10/350 50/50	1⅜ x 3	4.40	2.64
PT 44435C4	D046	40-40-40/350 40/25	1⅜ x 3	5.20	3.12
PT 44435V15	D047	40-40-40/350 150/50	1⅜ x 3⅝	5.70	3.42
PT 11145C	D048	10-10-10/450 20/25	1⅜ x 2	3.15	1.89
PT 11145C10	D049	10-10-10/450 100/25	1⅜ x 2	3.35	2.01
PT 11145V15	D050	10-10-10/450 150/50	1⅜ x 2½	3.70	2.22
PT 21145C10	D051	20-10-10 450 100/25	1⅜ x 2	3.70	2.22
P 22245C	D052	20-20-20/450 20/25	1⅜ x 2½	4.15	2.49
PT 22245V10	D053	20-20-20/450 100/50	1⅜ x 3	4.55	2.73
P 315D45C4	D054	30-15-15/450 40/25	1⅜ x 2½	4.15	2.49
P 32245C	D055	30-20-20/450 20/25	1⅜ x 3	4.40	2.64
PT 400	D056	30-30-15/450 30/50	1⅜ x 3	4.15	2.49
PT 404	D057	30-30-15/450 100/50	1⅜ x 3⅝	4.90	2.94
P 33145C	D058	30-30-10/450 20/25	1⅜ x 3	4.35	2.61
P 33245C	D059	30-30-20/450 20/25	1⅜ x 3	4.65	2.79
PT 41145C25	D060	40-10-10/450 250/25	1⅜ x 3	4.25	2.55
PT 42145C	D061	40-20-10/450 20/25	1⅜ x 3	4.25	2.55
PT 42145V10	D062	40-20-10/450 100/50	1⅜ x 3⅝	4.65	2.79
PT 42245C4	D063	40-20-20/450 40/25	1⅜ x 3	4.65	2.79
P 43145C	D064	40-30-10/450 20/25	1⅜ x 3	4.50	2.70
PT 44145V2	D065	40-40-10/450 25/50	1⅜ x 3⅝	4.70	2.82
PT 403	D066	40-40-10/450 100/100	1⅜ x 3⅝	5.35	3.21
PT 61145-215	D067	60-10-10/450 20/150	1⅜ x 3	4.60	2.76
PT 407	D068	40-10-20/475 10/25	1⅜ x 3	4.85	2.91
PT 22150-130	D069	20-20-10/500 10/300	1⅜ x 2½	4.30	2.58
PT 414	D070	100/300 40/50 80-20/25	1⅜ x 2½	4.55	2.73
PT 427	D071	20/300 150-150/150 100/30	1⅜ x 4⅛	5.30	3.18
PT 402	D072	15/350 80-40/200 200/25	1⅜ x 3	4.50	2.70
PT 428	D073	10/400 50-30/350 30/25	1⅜ x 3	4.40	2.64
PT 424	D074	10/450 60-40/350 25/25	1⅜ x 3⅝	4.60	2.76
PT 419	D075	10/450 100-10/350 20/25	1⅜ x 3⅝	5.25	3.15
PT 421	D076	20/450 80-20/200 50/50	1⅜ x 3	4.15	2.49
PT 425	D077	30/450 40-40/350 10/200	1⅜ x 3⅝	5.15	3.09
PT 409	D078	30/450 125-125/25 30/450	1⅜ x 3	8.55	5.13
PT 401	D079	5-5/400 50/300 80/250	1⅜ x 3	4.65	2.79
PT 429	D080	40-60/400 40/350 10/50	1⅜ x 3⅝	5.75	3.45
PT 411	D081	10-10/450 60/200 100/50	1⅜ x 3	3.85	2.31
PT 42245C	D082	40-20-20/450 20/25	1⅝ x 3	4.60	2.76
PT 423	D083	10-5/475 80/450 40/50	1⅜ x 3⅝	4.95	2.97
PT 417	D084	15-15/475 80/300 40/50	1⅜ x 3	4.80	2.88
P 4415C44	D085	40-40/150 40-40/25	1⅜ x 2	3.05	1.83
P 4415CD10	D086	40-40/150 100-100/25	1⅜ x 2	3.35	2.01
PT 4140-8125	D087	40-10/400 80-10/250	1⅜ x 3⅝	4.70	2.82
PT 1145CC	D088	10-10/450 20-20/25	1⅜ x 2	2.95	1.77
P 2245CC	D089	20-20/450 20-20/25	1⅜ x 2	3.60	2.16
P 2245-3335	D090	20-20 450 30-30 350	1⅜ x 3	5.05	3.03
PT 408	D091	40-10/450 35-10/350	1⅜ x 3	4.60	2.76
PT 4445-3335	D092	40-40/450 30-30/350	1⅜ x 4⅛	5.90	3.54
PT 405	D093	120/300 20/250 20/25 100/50	1⅜ x 4⅛	5.05	3.03
PT 406	D094	200/300 20/250 20/25 100/50	1⅜ x 5	5.45	3.27
PT 418	D095	20/350 40/300 10/150 250/50	1⅜ x 3	4.60	2.76
PT 412	D096	80/450 10/400 30/300 40/150	1⅜ x 4⅛	5.25	3.15
PT 410	D097	10/475 10/450 80/200 50/60	1⅜ x 2½	3.85	2.31
PT 413	D098	10/475 60/450 30/400 125/50	1⅜ x 4⅛	5.45	3.27
PT 422	D099	20/475 40/300 100/50 80/25	1⅜ x 3	4.50	2.70
PT 416	D100	25/475 20/450 40/300 100/50	1⅜ x 3	4.95	2.97
PT 426	D101	10/475 40/350 80/200 100/50	1⅜ x 3⅝	4.80	2.88
PT 53150-230	D102	50-30-10/500 20/300	1⅜ x 3⅝	5.60	3.36


MOUNTING PRONGS
SEAMLESS ALUMINUM CAN
D.
SOLDER LUGS MOULDED INTO TERMINAL BLOCK
L.
½"
METAL WASHER - .025" THICK
BAKELITE WASHER - 1/16" THICK
1⅝"
1⅞"
2 3/16"
.130" DIA. HOLE
1¼"
1½"
1 9/16"
WASHER FOR ¾" DIA. TYPE UP UNITS
WASHER FOR 1" DIA. TYPE UP UNITS
WASHER FOR 1⅜" DIA. TYPE UP UNITS

DIMENSIONS OF METAL AND BAKELITE MOUNTING WASHERS

TYPES UP, UPT AND UPE

SELENIUM RECTIFIER CAPACITORS

Type UPE are etched anode and cathode units especially engineered to prevent capacity drop due to high ripple and surge currents normally encountered in selenium rectifier circuits. *A protective series-resistor of approximately 50 ohms for a 100 ma. load, and at least 10 ohms for a 250 ma. load, should always be used to protect both the rectifier and filter capacitors.*

UPE Single Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPE 4015	XA001	40/150	¾ x 2	$1.60	$ .96
UPE 8015	XA002	80/150	1 x 2	1.85	1.11
UPE 10015	XA003	100/150	1 x 2½	2.00	1.20
UPE 15015	XA004	150/150	1 x 3	2.15	1.29
UPE 30015	XA005	300/150	1⅜ x 3	2.80	1.68
UPE 8020	XA006	80/200	1⅜ x 2	1.95	1.17
UPE 15020	XA007	150/200	1⅜ x 2½	2.80	1.68
UPE 4025	XA008	40/250	1 x 2	1.80	1.08
UPE 6030	XA009	60/300	1 x 2½	2.10	1.26
UPE 8030	XA010	80/300	1 x 3	2.55	1.53
UPE 8035	XA011	80/350	1⅜ x 2½	2.85	1.71
UPE 12535	XA012	125/350	1⅜ x 3	3.65	2.19
UPE 3050	XA013	30/500	1 x 3	2.00	1.20

UPE Dual Section Units

UPE 2215	XB001	20-20/150	1 x 2	$1.70	$1.02
UPE 4415	XB002	40-40/150	1 x 2	1.90	1.14
UPE 5515	XB003	50-50/150	1 x 2½	2.15	1.29
UPE 8415	XB004	80-40/150	1 x 2½	2.30	1.38
UPE 8815	XB005	80-80/150	1⅜ x 2	2.65	1.59
UPE 101015	XB006	100-100/150	1⅜ x 2½	3.25	1.95
UPE 150D15	XB007	150-150/150	1⅜ x 3	3.50	2.10
UPE 201515	XB008	200-150/150	1⅜ x 3⅝	3.75	2.25
UPE 202015	XB009	200-200/150	1⅜ x 3⅝	4.00	2.40
UPE 101020	XB010	100-100/200	1⅜ x 3	3.50	2.10
UPE 4425	XB011	40-40/250	1 x 3	2.55	1.53
UPE 8425	XB012	80-40/250	1⅜ x 2½	3.00	1.80
UPE 4430	XB013	40-40/300	1 x 3	3.00	1.80
UPE 8430	XB014	80-40/300	1⅜ x 2½	3.55	2.13

UPE Triple Section Units

UPE 22215	XC001	20-20-20/150	1 x 2	$2.35	$1.41
UPE 42215	XC002	40-20-20/150	1 x 2	2.40	1.44
UPE 55515	XC003	50-50-50/150	1 x 3	3.00	1.80
UPE 88815	XC004	80-80-80/150	1⅜ x 3	3.75	2.25
UPE 128415	XC005	120-80-40/150	1⅜ x 3	3.70	2.22
UPE 2215C	XC006	20-20/150 20/25	1 x 2	2.20	1.32
UPE 4215C	XC007	40-20/150 20/25	1 x 2	2.30	1.38
UPE 4415C	XC008	40-40/150 20/25	1 x 2	2.40	1.44
UPE 4230C	XC009	40-20/300 20/25	1 x 2½	3.10	1.86
UPE 1030-6225	XC10	100/300 60-20/250	1⅜ x 4⅛	4.90	2.94
UPE 2030-2625	XC11	200/300 20-60/350	1⅜ x 5	5.45	3.27

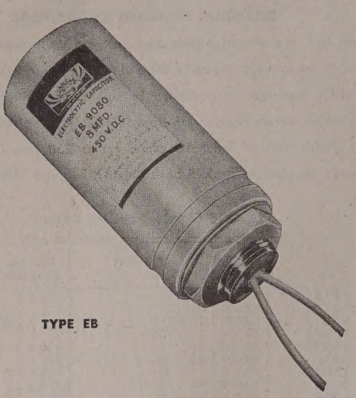
HARDWARE FOR TYPE UP, UPT & UPE CAPACITORS

Part No.	Item	Description	List Price	Net Price
22272	Wrench for	Mtg. UP Units	$1.24	$.74
19891	Bakelite Washer	For ¾" UP	.07	.04
19884	Bakelite Washer	For 1" UP	.07	.04
19888	Bakelite Washer	For 1⅜" UP	.07	.04
19890	Metal Washer	For ¾" UP	.07	.04
19883	Metal Washer	For 1" UP	.07	.04
19887	Metal Washer	For 1⅜" UP	.07	.04
21368-1	Mounting Clip	For ¾" UP	.15	.09
21368-2	Mounting Clip	For 1" UP	.15	.09
21368-3	Mounting Clip	For 1⅜" UP	.15	.09
22153-1	Insulating Tube	For ¾" x 2" UP	.07	.04
22153-4	Insulating Tube	For 1" x 2" UP	.07	.04
22153-6	Insulating Tube	For 1" x 3" UP	.07	.04
22153-7	Insulating Tube	For 1⅜" x 2" UP	.07	.04
22153-9	Insulating Tube	For 1⅜" x 3" UP	.07	.04
30035	Bakelite Washer	For 1" UP in 1⅜" Hole Mtg.	.07	.04
30036	Metal Washer	For 1" UP in 1⅜" Hole Mtg.	.07	.04

r application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

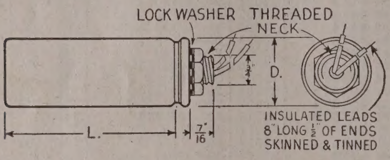
CORNELL DUBILIER

ROUND CAN-TYPE ELECTROLYTICS


ELECTROLYTIC CAPACITOR
EB 9080
8 MFD.
450 V.D.C.

TYPE EB

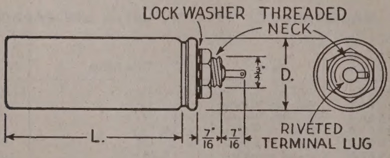
Type EB electrolytic capacitors are especially suited for replacement purposes in radio receivers to replace units of larger physical sizes. They are identical in mounting hole dimensions and general construction to Type WR capacitors except that they are provided with insulated color-coded wire leads 8″ long.


LOCK WASHER
THREADED NECK
D.
3/4"
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

TYPE EB

Cat. No.	Cap. Mfd.	Size—Inches Dia. x Lgth.	List Price	Net Price
EB 9080	8	1⅜ x 4⅜	$2.20	**$1.32**
EB 9100	10	1⅜ x 4⅜	2.30	**1.38**
EB 9120	12	1½ x 4½	2.40	**1.44**
EB 9160	16	1½ x 4½	2.45	**1.47**
EB 9180	18	1½ x 4½	2.55	**1.53**
EB 9200	20	1½ x 4½	2.75	**1.65**
EB 8800	8–8	1½ x 4½	3.00	**1.80**

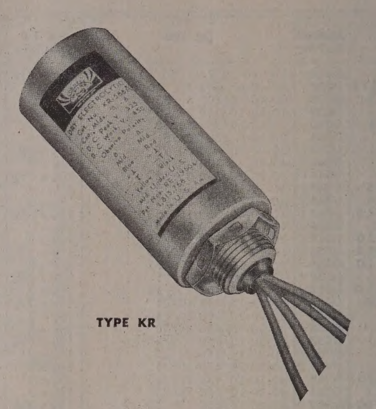
REPLACEMENTS FOR WET ELECTROLYTICS


LOCK WASHER
THREADED NECK
D.
3/4"
L.
7/16"
7/16"
RIVETED TERMINAL LUG

WET ELECTROLYTIC REPLACEMENT

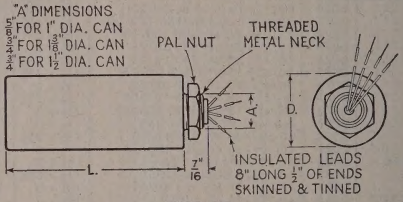
TYPE WR

Cat. No.	Cap. Mfd.	Replacement for	Size—Ins. Dia. x Lgth.	List Price	Net Price
WR 10	10	4 to 12 mfd.	1⅜ x 2½	$2.30	**$1.38**
WR 20	20	16 to 20 mfd.	1⅜ x 2½	2.70	**1.62**
WR 30	30	20 to 30 mfd.	1⅜ x 3¼	2.95	**1.77**
WR 40	40	30 to 40 mfd.	1⅜ x 3¼	3.15	**1.89**



TYPE KR

Types KR and KRC single-hole mounting units are compact etched foil type dry electrolytic capacitors furnished in round (inverted mounting) aluminum cans. Available in single, dual and triple sections with color-coded leads.


"A" DIMENSIONS
5/8" FOR 1" DIA. CAN
3/4" FOR 1 3/8" DIA. CAN
3/4" FOR 1 1/2" DIA. CAN
PAL NUT
THREADED METAL NECK
A.
D.
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

TYPE KR

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KR 105	50	25	1 x 2½	$1.55	**$ .93**
KR 204	4	250	1 x 2½	1.40	**.84**
KR 208	8	250	1 x 2½	1.65	**.99**
KR 212	12	250	1 x 2½	1.75	**1.05**
KR 225	25	250	1 x 3½	2.00	**1.20**
KR 350	50	300	1⅜ x 3¾	3.15	**1.89**
KR 504	4	450	1 x 2½	2.05	**1.23**
KR 508	8	450	1 x 2½	2.20	**1.32**
KR 512A	12	450	1 x 2½	2.40	**1.44**
KR 516A	16	450	1 x 3½	2.45	**1.47**
KR 520	20	450	1⅜ x 2½	2.75	**1.65**
KR 530	30	450	1⅜ x 3½	3.00	**1.80**
KR 540	40	450	1⅜ x 4⅜	3.15	**1.89**
KR 604	4	600	1⅜ x 3½	2.95	**1.77**
KR 608	8	600	1⅜ x 4½	3.15	**1.89**
KR 616	16	600	1½ x 4½	3.75	**2.25**

Common Negative Units

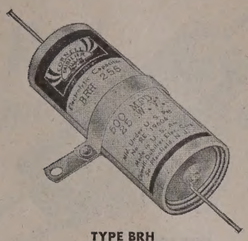
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KRC 248	4–8	250	1 x 3	$2.30	**$1.38**
KRC 288	8–8	250	1 x 3	2.40	**1.44**
KRC 2888	8–8–8	250	1⅜ x 3	3.85	**2.31**
KRC 548	4–8	450	1 x 3	2.95	**1.77**
KRC 588	8–8	450	1⅜ x 2½	3.00	**1.80**
KRC 5116	16–16	450	1⅜ x 3½	3.55	**2.13**
KRC 5220	20–20	450	1⅜ x 4⅜	3.80	**2.28**
KRC 5888	8–8–8	450	1⅜ x 3½	5.00	**3.00**

Separate Section Units

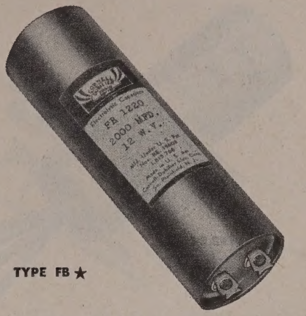
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KR 248	4–8	250	1⅜ x 2¾	$2.90	**$1.74**
KR 288	8–8	250	1⅜ x 2¾	3.00	**1.80**
KR 2888	8–8–8	250	1⅜ x 3½	4.80	**2.88**
KR 2881	8–8–16	250	1⅜ x 3½	4.90	**2.94**
KR 2811	8–16–16	250	1⅜ x 3½	5.00	**3.00**
KR 548A	4–8	450	1⅜ x 3	3.70	**2.22**
KR 588A	8–8	450	1⅜ x 3	3.75	**2.25**
KR 5816A	8–16	450	1⅜ x 4½	4.10	**2.46**
KR 5888A	8–8–8	450	1⅜ x 4½	6.25	**3.75**

CORNELL DUBILIER

HIGH-CAPACITY LOW-VOLTAGE ELECTROLYTICS

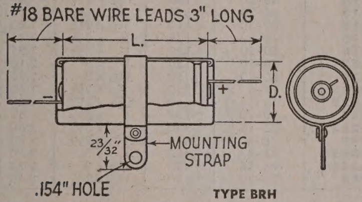


TYPE BRH



TYPE FB ★

These compact tubular electrolytic capacitors have been especially designed for all applications requiring high capacity units operating in low voltage D.C. circuits. They are widely employed in portable radio power rectifying circuits, electric fence devices, telephone and D.C. timing circuits. Units are available in standard capacities and voltage ratings for all uses. Hermetically sealed in pure aluminum cans with an external cardboard insulating sleeve, these units are provided with metal mounting strap and bare wire leads for convenient wiring into any circuit assembly.



TYPE BRH

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
BRH 601	100	6	⅝ x 1 1/16	$1.20	**$ .72**
BRH 6025	250	6	⅝ x 1 7/16	1.35	**.81**
BRH 605A	500	6	¾ x 1 11/16	1.55	**.93**
BRH 610	1000	6	⅞ x 2	1.90	**1.14**
BRH 620	2000	6	1 x 2½	2.30	**1.38**
BRH 121A	100	12	⅝ x 1 1/16	1.20	**.72**
BRH 1225A	250	12	¾ x 1 11/16	1.45	**.87**
BRH 125A	500	12	⅞ x 2	1.70	**1.02**
BRH 1210	1000	12	1 x 2	2.25	**1.35**
BRH 1220	2000	12	1 x 3	2.65	**1.59**
BRH 151A	100	15	⅝ x 1 1/16	1.25	**.75**
BRH 1525A	250	15	¾ x 1 11/16	1.55	**.93**
BRH 155A	500	15	⅞ x 2	1.75	**1.05**
BRH 1510	1000	15	1 x 2	2.30	**1.38**
BRH 1520	2000	15	1 x 3	3.20	**1.92**
BRH 251A	100	25	⅝ x 1 7/16	1.35	**.81**
BRH 2525A	250	25	⅞ x 1 11/16	1.70	**1.02**
BRH 255A	500	25	1 x 2	2.30	**1.38**
BRH 501	100	50	¾ x 2	1.40	**.84**
BRH 5015	150	50	⅞ x 2	1.55	**.93**
BRH 5025	250	50	1 x 2	1.75	**1.05**
BRH 5050	500	50	1 x 3	2.40	**1.44**

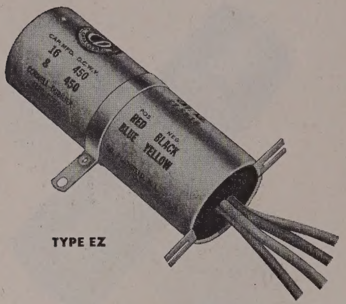
Type FB capacitors in round aluminum cans are designed for high capacity, low voltage applications, and are especially popular as replacements in motion picture sound equipment, and other low voltage circuits.

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
FB 1005	500	10	1⅜ x 2⅜	$3.10	**$1.86**
FB 1010	1000	10	1⅜ x 2⅜	3.55	**2.13**
FB 1015	1500	10	1⅜ x 2⅜	3.75	**2.25**
FB 1020	2000	10	1⅜ x 2⅝	3.95	**2.37**
FB 1030	3000	10	1⅜ x 3⅛	4.35	**2.61**
FB 1040	4000	10	1⅜ x 4⅛	4.75	**2.85**
FB 1050	5000	10	1¼ x 4⅛	5.15	**3.09**
FB 1060	6000	10	1¾ x 4⅛	5.55	**3.33**
FB 1205	500	12	1⅜ x 2⅜	3.20	**1.92**
FB 1210	1000	12	1⅜ x 2⅜	3.75	**2.25**
FB 1215	1500	12	1⅜ x 2⅝	3.95	**2.37**
FB 1220	2000	12	1⅜ x 3⅛	4.15	**2.49**
FB 1225	2500	12	1⅜ x 3⅛	4.85	**2.91**
FB 1230	3000	12	1⅜ x 4⅛	5.05	**3.03**
FB 1240	4000	12	1½ x 4⅛	5.25	**3.15**
FB 1260	6000	12	2 x 4⅛	5.50	**3.30**
FB 1505	500	15	1⅜ x 2⅜	3.25	**1.95**
FB 1510	1000	15	1⅜ x 2⅜	3.80	**2.28**
FB 1515	1500	15	1⅜ x 2⅝	4.00	**2.40**
FB 1520	2000	15	1⅜ x 3⅛	4.70	**2.82**
FB 1530	3000	15	1⅜ x 4⅛	5.15	**3.09**
FB 1540	4000	15	1½ x 4⅛	5.35	**3.21**
FB 1560	6000	15	2 x 4⅛	5.75	**3.45**
FB 1805	500	18	1⅜ x 2⅜	3.40	**2.04**
FB 1810	1000	18	1⅜ x 2⅜	3.90	**2.34**
FB 1820	2000	18	1⅜ x 3⅛	4.90	**2.94**
FB 1840	4000	18	1½ x 4⅛	5.75	**3.45**
FB 2005	500	20	1⅜ x 2⅜	3.40	**2.04**
FB 2010	1000	20	1⅜ x 3⅛	4.10	**2.46**
FB 2020	2000	20	1⅜ x 4⅛	5.20	**3.12**
FB 2040	4000	20	2 x 4⅛	5.95	**3.57**
FB 2505	500	25	1⅜ x 2⅜	3.55	**2.13**
FB 2510	1000	25	1⅜ x 3⅛	4.80	**2.88**
FB 2520	2000	25	1⅜ x 4⅛	7.20	**4.32**
FB 2530	3000	25	1¾ x 4⅛	8.95	**5.37**
FB 2540	4000	25	2 x 4⅛	6.45	**3.87**
FB 2550	5000	25	2½ x 4⅛	6.85	**4.11**
FB 3005	500	30	1⅜ x 3⅛	3.60	**2.16**
FB 3010	1000	30	1⅜ x 4⅛	4.90	**2.94**
FB 3020	2000	30	1¾ x 4⅛	7.40	**4.44**
FB 3030	3000	30	2 x 4⅛	7.95	**4.77**
FB 3040	4000	30	2½ x 4⅛	8.95	**5.37**
FB 3505	500	35	1⅜ x 3⅛	3.70	**2.22**
FB 3510	1000	35	1⅜ x 4⅛	5.00	**3.00**
FB 3520	2000	35	1¾ x 4⅛	8.00	**4.80**
FB 3530	3000	35	2 x 4⅛	9.50	**5.70**
FB 3540	4000	35	2½ x 4⅛	10.00	**6.00**
FB 4005	500	40	1⅜ x 3⅛	3.80	**2.28**
FB 4010	1000	40	1⅜ x 4⅛	6.50	**3.90**
FB 4020	2000	40	1¾ x 4⅛	9.00	**5.40**
FB 4030	3000	40	2 x 4⅛	10.50	**6.30**
FB 4040	4000	40	2½ x 4⅛	11.50	**6.90**
FB 5005	500	50	1⅜ x 3⅛	3.90	**2.34**
FB 5010	1000	50	1⅜ x 4⅛	8.00	**4.80**
FB 5020	2000	50	1¾ x 4⅛	10.00	**6.00**
FB 5030	3000	50	2 x 4⅛	11.50	**6.90**
FB 5040	4000	50	2½ x 4⅛	12.50	**7.50**

★When JAN-C-62 units must be supplied, order according to specific CE type designations.

CORNELL DUBILIER

CARDBOARD TUBE ELECTROLYTICS



TYPE EZ

Type EZ Capacitors are especially popular for radio servicing where low cost replacements are required. They are designed with mounting feet for upright mounting to replace inverted can-type units, spade-lug units.

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 825	8	250	⅞ x 2½	$1.15	**$ .69**
EZ 1625	16	250	1 x 2¾	1.30	**.78**
EZ 2425	24	250	1 1/16 x 2¾	1.40	**.84**
EZ 835	8	350	15/16 x 2½	1.20	**.72**
EZ 1235	12	350	15/16 x 2¾	1.30	**.78**
EZ 1635	16	350	1 x 2¾	1.40	**.84**
EZ 2435	24	350	1 x 3½	1.55	**.93**
EZ 845	8	450	⅞ x 2¾	1.25	**.75**
EZ 1245	12	450	1 x 2¾	1.35	**.81**
EZ 1645	16	450	1 1/16 x 2¾	1.40	**.84**
EZ 3045	30	450	1¼ x 3½	1.70	**1.02**

Dual Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 2215	20–20	150	1 x 2½	$1.65	**$ .99**
EZ 3315	30–30	150	1 1/16 x 2¾	1.80	**1.08**
EZ 5515	50–50	150	1 1/16 x 3½	2.10	**1.26**
EZ 8825	8–8	250	1 x 2¾	1.60	**.96**
EZ 8835	8–8	350	15/16 x 3½	1.65	**.99**
EZ 8845	8–8	450	1 x 3½	1.70	**1.02**

Dual Separate Section Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 288	8–8	250	1⅜ x 2¾	$2.00	**$1.20**
EZ 2116	16–16	250	1⅜ x 3¾	2.20	**1.32**
EZ 388	8–8	350	1⅜ x 3	2.05	**1.23**
EZ 3112	12–12	350	1⅜ x 3¾	2.20	**1.32**
EZ 3116	16–16	350	1⅜ x 4¾	2.70	**1.62**
EZ 588	8–8	450	1⅜ x 3	2.15	**1.29**
EZ 5816	8–16	450	1⅜ x 3¾	2.50	**1.50**
EZ 5112	12–12	450	1⅜ x 3¾	2.40	**1.44**
EZ 5116	16–16	450	1⅜ x 4¾	2.80	**1.68**

Triple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 2215C	20–20/20	150/25	1 x 3	$2.05	**$1.23**
EZ 3215C	30–20/20	150/25	1 x 3	2.10	**1.26**
EZ 3115C	30–10/20	150/25	1 x 3	2.05	**1.23**
EZ 4215C	40–20/20	150/25	1 1/16 x 3	2.15	**1.29**
EZ 32115	30–20/10	150	1⅛ x 2¾	2.15	**1.29**
EZ 42215	40–20/20	150	1⅛ x 3	2.25	**1.35**
EZ 1A135C	15–10/20	350/25	1⅛ x 3½	2.35	**1.41**
EZ 2143C	20–10/20	400/350/25	1⅜ x 3⅛	2.40	**1.44**

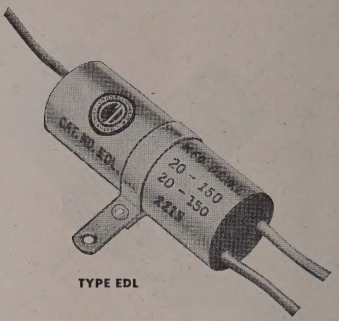
Triple Separate Section Units*

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8825S	8–8/20	250/25	1⅜ x 3	$2.50	**$1.50**
EZ 8835S	8–8/20	350/25	1⅜ x 3¾	2.55	**1.53**
EZ 12D35S	12–12/20	350/25	1⅜ x 3¾	2.70	**1.62**
EZ 16D35S	16–16/20	350/25	1⅜ x 4¾	3.20	**1.92**
EZ 8845S	8–8/20	450/25	1⅜ x 3¾	2.65	**1.59**
EZ 12D45S	12–12/20	450/25	1⅜ x 4¾	2.90	**1.74**
EZ 88845	8–8–8	450	1⅜ x 3¾	2.85	**1.71**

Quadruple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8815CC	8–8/10–10	150/25	1 x 2¾	$2.50	**$1.50**
EZ 3215CC	30–20/10–10	150/25	1 3/16 x 2¾	2.70	**1.62**
EZ 42215C	40–20–20/20	150/25	1 3/16 x 3	2.85	**1.71**
EZ 53215C	50–30–20/20	150/25	1 3/16 x 3½	3.05	**1.83**
EZ 44315C	40–40–30/20	150/25	1 3/16 x 3½	3.10	**1.86**
EZ 55515C	50–50–50/20	150/25	1⅜ x 3½	3.45	**2.07**

***Only first section is separate—remainder common neg.**



TYPE EDL

Type EDL Capacitors are dual and triple common negative units in cardboard tube containers with wax-filled ends. Capacities, voltages and polarity of the leads are clearly defined by color coding stamped on the tube casing.

Dual Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2202	20–20	25	⅝ x 2¼	$1.40	**$ .84**
EDL 115	10–10	50	⅝ x 2¼	1.40	**.84**
EDL 2115	20–10	150	13/16 x 2¼	1.55	**.93**
EDL 2215	20–20	150	⅞ x 2¼	1.65	**.99**
EDL 3215	30–20	150	⅞ x 2½	1.70	**1.02**
EDL 3315	30–30	150	⅞ x 2½	1.80	**1.08**
EDL 4215	40–20	150	⅞ x 2½	1.75	**1.05**
EDL 4315	40–30	150	15/16 x 2¾	1.80	**1.08**
EDL 4415	40–40	150	1 x 2¾	1.85	**1.11**
EDL 5315	50–30	150	1 x 2¾	1.95	**1.17**
EDL 5515	50–50	150	1 x 3	2.10	**1.26**
EDL 8415	80–40	150	1 1/16 x 3	2.25	**1.35**
EDL 16825	16–8	250	13/16 x 2½	1.70	**1.02**
EDL 16D25	16–16	250	⅞ x 2½	1.80	**1.08**
EDL 2225	20–20	250	1 x 2½	1.85	**1.11**
EDL 7V225	75–20	250	1 1/16 x 3½	2.60	**1.56**
EDL 8D45	8–8	450	15/16 x 2½	1.70	**1.02**
EDL 16845	16–8	450	1 x 3	2.00	**1.20**
EDL 16D45	16–16	450	1⅛ x 3	2.25	**1.35**
EDL 2245	20–20	450	1 3/16 x 3¼	2.50	**1.50**

Dual Separate Section Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2215SS	20–20	150	15/16 x 2⅝	$1.65	**$ .99**
EDL 3315SS	30–30	150	1 x 2⅝	1.80	**1.08**
EDL 4215SS	40–20	150	1 x 2⅝	1.75	**1.05**
EDL 4415SS	40–40	150	1 1/16 x 2⅞	1.85	**1.11**
EDL 5315SS	50–30	150	1 1/16 x 2⅞	1.95	**1.17**
EDL 5515SS	50–50	150	1⅛ x 3⅛	2.10	**1.26**
EDL 8415SS	80–40	150	1 3/16 x 3⅜	2.25	**1.35**

Triple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 22215	20–20–20	150	1 5/16 x 2½	$2.20	**$1.32**
EDL 32V215	30–25–20	150	⅞ x 3	2.25	**1.35**
EDL 42215	40–20–20	150	1 x 2¾	2.25	**1.35**
EDL 43215	40–30–20	150	1 x 3	2.35	**1.41**
EDL 44215	40–40–20	150	1 x 3	2.35	**1.41**
EDL 44415	40–40–40	150	1 1/16 x 3	2.45	**1.47**
EDL 2215C	20–20, 20	150, 25	⅞ x 2½	2.05	**1.23**
EDL 3315C	30–30, 20	150, 25	15/16 x 2½	2.20	**1.32**
EDL 4215C	40–20, 20	150, 25	15/16 x 2½	2.15	**1.29**
EDL 4415C	40–40, 20	150, 25	1 x 2¾	2.25	**1.35**
EDL 5315C	50–30, 20	150, 25	1 x 2¾	2.35	**1.41**
EDL 5515C	50–50, 20	150, 25	1 x 3	2.50	**1.50**
EDL 8415C	80–40, 20	150, 25	1 1/16 x 3	2.65	**1.59**
EDL 3215C10	30–20, 100	150, 25	1 x 2¾	2.35	**1.41**
EDL 5315X20	50–30, 200	150, 10	1 x 3	2.55	**1.53**
EDL 5315C10	50–30, 100	150, 25	1 x 3	2.55	**1.53**
EDL 8215C10	80–20, 100	150, 25	1⅛ x 3	2.75	**1.65**
EDL 2225C	20–20, 20	250, 25	15/16 x 2¾	2.25	**1.35**
EDL 4225C	40–20, 20	250, 25	1 x 3	2.55	**1.53**
EDL 4425C	40–40, 20	250, 25	1⅛ x 3	2.90	**1.74**
EDL 7V4125	75–40–10	250	1¼ x 3½	3.45	**2.07**
EDL 16T45	16–16–16	450	1⅜ x 3	3.10	**1.86**
EDL 2245C	20–20, 20	450, 25	1 3/16 x 3¼	2.90	**1.74**

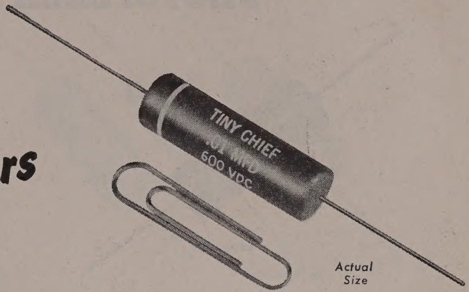
Quadruple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 33215C	30–30–20, 20	150, 25	1 x 2¾	$2.90	**$1.74**
EDL 22245C	20–20–20, 20	450, 25	1⅜ x 3¾	4.05	**2.43**

CORNELL DUBILIER

"TINY-CHIEF" MOULDED PLASTIC CAPACITORS

The New Smallest-Size All-Purpose Moulded Tubulars



Actual Size

Cornell-Dubilier "TINY-CHIEFS" are the roughest, toughest little capacitors ever offered servicemen for all types of television, auto radios, and other compact electronic equipment. They are moulded in an extra hard thermosetting plastic which has all the qualities and electrical characteristics required for long lasting all-around satisfaction. Tested at twice their specified voltage rating, they have been especially designed to maintain stable capacity values under severe conditions of temperature, humidity, and physical stresses. Bare wire leads are firmly connected to the capacitor section, imbedded in the hard plastic casing and will not pull out.

Cat. No.	Cap. Mfd.	Size—Inches Dia. & Length	List Price	Net Price
		200 V. D.C.		
PJ 2S2	.02	5⁄16 x 1	$.25	**$.15**
PJ 2S5	.05	⅜ x 1¼	.25	**.15**
PJ 2P1	.1	7⁄16 x 1¼	.35	**.21**
PJ 2P25	.25	⅝ x 1⅞	.45	**.27**
PJ 2P5	.5	⅝ x 1⅞	.60	**.36**
PJ 2W1	1.0	¾ x 2¼	.90	**.54**
		400 V. D.C.		
PJ 4S1	.01	5⁄16 x 1	.25	**.15**
PJ 4S2	.02	⅜ x 1¼	.25	**.15**
PJ 4S5	.05	7⁄16 x 1¼	.30	**.19**
PJ 4P1	.1	½ x 1½	.35	**.21**
PJ 4P25	.25	⅝ x 1⅞	.45	**.27**
PJ 4P5	.5	¾ x 2¼	.60	**.36**
PJ 4W1	1.0	1 x 2⅛	.90	**.54**
		600 V. D.C.		
PJ 6T5	.0005	5⁄16 x 1	.25	**.15**
PJ 6D1	.001	5⁄16 x 1	.25	**.15**
PJ 6D2	.002	5⁄16 x 1	.25	**.15**
PJ 6D3	.003	5⁄16 x 1	.25	**.15**
PJ 6D4	.004	5⁄16 x 1	.25	**.15**
PJ 6D5	.005	5⁄16 x 1	.25	**.15**
PJ 6D6	.006	⅜ x 1¼	.25	**.15**
PJ 6S1	.01	⅜ x 1¼	.30	**.18**
PJ 6S15	.015	⅜ x 1¼	.30	**.18**
PJ 6S2	.02	7⁄16 x 1¼	.30	**.18**
PJ 6S25	.025	7⁄16 x 1¼	.30	**.18**
PJ 6S3	.03	7⁄16 x 1¼	.35	**.21**
PJ 6S4	.04	½ x 1½	.35	**.21**
PJ 6S5	.05	½ x 1½	.40	**.24**
PJ 6P1	.1	⅝ x 1⅞	.45	**.27**
PJ 6P25	.25	¾ x 2¼	.55	**.33**
PJ 6P5	.5	1 x 2⅛	.80	**.48**
		1600 V. D.C.		
PJ 16D1	.001	⅜ x 1¼	.65	**.39**
PJ 16D2	.002	⅜ x 1¼	.65	**.39**
PJ 16D3	.003	⅜ x 1¼	.65	**.39**
PJ 16D4	.004	⅜ x 1¼	.65	**.39**
PJ 16D5	.005	⅜ x 1¼	.65	**.39**
PJ 16D55	.0055	7⁄16 x 1¼	.65	**.39**
PJ 16D6	.006	7⁄16 x 1¼	.65	**.39**
PJ 16D7	.007	7⁄16 x 1¼	.65	**.39**
PJ 16D75	.0075	7⁄16 x 1¼	.65	**.39**
PJ 16D8	.008	7⁄16 x 1¼	.65	**.39**
PJ 16S1	.01	½ x 1½	.70	**.42**
PJ 16S15	.015	½ x 1½	.70	**.42**
PJ 16S2	.02	⅝ x 1⅞	.70	**.42**
PJ 16S3	.03	⅝ x 1⅞	.70	**.42**
PJ 14S4	.04	⅝ x 1⅞	.70	**.42**

FEATURES OF C-D "TINY-CHIEFS"

• MECHANICAL •

Section and leads embedded in a red-colored solid thermosetting plastic.

A plastic material which has a cured tensile strength of 3,500 pounds per square inch. It will not soften on heating even up to 400°F.

Low pressure forming does not injure sections.

Leads held in exact center during embedment.

Leads tightly held and sealed by plastic housing.

Fast curing plastic does not expose section to a long cycle of high temperature.

No end fill to melt.

Each group size held to exact dimensions.

Tinned copper wire leads readily soldered.

Plastic will not melt when touched by soldering iron.

No surface wax.

• ELECTRICAL •

High quality specially developed materials provide long service life.

Cured plastic body provides excellent electrical insulation.

Body seal provides long humidity protection.

Leads soldered directly to foils of non-inductive section.

Lead size as below:

Capacitor Diameter	Lead Wire Size
5/16 - 3/8	#22
7/16 - 1/2	#20
5/8 - 1	#18

Temperature range —40°C. to +85°C.

Specified test voltage is two times rating. Power factor ½% - 1%.

Insulation resistance 2,000 megohm mfd. or 10,000 per unit, whichever is lower.

STANDARD CAPACITY TOLERANCES

Mfd.	Tolerance
1.0	+30% — 10%
.1 to .9	+40% — 10%
.01 to .09	+40% — 20%
.0005 to .009	+60% — 20%

Other tolerances available +20% and — 10%.

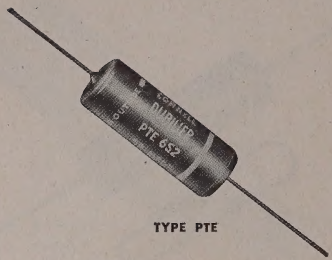
Permanence of capacity excellent due to solid plastic embedment.

New plastic will not track on arcing with excessive voltage.

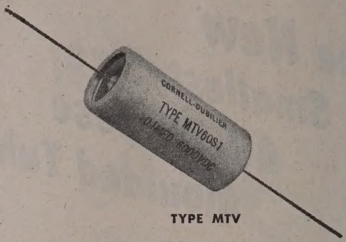
Capacitor stamping indicates capacity, voltage, and outside foil.

BLUE CUB MOLDED TUBULAR—HV TELEVISION

PHOTOFLASH ELECTROLYTIC



TYPE PTE



TYPE MTV

PTE—"Blue Cub" moulded plastic tubulars, are Vikane* impregnated to withstand high voltage breakdown at low power factor, humidity and temperatures up to 300° F.

Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		400 V. D.C.		
PTE 4S1	.01	11/32 x 1 1/16	$.25	**$.15**
PTE 4S2	.02	7/16 x 1 5/16	.25	**.15**
PTE 4S22	.022	7/16 x 1 3/8	.25	**.15**
PTE 4S47	.047	1/2 x 1 3/8	.30	**.18**
PTE 4S5	.05	1/2 x 1 5/16	.30	**.18**
PTE 4S68	.068	9/16 x 1 9/16	.35	**.21**
PTE 4P1	.1	9/16 x 1 9/16	.35	**.21**
PTE 4P15	.15	11/16 x 1 15/16	.35	**.21**
PTE 4P22	.22	11/16 x 1 15/16	.40	**.24**
PTE 4P25	.25	11/16 x 1 15/16	.40	**.24**
		600 V. D.C.		
PTE 6T25	.00025	11/32 x 1 1/8	.25	**.15**
PTE 6T5	.0005	11/32 x 1 1/8	.25	**.15**
PTE 6D1	.001	11/32 x 1 1/16	.25	**.15**
PTE 6D15	.0015	11/32 x 1 1/8	.25	**.15**
PTE 6D2	.002	11/32 x 1 1/16	.25	**.15**
PTE 6D22	.0022	11/32 x 1 1/8	.25	**.15**
PTE 6D3	.003	11/32 x 1 1/16	.25	**.15**
PTE 6D33	.0033	11/32 x 1 1/8	.25	**.15**
PTE 6D4	.004	11/32 x 1 1/16	.25	**.15**
PTE 6D47	.0047	11/32 x 1 1/8	.25	**.15**
PTE 6D5	.005	11/32 x 1 1/16	.25	**.15**
PTE 6D6	.006	7/16 x 1 5/16	.25	**.15**
PTE 6D68	.0068	7/16 x 1 3/8	.30	**.18**
PTE 6S1	.01	7/16 x 1 5/16	.30	**.18**
PTE 6S15	.015	7/16 x 1 5/16	.30	**.18**
PTE 6S2	.02	1/2 x 1 5/16	.30	**.18**
PTE 6S22	.022	1/2 x 1 3/8	.30	**.18**
PTE 6S3	.03	9/16 x 1 9/16	.35	**.21**
PTE 6S4	.04	9/16 x 1 9/16	.35	**.21**
PTE 6S47	.047	9/16 x 1 9/16	.40	**.24**
PTE 6S5	.05	9/16 x 1 9/16	.40	**.24**
PTE 6S6	.06	11/16 x 1 15/16	.40	**.24**
PTE 6S68	.068	11/16 x 1 15/16	.40	**.24**
PTE 6P1	.1	11/16 x 1 15/16	.45	**.27**
PTE 6P25	.25	7/8 x 2 1/16	.55	**.33**
		1600 V. D.C.		
PTE 16D1	.001	7/16 x 1 3/8	.65	**.39**
PTE 16D2	.002	7/16 x 1 3/8	.65	**.39**
PTE 16D22	.0022	7/16 x 1 3/8	.65	**.39**
PTE 16D3	.003	7/16 x 1 3/8	.65	**.39**
PTE 16D33	.0033	1/2 x 1 3/8	.65	**.39**
PTE 16D4	.004	1/2 x 1 3/8	.65	**.39**
PTE 16D47	.0047	1/2 x 1 3/8	.65	**.39**
PTE 16D5	.005	1/2 x 1 3/8	.65	**.39**
PTE 16D55	.0055	1/2 x 1 3/8	.65	**.39**
PTE 16D6	.006	9/16 x 1 9/16	.65	**.39**
PTE 16D68	.0068	9/16 x 1 9/16	.65	**.39**
PTE 16D7	.007	9/16 x 1 9/16	.65	**.39**
PTE 16D75	.0075	9/16 x 1 9/16	.65	**.39**
PTE 16D8	.008	9/16 x 1 9/16	.65	**.39**
PTE 16S1	.01	9/16 x 1 9/16	.70	**.42**
PTE 16S15	.015	9/16 x 1 9/16	.70	**.42**
PTE 16S2	.02	11/16 x 1 15/16	.70	**.42**
PTE 16S25	.025	11/16 x 1 15/16	.70	**.42**
PTE 16S3	.03	11/16 x 1 15/16	.70	**.42**
PTE 16S4	.04	11/16 x 1 15/16	.70	**.42**
		6000 V. D.C.		
PTE 60T5	.0005	11/16 x 1 15/16	1.35	**.81**
PTE 60D1	.001	11/16 x 1 15/16	1.35	**.81**
PTE 60D5	.005	11/16 x 1 15/16	1.35	**.81**
		10000 V. D.C.		
PTE 100T5	.0005	11/16 x 1 15/16	1.50	**.90**

*Reg. U. S. Pat. Off.

Type MTV Capacitors are impregnated and filled with oil in hermetically sealed metal tube containers and provided with an insulating cardboard sleeve cover. They are small size units especially designed for use in assemblies where high temperatures are encountered, such as television receivers and similar high voltage equipment.

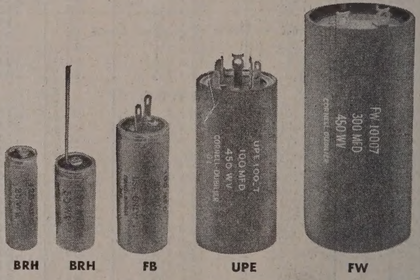
Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		6000 V. D.C.		
MTV 60T5	.0005	1 x 1 3/4	$2.35	**$1.41**
MTV 60D1	.001	1 x 1 3/4	2.35	**1.41**
MTV 60D5	.005	1 x 1 7/8	2.35	**1.41**
MTV 60S1	.01	1 x 2 1/4	2.35	**1.41**
MTV 60S2	.02	1 3/8 x 2 1/4	2.45	**1.47**
MTV 60S3	.03	1 3/8 x 2 5/8	2.60	**1.56**
MTV 60S5	.05	1 3/8 x 3 1/4	2.75	**1.65**

Mounting Clamps add 15¢ to list.

HEAVY WAXED PAPER TUBULAR CAPACITORS

GTV 60S1	.01	1 1/16 x 2 1/8	$1.40	**$.84**
GTV 60S3	.03	1 1/16 x 2 5/8	1.50	**.90**
GTV 60S5	.05	1 3/16 x 3 1/8	1.60	**.96**

ELECTROLYTIC PHOTOFLASH CAPACITORS



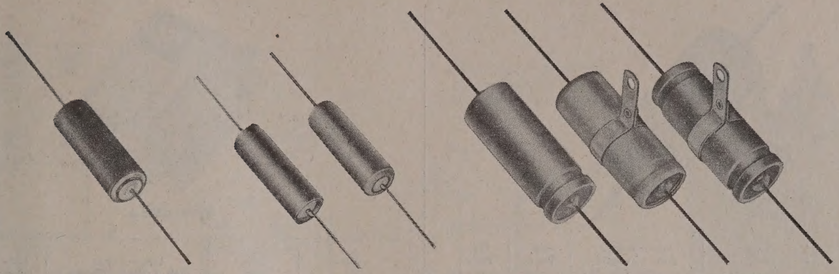
Cat. No.	Cap. Mfd.	Volts D.C.	Size—Inches Dia. x Length	List Price	Net Price
UPE 100T	100 (2 x 50)	450	1 3/8" x 3" (1 17/32" x 3 1/4" over CB tube)	$5.50	**$3.30**
FB 10063	200	450	2 1/16" x 4 1/2"	6.85	**4.11**
FW 10005	200	500	2 1/16" x 4 7/16"	10.50	**6.30**
FW 10007	300	450	2 1/16" x 4 7/16"	10.50	**6.30**
FWS 10000	300	450	2 1/16" x 4 7/16"	11.50	**6.90**
FA 10300	400	450	2 9/16" x 4 1/2" (over CB tube)	17.95	**10.77**

LOW VOLTAGE PHOTOFLASH CAPACITORS

BRE 10001	40	150	3/4" x 1 7/16"	$1.35	**$ .81**
FB 10077	100	30	1" x 2 1/2"	3.35	**2.01**
BRH 10062	125	25	5/8" x 1 15/16"	1.35	**.81**
BRH 10067	150	50	3/4" x 1 11/16"	1.35	**.81**
BRH 2525A	250	25	7/8" x 1 11/16"	1.70	**.1.02**

CORNELL DUBILIER

SMALL SIZE METALIZED-PAPER CAPACITORS



"PUP" "SEALPUPS" "METAPUPS"

"PUP" METAL END-CAP CARDBOARD TUBULARS

Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		200 V. D.C.		
MP 2S1	.01	3/8 x 5/8	$ .60	**$ .36**
MP 2S2	.02	3/8 x 5/8	.60	**.36**
MP 2S3	.03	3/8 x 5/8	.60	**.36**
MP 2S5	.05	3/8 x 5/8	.65	**.39**
MP 2P1	.1	3/8 x 5/8	.70	**.42**
MP 2P25	.25	15/32 x 5/8	.90	**.54**
MP 2P5	.5	15/32 x 1 1/8	1.05	**.63**
MP 2W1	1.0	9/16 x 1 1/8	1.30	**.78**
MP 2W2	2.0	5/8 x 1 5/8	1.80	**1.08**
		400 V. D.C.		
MP 4S1	.01	3/8 x 5/8	.65	**.39**
MP 4S2	.02	3/8 x 5/8	.65	**.39**
MP 4S3	.03	3/8 x 5/8	.65	**.39**
MP 4S5	.05	15/32 x 5/8	.70	**.42**
MP 4P1	.1	15/32 x 1 1/8	.80	**.48**
MP 4P25	.25	9/16 x 1 1/8	1.00	**.60**
MP 4P5	.5	5/8 x 1 5/8	1.15	**.69**
MP 4W1	1.0	23/32 x 2 1/8	1.60	**.96**
		600 V. D.C.		
MP 6S1	.01	3/8 x 5/8	.70	**.42**
MP 6S2	.02	3/8 x 5/8	.70	**.42**
MP 6S3	.03	15/32 x 5/8	.80	**.48**
MP 6S5	.05	15/32 x 5/8	.80	**.48**
MP 6P1	.1	15/32 x 1 1/8	.90	**.54**
MP 6P25	.25	5/8 x 1 1/8	1.10	**.66**
MP 6P5	.5	23/32 x 1 5/8	1.45	**.87**
MP 6W1	1.0	23/32 x 2 1/8	1.80	**1.08**

"METAPUP" ONE-PIECE METAL TUBULARS

Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		150 V. D.C.		
MTM 1W3	3.0	3/4 x 1 15/16	$3.40	**$2.04**
MTM 1W4	4.0	13/16 x 1 15/16	4.35	**2.61**
MTM 1W6	6.0	1 x 1 15/16	5.30	**3.18**
		200 V. D.C.		
MTM 2S5	.05	3/8 x 15/16	1.40	**.84**
MTM 2P1	.1	7/16 x 15/16	1.45	**.87**
MTM 2P25	.25	1/2 x 15/16	1.60	**.96**
MTM 2P5	.5	1/2 x 1 1/4	1.70	**1.02**
MTM 2W1	1.0	5/8 x 1 7/16	2.10	**1.26**
MTM 2W2	2.0	5/8 x 1 15/16	2.60	**.56**
		400 V. D.C.		
MTM 4S3	.03	3/8 x 15/16	1.40	**.84**
MTM 4S5	.05	7/16 x 15/16	1.45	**.87**
MTM 4P1	.1	7/16 x 1 1/4	1.60	**.96**
MTM 4P25	.25	5/8 x 1 1/4	1.80	**1.08**
MTM 4P5	.5	5/8 x 1 15/16	2.00	**1.20**
MTM 4W1	1.0	3/4 x 2 7/16	2.50	**1.50**
MTM 4W2	2.0	1 x 2 7/16	3.60	**2.16**
		600 V. D.C.		
MTM 6S1	.01	3/8 x 15/16	1.40	**.84**
MTM 6S2	.02	7/16 x 15/16	1.45	**.87**
MTM 6S3	.03	7/16 x 15/16	1.50	**.90**
MTM 6S5	.05	1/2 x 15/16	1.55	**.93**
MTM 6P1	.1	1/2 x 1 7/16	1.70	**1.02**
MTM 6P25	.25	5/8 x 1 9/16	2.00	**1.20**
MTM 6P5	.5	3/4 x 1 15/16	2.40	**1.44**
MTM 6W1	1.0	13/16 x 2 7/16	3.00	**1.80**
MTM 6W2	2.0	1 1/4 x 2 7/16	4.00	**2.40**

Cornell-Dubilier improved, self-healing, metalized paper capacitors have better electrical characteristics and extra long service life. "PUP" units are light, compact with an operating temperature range of —40° to 60° C. without derating. Bare wire leads securely anchored in metal end-caps, wax-impregnated and dip-sealed against humidity. All units are extended foil—non-inductive wound for low impedance at high frequencies, have high insulation resistance, low power factor and small capacity change with temperature and life.

"METAPUPS" are one piece metal tubular cased, pressure sealed by spin-over on synthetic rubber gaskets. The operating temperature range of these units is —55° to 95° C. For temperatures higher than 60° C. voltage derating is necessary.

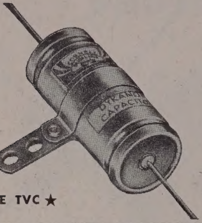
"SEALPUPS" are the highest quality metalized paper capacitor design for smallest size and positive seal against moisture. They are especially recommended for high grade military and commercial equipment.

For further data on C-D metalized capacitors, write for Bulletins 142-3-4.

"SEALPUP" GLASS-METAL END-SEALED TUBULARS

Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		200 V. D.C.		
MTW 2S1	.01	.175 x 11/16	$2.65	**$1.59**
MTW 2S2	.02	.235 x 11/16	2.70	**1.62**
MTW 2S4	.04	.235 x 11/16	2.80	**1.68**
MTW 2S5	.05	.235 x 11/16	2.85	**1.71**
MTW 2P1	.1	.312 x 11/16	2.95	**1.77**
MTW 2P2	.2	.312 x 1	3.15	**1.89**
MTW 2P25	.25	.312 x 1	3.40	**2.04**
MTW 2P5	.5	.400 x 1	4.00	**2.40**
MTW 2W1	1.0	.562 x 1 3/16	4.70	**2.82**
MTW 2W15	1.5	.562 x 1 11/16	5.40	**3.24**
MTW 2W2	2.0	.562 x 1 11/16	6.80	**4.08**
		400 V. D.C.		
MTW 4S1	.01	.235 x 11/16	2.85	**1.71**
MTW 4S2	.02	.235 x 11/16	2.90	**1.74**
MTW 4S4	.04	.312 x 11/16	3.00	**1.80**
MTW 4S5	.05	.400 x 11/16	3.10	**1.86**
MTW 4P1	.1	.400 x 1	3.30	**1.98**
MTW 4P2	.2	.500 x 1	3.70	**2.22**
MTW 4P25	.25	.562 x 1	3.95	**2.37**
MTW 4P5	.5	.562 x 1 11/16	4.85	**2.91**
MTW 4W1	1.0	.670 x 2 3/16	5.65	**3.39**
		600 V. D.C.		
MTW 6S1	.01	.312 x 11/16	2.90	**1.74**
MTW 6S2	.02	.312 x 11/16	2.95	**1.77**
MTW 6S4	.04	.400 x 11/16	3.15	**1.89**
MTW 6S5	.05	.400 x 11/16	3.25	**1.95**
MTW 6P1	.1	.500 x 1 3/16	3.65	**2.19**
MTW 6P2	.2	.670 x 1 5/16	4.00	**2.40**
MTW 6P25	.25	.670 x 1 5/16	4.50	**2.70**
MTW 6P5	.5	.750 x 1 11/16	5.85	**3.51**
MTW 6W1	1.0	.750 x 2 3/16	6.70	**4.02**

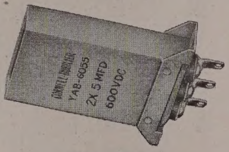
METAL CASED DYKANOL PAPER CAPACITORS



TYPE TVC ★

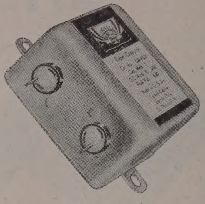
Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		400 V. D.C.		
TVC 4D5	.005	7/16 x 1⅛	$1.00	**$ .60**
TVC 4S1	.01	7/16 x 1⅛	1.00	**.60**
TVC 4S15	.015	7/16 x 1⅛	1.10	**.66**
TVC 4S2	.02	7/16 x 1¼	1.10	**.66**
TVC 4S3	.03	7/16 x 1⅜	1.15	**.69**
TVC 4S4	.04	17/32 x 1¼	1.15	**.69**
TVC 4S5	.05	17/32 x 1⅜	1.15	**.69**
TVC 4P1	.1	⅝ x 1 11/16	1.30	**.78**
TVC 4P25	.25	¾ x 2 1/16	1.60	**.96**
TVC 4P5	.5	1 x 2 1/16	1.90	**1.14**
		600 V. D.C.		
TVC 6D5	.005	7/16 x 1⅛	1.05	**.63**
TVC 6S1	.01	7/16 x 1⅛	1.05	**.63**
TVC 6S15	.015	7/16 x 1⅛	1.10	**.66**
TVC 6S2	.02	7/16 x 1⅛	1.15	**.69**
TVC 6S3	.03	17/32 x 1⅛	1.25	**.75**
TVC 6S4	.04	9/16 x 1⅛	1.25	**.75**
TVC 6S5	.05	9/16 x 1¼	1.25	**.75**
TVC 6P1	.1	⅝ x 1½	1.40	**.84**
TVC 6P25	.25	¾ x 1 13/16	1.90	**1.14**
TVC 6P5	.5	1 x 1 13/16	2.45	**1.47**
		1000 V. D.C.		
TVC 10D5	.005	17/32 x 1⅛	1.25	**.75**
TVC 10S1	.01	17/32 x 1⅛	1.25	**.75**
TVC 10S15	.015	17/32 x 1⅛	1.35	**.81**
TVC 10S2	.02	17/32 x 1¼	1.35	**.81**
TVC 10S3	.03	17/32 x 1⅜	1.35	**.81**
TVC 10S4	.04	17/32 x 1½	1.35	**.81**
TVC 10S5	.05	9/16 x 1⅝	1.45	**.87**
TVC 10P1	.1	⅝ x 2 1/16	1.65	**.99**
OIL-FILLED UNITS		**1600 V. D.C.**		
TVC 16D5	.005	⅝ x 1 5/16	1.35	**.81**
TVC 16S1	.01	⅝ x 1 5/16	1.35	**.81**
TVC 16S15	.015	⅝ x 1 9/16	1.40	**.84**
TVC 16S2	.02	⅝ x 1 11/16	1.45	**.87**
TVC 16S3	.03	⅝ x 2 1/16	1.45	**.87**
TVC 16S4	.04	¾ x 1 13/16	1.45	**.87**
TVC 16S5	.05	⅞ x 1 11/16	1.55	**.93**

For units provided with insulating sleeve over metal tube add 10c to list price. When ordering add "–6" to Cat. No. (Example TVC 4D5-6).



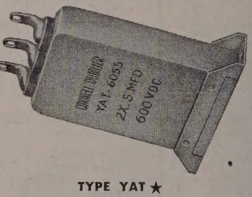
TYPE YAB ★

Cat. No.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
WAT or **WAB 6005**	.05	1 5/16 x 11/16 x 1 7/16	$3.85	**$2.31**
WAT or **WAB 6010**	.1	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 6025**	.25	1 5/16 x 11/16 x 1 11/16	4.40	**2.64**
WAT or **WAB 6050**	.5	1 5/16 x 11/16 x 2 1/16	4.70	**2.82**
WAT or **WAB 6100**	1.0	1 5/16 x 11/16 x 2½	5.25	**3.15**
		1000 V. D.C. Work.		
WAT or **WAB 10005**	.05	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 10010**	.1	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 10025**	.25	1 5/16 x 11/16 x 2 1/16	4.40	**2.64**
WAT or **WAB 10050**	.5	1 5/16 x 11/16 x 2½	4.40	**2.64**



TYPE DYR ★

Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
		600 V. D.C. Work.		
DYR 6005	.05	1 13/16 x 1 x ¾	$2.90	**$1.74**
DYR 6010	.1	1 13/16 x 1 x ¾	2.95	**1.77**
DYR 6025	.25	1 13/16 x 1 x ¾	3.10	**1.86**
DYR 6050	.5	1 13/16 x 1 x ⅞	3.30	**1.98**
DYR 6100	1	2 x 1¾ x ⅞	3.75	**2.25**
DYR 6200	2	2 x 2 x 1⅛	5.00	**3.00**
DYR 60055	.05–.05	1 13/16 x 1 x ¾	3.65	**2.19**
DYR 6011	.1–.1	1 13/16 x 1 x ¾	3.70	**2.22**
DYR 6022	.25–.25	1 13/16 x 1¼ x ¾	3.75	**2.25**
DYR 6055	.5–.5	2 x 1¾ x ⅞	4.30	**2.58**
DYR 6110	1.–1.	2 x 2 x 1⅛	5.30	**3.18**
DYR 6111	.1–.1–.1	1 13/16 x 1 x ¾	4.20	**2.52**
DYR 6222	.25–.25–.25	2 x 1¾ x 13/16	4.75	**2.85**
DYR 6555	.5–.5–.5	2 x 2 x 1⅛	5.75	**3.45**
		1000 V. D.C. Work.		
DYR 10005	.05	1 13/16 x 1 x ¾	3.05	**1.83**
DYR 10010	.1	1 13/16 x 1 x ¾	3.15	**1.89**
DYR 10025	.25	1 13/16 x 1 x ¾	3.25	**1.95**
DYR 10050	.5	2 x 1¾ x 13/16	3.55	**2.13**
DYR 10100	1	2 x 2 x 1⅛	4.40	**2.64**
DYR 100055	.05–.05	1 13/16 x 1 x ¾	3.85	**2.31**
DYR 10011	.1–.1	1 13/16 x 1 x ¾	4.00	**2.40**
DYR 10022	.25–.25	2 x 1¾ x 13/16	4.20	**2.52**
DYR 10055	.5–.5	2 x 2 x 1⅛	5.45	**3.27**
DYR 10111	.1–.1–.1	1 13/16 x 1¼ x ¾	4.60	**2.76**
DYR 10222	.25–.25–.25	2 x 2 x 1⅛	5.50	**3.30**



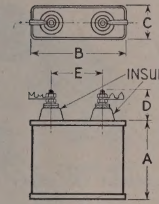
TYPE YAT ★

Cat. No.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
YAT or **YAB 6005**	.05	1¾ x 9/16 x 1	$3.60	**$2.16**
YAT or **YAB 6010**	.1	1¾ x 9/16 x 1	3.60	**2.16**
YAT or **YAB 6025**	.25	1¾ x 9/16 x 1½	3.85	**2.31**
YAT or **YAB 6050**	.5	1¾ x 9/16 x 1⅞	4.15	**2.49**
YAT or **YAB 6100**	1.0	1¾ x 9/16 x 2½	4.70	**2.82**
YAT or **YAB 60055**	.05–.05	1¾ x 9/16 x 1	3.65	**2.19**
YAT or **YAB 6011**	.1–.1	1¾ x 9/16 x 1½	4.70	**2.82**
YAT or **YAB 6022**	.25–.25	1¾ x 9/16 x 1⅞	4.70	**2.82**
YAT or **YAB 6055**	.5–.5	1¾ x 9/16 x 2½	5.50	**3.30**
YAT or **YAB 60555**	.05–.05–.05	1¾ x 9/16 x 1	5.25	**3.15**
YAT or **YAB 6111**	.1–.1–.1	1¾ x 9/16 x 1½	5.50	**3.30**
YAT or **YAB 6222**	.25–.25–.25	1¾ x 9/16 x 2½	5.80	**3.48**
		1000 V. D.C. Work.		
YAT or **YAB 10005**	.05	1¾ x 9/16 x 1	3.70	**2.22**
YAT or **YAB 10010**	.1	1¾ x 9/16 x 1	4.00	**2.40**
YAT or **YAB 10025**	.25	1¾ x 9/16 x 1⅞	4.15	**2.49**
YAT or **YAB 10050**	.5	1¾ x 9/16 x 2½	4.40	**2.64**
YAT or **YAB 100055**	.05–.05	1¾ x 9/16 x 1½	4.40	**2.64**
YAT or **YAB 10011**	.1–.1	1¾ x 9/16 x 1½	4.95	**2.97**
YAT or **YAB 10022**	.25–.25	1¾ x 9/16 x 2½	5.25	**3.15**
YAT or **YAB 100555**	.05–.05–.05	1¾ x 9/16 x 1½	5.80	**3.48**
YAT or **YAB 10111**	.1–.1–.1	1¾ x 9/16 x 2½	6.35	**3.81**

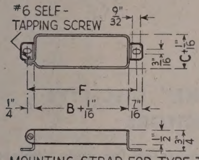
★When JAN-C-25 units must be supplied, order according to specific CP type designations listed in C-D Paper Capacitor Catalog No. 400.

CORNELL DUBILIER

DYKANOL TRANSMITTING CAPACITORS

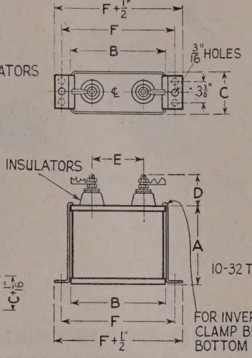


TYPE T
(WITHOUT MOUNTINGS)

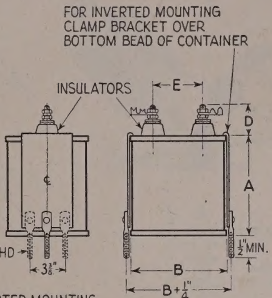


MOUNTING STRAP FOR TYPE TJU

TYPE TJU
(WITH MOUNTING STRAP)


F+1/2"
F
B
3/16" HOLES
3/8"
C
INSULATORS
E
D
A
B
F
F+1/2"
FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER

TYPE TJL


FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER
INSULATORS
E
D
A
10-32 THD
3⅜"
1/2" MIN.
B
B+1/4"

TYPE TJH

DYKANOL A
T 20010
1 MFD.
2000 V.D.C.
Made in U. S. A.
Cornell-Dubilier Elec. Corp.
So. Plainfield, N. J.

TYPE T ★
Provided with mounting brackets designated upon ordering as explained below.

Prices below include mounting brackets or universal mounting strap when ordered according to these type numbers.

TYPE DESIGNATIONS—Type T (basic units) are without mountings. To order Types TJH, TJL or TJU with mountings as shown above, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T—(Basic unit) without mountings.

TYPE TJH—With screw spade-lug brackets.

TYPE TJL—With mounting foot brackets.

TYPE TJU—With universal mounting strap.

Cat. No.	Cap. Mfd.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
		600 V. D.C. Working							
T 6005	.5	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	$4.70	**$2.82**
T 6010	1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	5.80	**3.48**
T 6020	2	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	7.15	**4.29**
T 6030	3	3⅞	1 13/16	1 1/16	⅞	13/16	2¼	8.25	**4.95**
T 6040	4	3⅜	2½	1 3/16	⅞	1⅛	3	9.10	**5.46**
T 6050	5	4¾	1 13/16	1 1/16	⅞	13/16	2¼	10.45	**6.27**
T 6060	6	4⅝	2½	1 3/16	⅞	1⅛	3	11.30	**6.78**
T 6080	8	3 13/16	3¾	1¼	⅞	2	4⅜	13.50	**8.10**
T 6100	10	4⅝	3¾	1¼	⅞	2	4⅜	15.15	**9.09**
		1000 V. D.C. Working							
T 10001	.1	2	1 13/16	1 1/16	⅞	13/16	2¼	4.15	**2.49**
T 100025	.25	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	4.70	**2.82**
T 10005	.5	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	4.95	**2.97**
T 10010	1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	6.35	**3.81**
T 10020	2	4	1 13/16	1 1/16	⅞	13/16	2¼	8.25	**4.95**
T 10030	3	3½	2½	1 3/16	⅞	1⅛	3	9.65	**5.79**
T 10040	4	4⅝	2½	1 3/16	⅞	1⅛	3	10.45	**6.27**
T 10050	5	3 13/16	3¾	1¼	⅞	2	4⅜	12.65	**7.59**
T 10060	6	4¾	3¾	1¼	⅞	2	4⅜	14.05	**8.43**
T 10080	8	4¾	3¾	1¼	⅞	2	4⅜	15.15	**9.09**
T 10100	10	4⅝	3¾	1¾	⅞	2	4⅜	16.80	**10.08**
T 10120	12	3 13/16	3¾	2¼	⅞	2	4⅜	18.15	**10.89**
T 10150	15	4¾	3¾	2½	⅞	2	4⅜	20.10	**12.06**
		1500 V. D.C. Working							
T 15005	.5	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	6.35	**3.81**
T 15010	1	4	1 13/16	1 1/16	⅞	13/16	2¼	7.45	**4.47**
T 15020	2	4⅛	2½	1 3/16	⅞	1⅛	3	10.45	**6.27**
T 15030	3	4¾	2½	1 3/16	⅞	1⅛	3	12.40	**7.44**
T 15040	4	4⅝	3¾	1¼	⅞	2	4⅜	14.05	**8.43**
T 15050	5	4¾	3¾	1¾	⅞	2	4⅜	15.15	**9.09**
T 15060	6	4¾	3¾	1¾	⅞	2	4⅜	17.05	**10.23**
T 15080	8	4¾	3¾	2½	⅞	2	4⅜	20.90	**12.54**
***T 15100**	10	4¾	3¾	3 3/16	⅞	2	4⅜	25.05	**15.03**
***T 15120**	12	4¾	3¾	3 3/16	⅞	2	4⅜	27.25	**16.35**
†*T 15150	15	4¾	3¾	4 9/16	⅞	2	4⅜	30.00	**18.00**

NOTES—* Type TJU units are not furnished in these larger sizes.
† Types TJL and TJH units furnished with two mounting holes or spade lugs 3⅜" apart. All other units furnished with a single mounting hole or spade lug centered on each bracket.

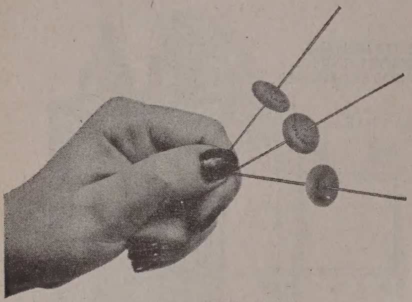
Cat. No.	Cap. Mfd.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
		2000 V. D.C. Working							
T 20001	.1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	$6.60	**$3.96**
T 200025	.25	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	7.15	**4.29**
T 20005	.5	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	7.45	**4.47**
T 20010	1	3⅜	2½	1 3/16	1¼	1⅛	3	9.10	**5.46**
T 20020	2	4	3¾	1¼	1¼	2	4⅜	10.75	**6.45**
T 20030	3	4¾	3¾	1¼	1¼	2	4⅜	13.20	**7.92**
T 20040	4	3 13/16	3¾	2¼	1¼	2	4⅜	15.15	**9.09**
T 20050	5	4¾	3¾	2¼	1¼	2	4⅜	16.80	**10.08**
***T 20060**	6	4¾	3¾	3 3/16	1¼	2	4⅜	20.10	**12.06**
***T 20080**	8	4¾	3¾	3 3/16	1¼	2	4⅜	25.05	**15.03**
†*T 20100	10	4¾	3¾	4 9/16	1¼	2	4⅜	30.55	**18.33**
†*T 20120	12	5⅜	3¾	4 9/16	1¼	2	4⅜	33.30	**19.98**
		2500 V. D.C. Working							
T 25005	.5	3½	3¾	1¼	1¼	2	4⅜	11.55	**6.93**
T 25010	1	3¼	3¾	1¾	1¼	2	4⅜	13.20	**7.92**
T 25020	2	4¾	3¾	1¾	1¼	2	4⅜	21.45	**12.87**
†*T 25040	4	4	3¾	4 9/16	1¼	2	4⅜	30.00	**18.00**
†*T 25100A	10	6⅜	3¾	4 9/16	1¼	2	4⅜	75.10	**45.06**
		3000 V. D.C. Working							
T 30001	.1	2	2½	1 3/16	1¼	1⅛	1	14.05	**8.43**
T 300025	.25	2½	2½	1 3/16	1¼	1⅛	3	14.85	**8.91**
T 30005	.5	3⅞	2½	1 9/16	1¼	1⅛	3	16.80	**10.08**
T 30010	1	3 13/16	3¾	2¼	1¼	2	4⅜	20.10	**12.06**
***T 30020**	2	4⅛	3¾	3 3/16	1¼	2	4⅜	25.05	**15.03**
†*T 30040	4	4¾	3¾	4 9/16	1¼	2	4⅜	36.85	**22.11**
		4000 V. D.C. Working							
T 40001	.1	2¾	3¾	2¼	2	2	4⅜	25.05	**15.03**
T 400025	.25	2¾	3¾	2¼	2	2	4⅜	26.40	**15.84**
T 40005	.5	4	3¾	2¼	2	2	4⅜	30.00	**18.00**
T 40010	1	5	3¾	2¼	2	2	4⅜	36.85	**22.11**
†*T 40020	2	5	3¾	4 9/16	2	2	4⅜	46.75	**28.05**
†*T 40040A	4	8	3¾	4 9/16	2	1¾	4⅜	66.85	**40.11**
		5000 V. D.C. Working							
T 50005	.5	4¼	3¾	2¼	2	2	4⅜	33.30	**19.98**
†*T 50010	1	4¼	3¾	4 9/16	2	2	4⅜	41.80	**25.08**
†*T 50020	2	6	3¾	4 9/16	2	2	4⅜	53.65	**32.19**
		6000 V. D.C. Working							
†*T 60010A	1	8	3¾	4 9/16	2	1¾	4⅜	83.60	**50.16**

For higher voltage units, from 6,000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.

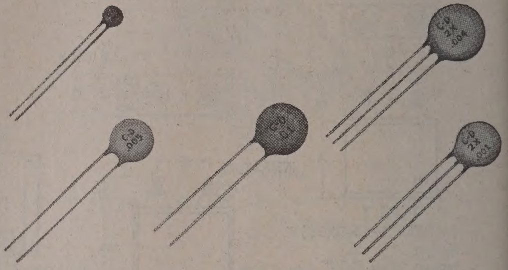
★When JAN-C-25 units must be supplied, order according to specific CP type designations listed in C-D Paper Capacitor Catalog No. 400.

CORNELL DUBILIER

"TINYMIKE" DISC-TYPE CERAMIC CAPACITORS



TYPE TM-6
(Radial Leads)



TYPE TM-5

TINY MIKE®

Miniature Ceramic Disc Capacitors

For Bypass and Coupling Applications in TV, FM, UHF, VHF, and Compact, Small-Size Equipment

500 Volts D. C. Working

Cat. No.	Cap. Mmf. ± 20%	Size—Inches Dia. x Thick	List Price	Net Price
TM 5Q5	50	19/32 x 5/32	$.25	**$.15**
TM 5Q75	75	19/32 x 5/32	.25	**.15**
TM 5T1	100	19/32 x 5/32	.25	**.15**
TM 5T12	120	19/32 x 5/32	.25	**.15**
TM 5T15	150	19/32 x 5/32	.25	**.15**
TM 5T2	200	19/32 x 5/32	.25	**.15**
TM 5T5	500	¼ x 5/32	.25	**.15**
TM 5T8	800	¼ x 5/32	.25	**.15**
TM 5D1	1000	¼ x 5/32	.25	**.15**
TM 5D15	1500	19/32 x 5/32	.25	**.15**
TM 5D2	2000	19/32 x 5/32	.25	**.15**
TM 5D25	2500	19/32 x 5/32	.25	**.15**
TM 5D3	3000	19/32 x 5/32	.25	**.15**
TM 5D4	4000	19/32 x 5/32	.25	**.15**
TM 5D5	5000	19/32 x 5/32	.25	**.15**
TM 5S1	10000	¾ x 5/32	.30	**.18**
TM 5DD1	2 x 1000	19/32 x 5/32	.40	**.24**
TM 5DD15	2 x 1500	19/32 x 5/32	.40	**.24**
TM 5DD2	2 x 2000	19/32 x 5/32	.40	**.24**
TM 5DD25	2 x 2500	19/32 x 5/32	.40	**.24**
TM 5DD3	2 x 3000	¾ x 5/32	.45	**.27**
TM 5DD4	2 x 4000	¾ x 5/32	.45	**.27**
TM 5DS1	2 x 10000	¾ x 5/32	.45	**.27**

1000 Volts D. C. Working

TM 10Q18	18	19/32 x 5/32	$.40	**$.24**
TM 10Q22	22	19/32 x 5/32	.40	**.24**
TM 10Q33	33	19/32 x 5/32	.40	**.24**
TM 10Q47	47	19/32 x 5/32	.40	**.24**
TM 10Q56	56	19/32 x 5/32	.40	**.24**
TM 10Q62	62	19/32 x 5/32	.40	**.24**
TM 10Q68	68	19/32 x 5/32	.40	**.24**
TM 10Q75	75	19/32 x 5/32	.40	**.24**
TM 10Q82	82	19/32 x 5/32	.40	**.24**
TM 10Q91	91	19/32 x 5/32	.40	**.24**

6000 Volts D. C. Working

TM 60Q1	10	19/32 x 5/32	$.75	**$.45**
TM 60Q2	20	19/32 x 5/32	.75	**.45**
TM 60Q3	30	19/32 x 5/32	.75	**.45**
TM 60Q4	40	19/32 x 5/32	.75	**.45**
TM 60Q5	50	19/32 x 5/32	.75	**.45**

FEATURES OF "TINYMIKE" DISC-TYPE CERAMIC CAPACITORS

- **Small, space-saving and lightweight.**
- **Available in all popular capacities.**
- **Guaranteed minimum capacity tolerance.**
- **Adapted for wide variety of applications.**
- **Minimized eddy current losses due to construction.**
- **Low inductance, stable, dependable performance.**
- **Available with temperature compensating characteristics.**

C-D "TINYMIKES" are small, space-saving and lightweight, making them ideal for cramped chassis layouts. So light . . . far lighter than other capacitor types having equivalent electrical rating. Diminutive but easy-to-handle size, and parallel leads, permit easy, fast insertion to connections in tight assemblies, reducing labor cost while increasing productivity. Low cost of "TINYMIKES" shows direct saving over most other capacitor types of equivalent electrical ratings. Guaranteed Minimum Capacity over a temperature range of +10° C. to +65° C.

Minimized eddy current losses due to construction with only a single pair of silver electrodes per capacitor. Leads firmly solder-connected directly to the complete active area of capacitance provide positive contact.

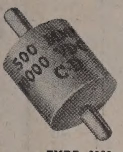
Short current path and parallel leads reduce inductance to an unusually low level, the amount depending on lead length. Accurately positioned, parallel leads provide convenient connections. Excellent control of dielectric composition and manufacturing processes assures low power factor, high dielectric strength and high insulation resistance.

Constant, dependable service further assured by C-D quality construction such as firm bonding of high-purity silver electrodes to the flat ceramic disc, and soldering of the leads. Protected against effects of humidity by use of special phenolic coating and high-temperature wax impregnation. The coating also protects against grounds caused by contact with nearby components.

For quick identification all units of 1,000 mmf. (.001 mfd.) and higher are stamped with decimal in MFD.; units under 1,000 mmf. are stamped with whole number in mmf.

C-D has developed a special line of Temperature Compensating ceramic capacitors that offer the utmost in high stability, low drift, low power factor, high Q, high insulation resistance, and low inductance. C-D manufactures its own ceramic capacitor bodies under the strictest electronically controlled quality supervision which results in the desirable features inherent particularly in the temperature compensating types.

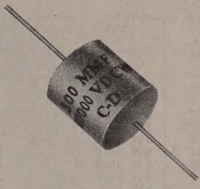
HIGH-VOLTAGE CERAMIC TELEVISION CAPACITORS



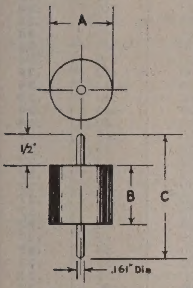
TYPE MM
WITH "A" TERMINALS

TYPE MM
WITH "B" TERMINALS

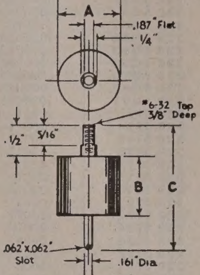
TYPE MM WITH
"C" OR "D" TERMINALS



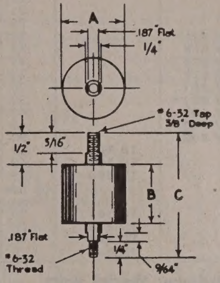
TYPE MM
WITH "E" TERMINALS



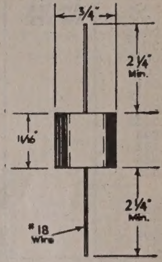
Plug-In Stud
Terminals
Specify "A" Terminals



Slotted Plug-In Stud &
Tapped 6/32 Female Terminal
Specify "B" Terminals



Tapped 6/32 Female Terminal & Threaded
6/32 Male Terminal Specify "C" Terminals;
for Threaded 6/32 Female & Threaded 8/32
Male Terminal Specify "D" Terminals; for
Both Terminals Threaded 8/32 Male, Specify
"F" Terminals



Wire-Lead
Terminals
Specify
"E" Terminals

MITY MIKE®

High-Voltage Television Ceramic Capacitors

Cat. No.	Cap. Mmfd.	Volts D.C.	Flash Test	Size—Inches A	B	C	List Price	Net Price
MM-†10T5	500	10,000	20,000	.750	11/16	1 21/32	$1.75	**$1.05**
MM-†20T5	500	20,000	30,000	.950	15/16	1 31/32	2.25	**1.35**

†Add letter specifying type of terminals (A, B, C, D, E or F) desired.

New, superior design and construction . . . with greater electrical advantages, dependability, and longer life than ever before achieved in TV high-voltage ceramic capacitors!

An original C-D engineering job inside and out . . . backed by C-D's decades of experience with high-voltage ceramic capacitors. These TV High-Voltage "MITYMIKES" will withstand higher peak voltages, and can be used at *full rated voltage*, as they are *conservatively* rated for DC Flash Test up to 1½x to 2x rated DC Working Voltage, as listed.

This generous factor of safety, due to the unique C-D design, assures long life and constant, dependable service with no deterioration in the ceramic composition despite the severe high voltage stress in TV operation.

High-purity silver electrodes are heat-bonded to the ceramic dielectric. The silver-plated brass terminals (or the #18, .040", tinned wire leads) are firmly solder-connected direct to the silver electrodes. The C-D ceramic design effectively reduces corona to a minimum, and in combination with the ceramic composition provides high insulation resistance and low power factor. The ceramic body is manufactured under strictest Quality Control standards to insure uniformity of physical and electrical characteristics in the finished capacitor.

Choice of terminal styles is shown in photos and outline drawings . . . every type to meet TV assembly requirements. Any combination of the above A, B, C, D, E or F terminals, can be furnished on order.

"MITYMIKES" are ideally suited for filter, bypass, and blocking, in TV high-voltage power supplies; in filter circuits employing cathode ray tubes; and in other applications, stationary and mobile equipment, where high-voltage rectified power supplies are used. These units can also be used to obtain higher voltages by means of series connections.

Capacity tolerance: +50%-20%. Power Factor: 1.5% maximum at 1 mc. or 1 kc. Leakage Resistance: 7,500 megohms minimum. Outer coating is distinctively colored for easy identification. All units are clearly stamped with capacity and voltage and are impregnated with high-temperature wax for additional protection against moisture absorption.

FEATURES OF "MITYMIKE" HIGH VOLTAGE CERAMIC CAPACITORS

- **New, superior design and construction.**
- **Generous factor of safety permits use at FULL rated voltage.**
- **High insulation resistance, low power factor.**
- **Choice of terminal styles to meet all TV assembly requirements.**

CORNELL DUBILIER

MOULDED MIDGET MICA & BAKELITE CAPACITORS

Cap. Mfd.	1000 V. D.C. Test—500 V. D.C. Work. Type 5W Cat. No.	Type 1W Cat. No.	Type 1D Cat. No.	List Price	Net Price
.000005	**5W 5V5**			$.25	**$.15**
.00001	**5W 5Q1**			.25	**.15**
.00002	**5W 5Q2**			.25	**.15**
.000025	**5W 5Q25**			.25	**.15**
.00003	**5W 5Q3**			.25	**.15**
.00004	**5W 5Q4**			.20	**.12**
.00005	**5W 5Q5**			.20	**.12**
.00007	**5W 5Q7**			.20	**.12**
.0001	**5W 5T1**			.20	**.12**
.00015	**5W 5T15**			.20	**.12**
.0002	**5W 5T2**			.20	**.12**
.00025	**5W 5T25**			.25	**.15**
.0003	**5W 5T3**			.25	**.15**
.0004	**5W 5T4**			.25	**.15**
.0005	**5W 5T5**			.25	**.15**
.0006		**1W 5T6**		.25	**.15**
.0007		**1W 5T7**		.25	**.15**
.0008		**1W 5T8**		.25	**.15**
.0009		**1W 5T9**		.25	**.15**
.001		**1W 5D1**		.30	**.18**
.0015		**1W 5D15**		.30	**.18**
.002		**1W 5D2**		.40	**.24**
.0025		**1W 5D25**		.45	**.27**
.003		**1W 5D3**		.50	**.30**
.004			**1D 5D4**	.55	**.33**
.005			**1D 5D5**	.60	**.36**
.006			**1D 5D6**	.75	**.45**
			600 V. D.C. Test 300 V. D.C. Working		
.007			**1D 3D7**	.90	**.54**
.008			**1D 3D8**	1.00	**.60**
.009			**1D 3D9**	1.00	**.60**
.01			**1D 3S1**	1.20	**.72**

Notes On Ordering Special Units

The listing above gives the range of capacities available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Standard capacity tolerance is plus or minus 20%. Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 1 mmfd.—whichever is greater). For capacity tolerance of: 10% add 10% to list prices; 5% add 20% to list prices; 3% add 40% to list prices; 2% add 75% to list prices.

1500 Volts D. C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
5WP 15V5	.000005	$.30	**$.18**
5WP 15Q1	.00001	.30	**.18**
5WP 15Q25	.000025	.30	**.18**
5WP 15Q5	.00005	.30	**.18**
5WP 15Q75	.000075	.30	**.18**
5WP 15T1	.0001	.35	**.21**
5WP 15T5	.00015	.35	**.21**
5WP 15T2	.0002	.40	**.24**
5WP 15T25	.00025	.45	**.27**
5WP 15T3	.0003	.50	**.30**
5WP 15T35	.00035	.50	**.30**
5WP 15T4	.0004	.55	**.33**

1500 Volts D. C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
1WP 15T5	.0005	$ .70	**$.42**
1WP 15T75	.00075	.80	**.48**
1WP 15D1	.001	.90	**.54**
1WP 15D15	.0015	1.05	**.63**
1WP 15D2	.002	1.20	**.72**
1WP 15D24	.0024	1.35	**.81**

1000 Volts D. C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
1WP 10D15	.0015	$ .70	**$.42**
1WP 10D2	.002	.80	**.48**
1WP 10D25	.0025	1.00	**.60**
1WP 10D3	.003	1.10	**.66**
1WP 10D4	.004	1.30	**.78**
1WP 10D5	.005	1.60	**.96**

2000 Volts D. C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
3WP 20T5	.0005	$ .65	**$.39**
3WP 20T75	.00075	.75	**.45**
3WP 20D1	.001	.95	**.57**
3WP 20D15	.0015	1.25	**.75**

Standard tolerance ±20%.

TYPE 22R

Cat. No.	Cap. Mfd.	Volts D. C. W.	List Price	Net Price
22R 5Q5	.000005	500	$.40	**$.24**
22R 5Q1	.00001	500	.40	**.24**
22R 5Q22	.000012	500	.40	**.24**
22R 5Q15	.000015	500	.40	**.24**
22R 5Q18	.000018	500	.40	**.24**
22R 5Q2	.00002	500	.40	**.24**
22R 5Q22	.000022	500	.40	**.24**
22R 5Q24	.000024	500	.40	**.24**
22R 5Q27	.000027	500	.40	**.24**
22R 5Q3	.00003	500	.40	**.24**
22R 5Q33	.000033	500	.40	**.24**
22R 5Q36	.000036	500	.40	**.24**
22R 5Q39	.000039	500	.40	**.24**
22R 5Q43	.000043	500	.40	**.24**
22R 5Q47	.000047	500	.40	**.24**
22R 5Q5	.00005	500	.40	**.24**
22R 5Q51	.000051	500	.40	**.24**
22R 5Q56	.000056	500	.40	**.24**
22R 5Q62	.000062	500	.40	**.24**
22R 5Q68	.000068	500	.40	**.24**
22R 5Q75	.000075	500	.40	**.24**
22R 5Q82	.000082	500	.40	**.24**
22R 5Q91	.000091	500	.40	**.24**
22R 5T1	.0001	500	.40	**.24**
22R 5T11	.00011	500	.45	**.27**
22R 5T12	.00012	500	.45	**.27**
22R 5T13	.00013	500	.45	**.27**
22R 5T15	.00015	500	.45	**.27**
22R 5T16	.00016	500	.45	**.27**
22R 5T18	.00018	500	.45	**.27**
22R 5T2	.0002	500	.45	**.27**
22R 5T22	.00022	500	.45	**.27**
22R 5T24	.00024	500	.45	**.27**
22R 5T25	.00025	500	.45	**.27**
22R 5T27	.00027	500	.55	**.33**
22R 5T3	.0003	500	.55	**.33**
22R 5T33	.00033	500	.55	**.33**
22R 5T36	.00036	500	.55	**.33**
22R 5T39	.00039	500	.65	**.39**
22R 5T42	.00042	500	.65	**.39**
22R TR5T43	.00043	500	.65	**.39**
22R 3T43	.00043	300	.65	**.39**
22R 3T47	.00047	300	.70	**.42**
22R 3T5	.0005	300	.70	**.42**
22R 3T51	.00051	300	.70	**.42**

Note: Standard tolerance ± 5%, but in no instance less than ± mmf. For capacity Tolerance of: 20% deduct 10% from List; 10% deduct 5% from List; 3% add 10% to List; 2% add 15% to List; 1% add 25% to List.

Cap. Mfd.	1000 V. D.C. Test—500 V. D.C. Work. Type 5R Cat. No.	Type 2R Cat. No.	Type 1R & 1DR Cat. No.	List Price	Net Price
.000005	**5R 5V5**			$ .45	**$ .27**
.00001	**5R 5Q1**			.40	**.24**
.00002	**5R 5Q2**			.40	**.24**
.000025	**5R 5Q25**			.40	**.24**
.00003	**5R 5Q3**			.40	**.24**
.00004	**5R 5Q4**			.40	**.24**
.00005	**5R 5Q5**			.40	**.24**
.00007	**5R 5Q7**			.40	**.24**
.0001	**5R 5T1**	**2R 5T1**		.40	**.24**
.00015	**5R 5T15**	**2R 5T15**		.45	**.27**
.0002	**5R 5T2**	**2R 5T2**		.45	**.27**
.00025	**5R 5T25**	**2R 5T25**		.45	**.27**
.0003	**5R 5T3**	**2R 5T3**		.55	**.33**
.0004	**5R 5T4**	**2R 5T4**		.65	**.39**
.0005	**5R 5T5**	**2R 5T5**		.70	**.42**
.0007		**2R 5T7**		.85	**.51**
.0008		**2R 5T8**		.95	**.57**
.0009		**2R 5T9**		1.00	**.60**
.001		**2R 5D1**	**1R 5D1**	1.10	**.66**
.0015			**1R 5D15**	1.35	**.81**
.002			**1R 5D2**	1.35	**.81**
.0025			**1R 5D25**	1.80	**1.08**
.003			**1R 5D3**	2.05	**1.23**
.004			**1DR 5D4**	2.15	**1.29**
.005			**1DR 5D5**	2.25	**1.35**

Notes On Ordering Special Units

The listing above gives range of capacities which are available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

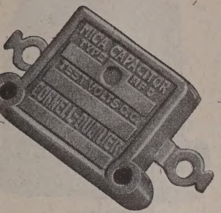
Standard capacity tolerance is 5%. Also available, on special order, in tolerance ratings of plus or minus 3%, add 10% to list prices, 2% add 15% to list prices and 1% add 25% to list prices, (or within 1 mmfd.—whichever is greater). All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

*Reg. U.S. Pat. Off.

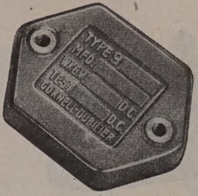
★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 422.

CORNELL DUBILIER

MOULDED BAKELITE TRANSMITTING CAPACITORS



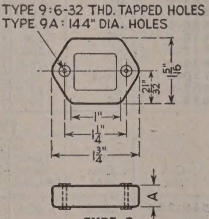
TYPE 4 ★



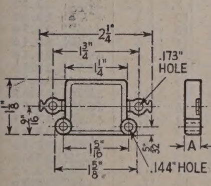
TYPE 9 ★

Notes on Ordering Special Capacitors

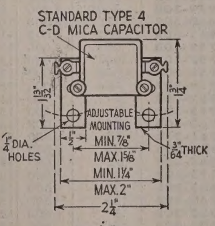
Type No. Suffix	
	STANDARD TOLERANCE is plus or minus 10%. Also available on order in plus or minus 5% and 2%. For capacity tolerance of: 5% add 15c to list prices; 2% add 40c to list prices.
"L"	MOULDED IN LOW-LOSS BAKELITE available on order. Add "L" to Cat. No. (example: 4L-22060; 9L-11010). Add 25c to list prices.
"S"	SPECIAL SALT WATER IMMERSION SEAL AGAINST HUMIDITY. To order, add "S" to Cat. No. (example: 4S-53010; 9S-12050). Add 10c to list prices.
"T"	HEAT AGEING TREATMENT for stabilizing capacity over extremely wide temperature changes, minus 40° C. to plus 70° C., furnished on special order. Add "T" to Cat. No. (example: 4T-12010; 9T-21020). Add 15c to list prices.
"LST"	TO ORDER A COMBINATION OF ABOVE FEATURES, add letters specified to Cat. No. (example: 4LST-12040; 9LST-13020). Add 50c to list prices.
	INSULATION RESISTANCE—Brown Bakelite, 20,000 megohms per unit—Low-Loss Bakelite, 40,000 megohms per unit. Low-Loss Bakelite provides higher Q and lowers the power factor.
"4E"	SMALL METER BRACKETS adapted for Weston Model 301 meters, add "E" to Cat. No. (example: 4E-22050). Add 20c to list prices.
"9A"	UNTAPPED MOUNTING HOLES. Standard units are tapped for 6-32 and furnished with round head screws. For untapped mounting hole, .144" diameter (No. 6 clearance), add "A" to Cat. No. (example: 9A-11030).
"9F"	HIGHER VOLTAGE CONSTRUCTION, rated 6,000 v.d.c. test, 3,000 v.d.c.—1500 v.a.c. operating. Capacity range limited. Moulded in low-loss Bakelite, BM 262. The thickness of these units, or "A" dimension, is 7/16" for capacities up to .002 mfd. and 3/4" for capacities from .0022 to .005 mfd. max. To order, add "F" to Cat. No. (example: 9F-63050, the numeral "6" designating 6,000 volts test). Prices of "9F" units are double the list prices shown.
"9R"	HIGH STABILITY UNITS — Special high stability units, comprising low-loss Bakelite, BM 262, temperature aged and sealed construction for use as low power master oscillator tank capacitors or accessory positions. These units are fixed and permanent in characteristics, having a capacity-temperature coefficient of approximately plus .003% (30 parts per million) per degree C. To order, add "R" to Cat. No. (example: 9R-52020). Prices of 9R units are double the list prices shown.



TYPE 9



TYPE 4



TYPE 4E

C-D Mica Capacitors Types 4 and 9 are designed to meet the requirements of power amplifiers and low-power transmitters. They are principally employed for grid and plate blocking purposes and for r. f. by-pass functions.

TYPE 4

1200 V. D.C. Test— 600 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
4-14050	.00005	$1.20	**$ .72**
4-13010	.0001	1.20	**.72**
4-13020	.0002	1.20	**.72**
4-13025	.00025	1.20	**.72**
4-13030	.0003	1.20	**.72**
4-13040	.0004	1.20	**.72**
4-13050	.0005	1.20	**.72**
4-12010	.001	1.20	**.72**
4-12015	.0015	1.20	**.72**
4-12020 *	.002	1.30	**.78**
4-12025	.0025	1.30	**.78**
4-12030	.003	1.45	**.87**
4-12040	.004	1.50	**.90**
4-12050	.005	1.55	**.93**
4-12060	.006	1.80	**1.08**
4-12070	.007	1.85	**1.11**
4-12080	.008	1.90	**1.14**
4-11010	.01	2.15	**1.29**
4-11015	.015	2.65	**1.59**
4-11020	.02	3.05	**1.83**
4-11025 †	.025	3.60	**2.16**
4-11030	.03	4.45	**2.67**

2500 V. D.C. Test— 1200 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
4-24050	.00005	$1.60	**$ .96**
4-23010	.0001	1.60	**.96**
4-23020	.0002	1.60	**.96**
4-23025	.00025	1.60	**.96**
4-23030	.0003	1.60	**.96**
4-23050 *	.0005	1.60	**.96**
4-22010	.001	1.80	**1.08**
4-22015	.0015	2.30	**1.38**
4-22020	.002	2.40	**1.44**
4-22025	.0025	2.80	**1.68**
4-22030	.003	3.05	**1.83**
4-22040	.004	3.05	**1.83**
4-22050	.005	3.30	**1.98**
4-22060 †	.006	3.30	**1.98**
4-22080	.008	3.85	**2.31**
4-21010	.01	5.10	**3.06**

5000 V. D.C. Test— 2500 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
4-54050	.00005	$1.90	**$1.14**
4-53010	.0001	1.90	**1.14**
4-53020	.0002	1.90	**1.14**
4-53025	.00025	2.20	**1.32**
4-53030 *	.0003	2.25	**1.35**
4-53050	.0005	2.50	**1.50**
4-52010	.001	2.80	**1.68**
4-52015	.0015	3.55	**2.13**
4-52020	.002	4.15	**2.49**
4-52025	.0025	4.50	**2.70**
4-52030 †	.003	4.90	**2.94**
4-52040	.004	5.65	**3.39**
4-52050	.005	6.40	**3.84**

TYPE 9

1200 V. D.C. Test— 600 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
9-14050	.00005	$1.45	**$ .87**
9-13010	.0001	1.45	**.87**
9-13025	.00025	1.45	**.87**
9-13050	.0005	1.45	**.87**
9-12010	.001	1.45	**.87**
9-12020	.002	1.65	**.99**
9-12025	.0025	1.70	**1.02**
9-12030	.003	1.85	**1.11**
9-12040 *	.004	2.00	**1.20**
9-12050	.005	2.10	**1.26**
9-12060	.006	2.20	**1.32**
9-12080	.008	2.45	**1.47**
9-11010	.01	2.80	**1.68**
9-11015	.015	3.05	**1.83**
9-11020	.02	3.55	**2.13**
9-11025	.025	4.35	**2.61**
9-11030	.03	4.55	**2.73**
9-11040	.04	5.85	**3.51**
9-11050 †	.05	7.10	**4.26**
9-11060	.06	8.05	**4.83**

2500 V. D.C. Test— 1200 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
9-24050	.00005	$1.60	**$ .96**
9-23010	.0001	1.60	**.96**
9-23025	.00025	1.60	**.96**
9-23050	.0005	1.60	**.96**
9-22010	.001	1.90	**1.14**
9-22020	.002	2.50	**1.50**
9-22025 *	.0025	2.80	**1.68**
9-22030	.003	2.95	**1.77**
9-22040	.004	3.10	**1.86**
9-22050	.005	3.30	**1.98**
9-22060	.006	3.45	**2.07**
9-22080	.008	4.10	**2.46**
9-21010	.01	4.70	**2.82**
9-21015	.015	5.80	**3.48**
9-21020	.02	7.05	**4.23**
9-21025 †	.025	7.90	**4.74**
9-21030	.03	8.10	**4.86**

5000 V. D.C. Test— 2500 V. D.C. Working

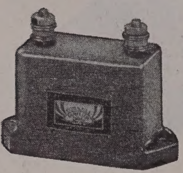
Cat. No.	Cap. Mfd.	List Price	Net Price
9-54050	.00005	$1.90	**$1.14**
9-53010	.0001	1.90	**1.14**
9-53025	.00025	2.15	**1.29**
9-53050	.0005	2.55	**1.53**
9-52010 *	.001	2.90	**1.74**
9-52020	.002	4.25	**2.55**
9-52025	.0025	4.60	**2.76**
9-52030	.003	5.10	**3.06**
9-52040	.004	5.65	**3.39**
9-52050	.005	6.20	**3.72**
9-52060	.006	6.35	**3.81**
9-52080 †	.008	6.85	**4.11**
9-51010	.01	7.30	**4.38**
9-51015	.015	8.05	**4.83**

* Dimension "A" in diagram—for type 4-11/32" for type 9-7/16".

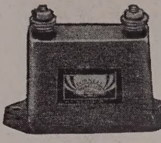
† Dimension "A" in diagram—for type 4-1/16" for type 9-3/4"

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

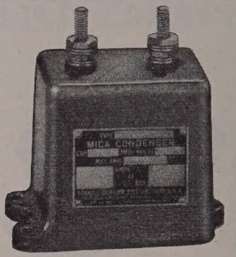
BAKELITE CASED MICA TRANSMITTING CAPACITORS



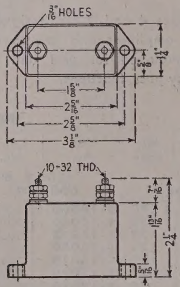
TYPE 6 ★

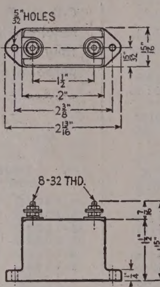


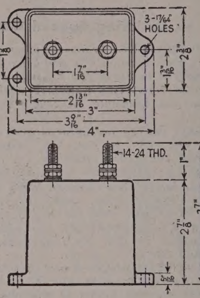
TYPE 15L ★



TYPE 30B







TYPE 6

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
390-6	.00005	5,000	1.5	.8	.2	.07	$17.30	**$10.38**
362-6	.0000625	5,000	1.8	.8	.2	.07	17.30	**10.38**
321-6	.0001	5,000	2	1	.3	.1	17.30	**10.38**
395-6	.00015	5,000	3	1.5	.5	.16	17.30	**10.38**
307-6	.0002	5,000	3.5	1.7	.7	.18	17.30	**10.38**
364-6	.00025	5,000	5	2.5	1	.3	17.30	**10.38**
294A-6	.0003	5,000	3.5	2	.8	.4	17.30	**10.38**
283-6	.0004	5,000	4	2.5	1	.5	17.30	**10.38**
272-6	.0005	5,000	4	2	1.4	.8	17.30	**10.38**
266-6	.0006	5,000	5	3	1.6	.8	17.30	**10.38**
654-6	.00075	5,000	5	3.5	2	1	17.30	**10.38**
599-6	.0008	5,000	6	4	2	1	17.30	**10.38**
246-6	.001	5,000	7	4	2	1	17.30	**10.38**
234-6	.0015	5,000	9	5	3	1.5	17.30	**10.38**
215-6	.002	3,000	6	3	1.5	.8	17.30	**10.38**
217-6	.002	6,000	9	6	4	2	17.30	**10.38**
473-6	.0025	5,000	9	6	4	2	17.30	**10.38**
197-6	.003	3,000	8	6	4	2	17.30	**10.38**
184-6	.004	3,000	8	6	5	2	$17.30	**$10.38**
173-6	.005	2,000	8	5	3	1.5	17.30	**10.38**
474-6	.005	3,000	9	6.5	4	2	17.30	**10.38**
565-6	.0075	2,000	10	8	5	3	17.30	**10.38**
476-6	.008	2,000	11	9	7	3	17.30	**10.38**
162-6	.008	3,000	10	8	5	3	17.30	**10.38**
151-6	.01	2,000	10	8	5	3.5	17.30	**10.38**
140-6	.015	1,500	12	10	7	4	17.30	**10.38**
784-6	.015	2,000	12	12	8	4	17.30	**10.38**
131-6	.02	2,000	12	11	10	7	17.30	**10.38**
479-6	.03	2,000	14	20	15	7	17.30	**10.38**
480-6	.04	1,500	12	13	11	6	17.30	**10.38**
118-6	.05	1,500	13	15	12	7	17.30	**10.38**
111-6	.1	500	17	20	15	8	19.20	**11.52**
406-6	.1	1,000	18	20	15	8	17.30	**10.38**
110-6	.1—.1	250	20	20	15	10	17.30	**10.38**
105-6	.2	250	18	20	16	12	25.25	**15.15**
885-6	.25	250	18	20	16	12	27.90	**16.74**

TYPE 15L

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
639-15L	.00005	3,000	1.2	.6	.15	.05	$12.60	**$7.56**
583-15L	.0001	3,000	2.2	.8	.3	.1	12.60	**7.56**
657-15L	.00015	3,000	2.3	1	.45	.15	12.60	**7.56**
582-15L	.0002	3,000	3	1.2	.6	.2	12.60	**7.56**
805-15L	.00025	3,000	3	2.5	1	.4	12.60	**7.56**
640-15L	.0003	3,000	3.5	2	.8	.4	12.60	**7.56**
641-15L	.0004	3,000	4	2	.9	.45	12.60	**7.56**
642-15L	.0005	3,000	4	2	1	.55	12.60	**7.56**
643-15L	.0006	3,000	4.5	2	1.2	.6	12.60	**7.56**
727-15L	.0008	3,000	4.5	2.5	1.5	.7	12.60	**7.56**
581-15L	.001	3,000	5	3	1.6	.8	12.60	**7.56**
679-15L	.0015	3,000	6	3.5	2	1	12.60	**7.56**
726-15L	.002	3,000	6.5	4	2.5	1.5	12.60	**7.56**
645-15L	.003	2,000	7.5	5	3	1.5	12.60	**7.56**
699-15L	.004	2,000	8	6	3.5	1.6	12.60	**7.56**
725-15L	.005	2,000	8.5	6.5	4	2	12.60	**7.56**
580-15L	.006	2,000	9	7.5	4.5	2.2	12.60	**7.56**
724-15L	.008	1,500	10	8	5	2.3	12.60	**7.56**
677-15L	.01	1,000	10	8	5	2.5	12.60	**7.56**
723-15L	.02	1,000	11	10	7	3	14.30	**8.58**
722-15L	.05	500	11	10	8	5	14.30	**8.58**
721-15L	.1	250	11	12	10	6	15.10	**9.06**

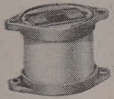
TYPE 30B

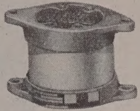
Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
533-30B	.0001	4,000	(20 Amps. at 60 mc.)		(3 Amps. at 4 mc.)		$35.25	**$21.15**
958-30B	.00025	8,000	7	4.5	1.5	.5	35.25	**21.15**
959-30B	.0005	8,000	8.5	6	3	1	35.25	**21.15**
960-30B	.001	8,000	10	8.5	4.5	1.5	39.25	**23.55**
961-30B	.002	8,000	11	11	7.5	2.5	39.25	**23.55**
759-30B	.003	8,000	12	14	10	5	42.25	**25.35**
757-30B	.004	8,000	12	14	10	6	44.60	**26.76**
758-30B	.005	8,000	13	15	11	6	48.60	**29.16**
756-30B	.006	6,000	15	15	11	6	48.60	**29.16**
962-30B	.01	5,000	16	20	15	8	52.55	**31.53**
915-30B	.01	8,000	16	20	15	8	55.20	**33.12**
963-30B	.02	5,000	18	20	17	10	55.20	**33.12**
741-30B	.03	4,000	20	20	18	12	55.20	**33.12**
771-30B	.05	2,000	18	25	22	12	61.85	**37.11**
964-30B	.05	4,000	18	25	22	12	61.85	**37.11**
113-30B	.1	2,000	18	25	22	12	48.60	**29.16**
603-30B	.2	600	18	25	22	12	39.25	**23.55**
750-30B	.25	600	18	25	22	12	44.60	**26.76**
933-30B	.3	600	18	25	22	12	44.60	**26.76**
604-30B	.5	600	18	25	22	12	52.55	**31.53**
898-30B	1.0	600	18	25	22	12	81.85	**49.11**

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

CORNELL-DUBILIER

COMMERCIAL MICA TRANSMITTING CAPACITORS


TYPE 59 ★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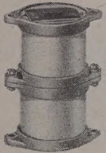
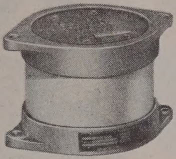

2 TYPE 59 STACKED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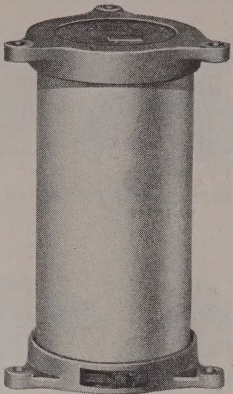
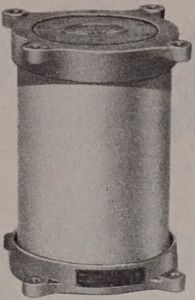

TYPE 57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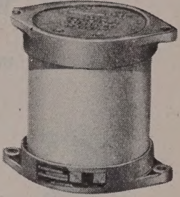

TYPE 52 ★

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
TYPE 50—Size 5″ x 3½″ x 3″ high				
325-50	.0001	10,000	$65.55	**$39.33**
315A-50	.00015	10,000	65.55	**39.33**
308-50	.0002	10,000	65.55	**39.33**
278-50	.0005	10,000	65.55	**39.33**
259-50	.0008	10,000	65.55	**39.33**
250-50	.001	10,000	65.55	**39.33**
238-50	.0015	10,000	65.55	**39.33**
223-50	.002	10,000	65.55	**39.33**
191-50	.004	8,000	65.55	**39.33**
178-50	.005	5,000	65.55	**39.33**
155-50	.01	5,000	69.15	**41.49**
142-50	.015	4,000	69.15	**41.49**
136-50	.02	3,000	69.15	**41.49**
TYPE 51—Size 6½″ x 5″ x 4″ high				
335-51	.00005	20,000	$110.90	**$66.54**
323-51	.0001	25,000	126.00	**75.60**
316-51	.00015	20,000	126.00	**75.60**
310-51	.0002	20,000	131.10	**78.66**
280-51	.0005	20,000	137.15	**82.29**
260-51	.0008	20,000	137.15	**82.29**
252-51	.001	20,000	141.15	**84.69**
239-51	.0015	20,000	151.25	**90.75**
225-51	.002	12,000	141.15	**84.69**
193-51	.004	12,000	151.25	**90.75**
181-51	.005	10,000	151.25	**90.75**
158-51	.01	10,000	151.25	**90.75**
138-51	.02	3,000	151.25	**90.75**
TYPE 56—Size 9″ x 10″ high				
951-56	.0001	35,000	$464.00	**$278.40**
803-56	.0002	35,000	504.00	**302.40**
409-56	.0004	30,000	464.00	**278.40**
412-56	.0006	30,000	544.00	**326.40**
421-56	.001	30,000	544.00	**326.40**
559-56	.002	30,000	538.00	**322.80**
955-56	.003	25,000	548.00	**328.80**

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
TYPE 52—Size 6½″ x 5″ x 5¾″ high				
609-52	.00005	10,000	$151.25	**$ 90.75**
326-52	.0001	35,000	221.16	**132.70**
492-52	.00015	8,000 (30 Amps. at 20 Mc; 18 A. at 6 Mc)	167.90	**100.74**
298-52	.0003	30,000	221.16	**132.70**
286-52	.0004	30,000	221.16	**132.70**
281-52	.0005	30,000	221.16	**132.70**
261-52	.0008	30,000	221.16	**132.70**
253-52	.001	25,000	229.10	**137.46**
227-52	.002	20,000	229.10	**137.46**
462-52	.004	20,000	234.35	**140.61**
485-52	.005	20,000	252.25	**151.35**
164-52	.008	12,000	260.00	**156.00**
430-52	.01	15,000	272.44	**163.46**
523-52	.04	5,000	272.44	**163.46**
TYPE 59—Size 3$^{13}/_{16}$″ x 2$^{13}/_{16}$″ x 2½″ high				
573-59	.00005	6,000	$38.20	**$22.92**
542-59	.0001	6,000	40.60	**24.36**
543-59	.0002	6,000	40.60	**24.36**
620-59	.0003	6,000	40.60	**24.36**
544-59	.0005	6,000	46.65	**27.99**
545-59	.001	6,000	46.65	**27.99**
572-59	.002	6,000	69.15	**41.49**
595-59	.003	6,000	50.60	**30.36**
547-59	.005	5,000	48.90	**29.34**
548-59	.01	5,000	51.45	**30.87**
889-59	.02	3,000	51.45	**30.87**
TYPE 57—Size 8½″ x 14″ high				
402-57	.0006	30,000	$429.60	**$257.76**
676-57	.002	40,000	566.40	**339.84**
776-57	.004	25,000	644.40	**386.64**

For complete information on Cornell-Dubilier Mica Transmitting Capacitors see Catalog No. 420.

FARADON REPLACEMENT TRANSMITTING CAPACITORS

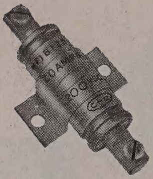
Cat. No.	Type Case	Cap. Mfds.	Volts D.C.W.	List Price	Net Price
UC 2325A	77	.001	15000	$129.94	**$77.96**
UC 2344	77	.0005	20000	129.94	**77.96**
UC 2360A	77	.004	12000	138.77	**83.26**
UC 2446	77	.05	3000	129.94	**77.96**
UC 2507A	140	.0002	30000	609.59	**365.75**
UC 2992	99	.05	2000	86.63	**51.98**
UC 3000	111	.02	5000	240.63	**144.38**
UC 3018A	140	.008	15000	657.71	**394.63**
UC 3031A	13B	.005	5000	94.64	**56.78**
UC 3035	140	.005	15000	657.71	**394.63**
UC 3047	13B	.003	5000	88.23	**52.94**

Cat. No.	Type Case	Cap. Mfds.	Volts D.C.W.	List Price	Net Price
UC 3073	99	.001	10000	$ 78.29	**$ 46.97**
UC 3075	111	.001	20000	224.59	**134.75**
UC 3076	140	.001	40000	609.59	**365.75**
UC 3097	99	.0005	10000	78.29	**46.97**
UC 3099	111	.0005	25000	224.59	**134.75**
UC 3100	140	.0005	40000	609.59	**365.75**
UC 3117	99	.0002	10000	78.29	**46.97**
UC 3123	99	.00015	10000	78.29	**46.97**
UC 3127A	351	.0001	5000	23.27	**13.96**
UC 3245	358	.1	10000	2,085.41	**1,251.25**
UC 3260	366	.00005	20000	118.70	**71.22**

For complete information on C-D FARADON Capacitors refer to C-D Mica Catalog No. 420

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

FEED-THRU AND NOISE FILTERS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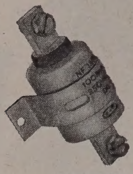
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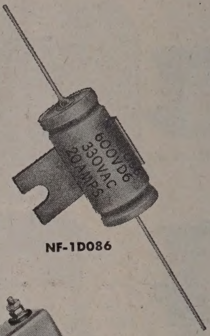
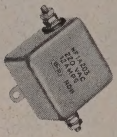

NF-1D086

NF-1F247

NF-1O241


NF-1A203

These C-D Feed-Thru Capacitors are specially adapted for television, sound and radio as noise filters in mobile, aircraft and marine equipment where high insertion loss over wide frequencies are required.

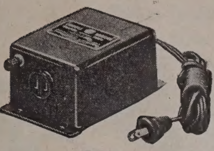
Hermetically sealed in sturdy metal casings to withstand extreme conditions of humidity in marine and automotive equipment, they are also available in various voltage ratings, mountings and terminal types for all uses.

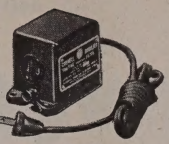
Cat. No.	Cap. Mfd.	VOLTAGE A.C.	VOLTAGE D.C.	Amps.	Fig.	DIMENSIONS—INCHES A	B	C	D	E	F	G	List Price	Net Price
NF 1D248	.001	330	600	20	1	1/4	1 3/8	1/4	9/32	.144	—	5 3/8	$2.65	**$1.59**
NF 1D249	.005	330	600	20	1	1/4	1 5/8	1/4	9/32	.144	—	5 3/8	2.65	**1.59**
NF 1D085	.010	330	600	20	1	7/16	1 1/4	7/16	3/8	.170	—	5 1/4	2.80	**1.68**
NF 1D086	.10	330	600	20	1	11/16	1 7/16	5/8	5/8	7/32	—	5 7/16	3.05	**1.83**
NF 1D087	.25	330	600	20	1	3/4	1 7/16	5/8	3/16	7/32	—	5 7/16	3.75	**2.25**
NF 1D088	.50	330	600	20	1	1	2 1/16	5/8	11/16	7/32	—	6 1/16	4.20	**2.52**
NF 1D247	.10	250	600	20	2	1 3/16	1 23/32	5/8	5/8	7/32	—	2 7/32	5.30	**3.18**
NF 1D246	.25	115	200	20	2	3/4	1 23/32	5/8	9/16	7/32	—	2 7/32	5.60	**3.36**
NF 1D250	.50	115	200	20	2	1 1/8	1 13/16	5/8	11/16	7/32	—	2 5/16	6.10	**3.66**
NF 1F248	.001	330	600	20	3	1/4	1 3/8	3/8	3/16	.125	13/16	5 3/8	3.15	**1.89**
NF 1F249	.005	330	600	20	3	1/4	1 5/8	3/8	9/16	.125	13/16	5 5/8	3.15	**1.89**
NF 1F085	.01	330	600	20	3	7/16	1 1/4	5/8	15/16	.154	1 7/32	5 1/4	3.30	**1.98**
NF 1F086	.10	330	600	20	3	11/16	1 7/16	7/8	1 1/16	.154	1 11/32	5 7/16	3.55	**2.13**
NF 1F087	.25	330	600	20	3	3/4	1 7/16	7/8	1 1/8	.156	1 13/32	5 7/16	4.25	**2.55**
NF 1F088	.50	330	600	20	3	1	2 1/16	1 7/8	1 7/16	.156	1 19/32	6 1/16	4.70	**2.82**
NF 1F247	.10	250	600	20	4	11/16	1 23/32	7/8	1 1/16	.154	1 11/32	2 7/32	5.80	**3.48**
NF 1F246	.25	115	200	20	4	3/4	1 23/32	7/8	1 1/8	.156	1 13/32	2 7/32	6.10	**3.66**
NF 1F250	.50	115	200	20	4	1	1 13/16	1 1/8	1 7/16	.156	7 19/32	2 5/16	6.50	**3.90**

CARDBOARD TUBULAR RESONANT FILTERS

Cat. No.	Cap. Mfd.	VOLTAGE D.C.	Size—Inches Dia. x Length	List Price	Net Price
NF 10170	.05	400	1/2 x 1 1/8	$.60	**$.36**
NF 10178	.1	400	1/2 x 1 5/8	.65	**.39**
NF 10137	.2	400	9/16 x 1 7/8	.75	**.45**

"QUIETONE"® INTERFERENCE FILTERS


IF-18

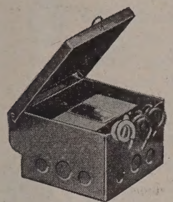

IF-19

IF-6

IF-4

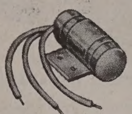
IF-22

QUIETONES FOR USE ON RADIOS AND HOME ELECTRICAL APPLIANCES


IF-7A

IF-27

IF-54


IF-25

IF-24

QUIETONES FOR USE ON INDUSTRIAL AND HEAVY-DUTY ELECTRICAL EQUIPMENT

Most satisfactory results are obtained when Quietones are installed at the source of the radio noise. This is because the high frequency disturbances caused by appliances are carried by the power lines.

A Quietone installed on an appliance corrects noise in all radio receivers, your neighbors, as well as your own.

RADIO AND APPLIANCE QUIETONES

Rating—110 V. A.C.-D.C.—5 amps.

Cat. No.	Radio and Electrical Appliance Uses	Case Color	List Price	Net Price
IF-4	Small radios, portables. Low intensity noise.	Ivory, Walnut, Green	$1.25	**$ .75**
IF-5	Small electric appliances. Low intensity interference.	Ivory, Walnut, Green	1.25	**.75**
IF-6	All home appliances. Low intensity interference.	Ivory, Walnut, Green	1.95	**1.17**
IF-18	All radios and appliances with severe interference	Walnut, Bakelite	9.20	**5.52**
IF-19	All types home appliances with severe interference.	Ivory, Walnut, Bakelite	7.70	**4.62**
IF-20	Small appliances with very low interference.	Ivory, Walnut, Bakelite	.85	**.51**
IF-21*	Electric barber clippers, shavers, small appliances.	Ivory, Walnut, Bakelite	4.40	**2.64**
IF-22-A or B	Schick, Knapp—IF-22-A. Rem. Rand, Packard, Zephyr, Ronson, etc.—IF-22-B.	Ivory, Black, Bakelite	3.05	**1.83**

*IF-21 rated at 1.6 amps.

INDUSTRIAL QUIETONES

Fluorescent Light Quietones

Cat. No.	Volts D.C.—A.C.	Connections	Housing	List Price	Net Price
IF-6	110	Plug-in	Metal	$1.95	**$1.17**
IF-24	110	Flex-Leads	Metal	1.25	**.75**
IF-54	110–220	Flex-Leads	Metal	2.50	**1.50**

Capacitive (CP) Quietones

Cat. No.	Volts D.C.—A.C.	Connections	Housing	List Price	Net Price
IF-25	110–220	Flex-Leads	Metal	$4.95	**$2.97**
IF-26	110–220	Flex-Leads	Metal	6.60	**3.96**
IF-11	110	BX	Cutout Box	13.20	**7.92**
IF-12	220	BX	Cutout Box	18.15	**10.89**
IF-14**	110–220	BX	Cutout Box	24.75	**14.85**

** IF-14 is for 2 or 3 phase circuits.

Capacitive-Inductive (CI) Quietones

Cat. No.	Volts D.C.—A.C.	Max. Amps.	Connections	Housing	List Price	Net Price
IF-7A§	110–220	5	BX	Cutout Box	$13.75	**$8.25**
IF-15	110–220	10	BX	Cutout Box	27.50	**16.50**
IF-16	110–220	20	BX	Cutout Box	38.50	**23.10**
IF-27	110	5	Flex-Leads	Steel Box	7.70	**4.62**
IF-28	110	10	Flex-Leads	Steel Box	13.75	**8.25**
IF-29	110	20	Flex-Leads	Steel Box	24.20	**14.52**

§For use on oil burners.

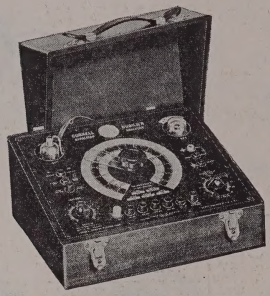
GUIDE TO THE SELECTION OF QUIETONES

For These Electrical Appliances	Best Type	Use These Quietones Also Satisfactory Types			
Adding Machines	IF-18	IF-19	IF-6	IF-54	IF-24
Addressing Machines	IF-18	IF-19	IF-6	IF-54	IF-24
Air Conditioners	IF-18	IF-19	IF-6	IF-25	IF-24
Automatic Towels	IF-18	IF-19	IF-6	IF-25	IF-24
Auto Call Systems	IF-18	IF-19	IF-26	IF-24	IF-54
Barbers Clippers	IF-21	IF-19	IF-6		IF-5
Battery Chargers:					
Mercury Arc	CP-Types*	IF-26			
Rotary Type	CI-Types*				
Vibrator Type	IF-18	IF-19	IF-6		
Billing Machines	IF-18	IF-19	IF-6	IF-24	IF-54
Calculating Machines	IF-18	IF-19	IF-6	IF-24	IF-54
Cash Registers	IF-18	IF-19	IF-6	IF-54	
Dental Machines	IF-19				
Dial Telephones		Call Telephone Company			
Diathermy	CI-Types*	Plus Shielding			
Dictating Machines	IF-19	IF-6	IF-24		
Dishwashers	IF-19	IF-19	IF-6	IF-54	
Drink Mixers	IF-19	IF-21	IF-6	IF-5	IF-20
Drills	IF-19	IF-6	IF-24	IF-54	
Elevator Motors	CI-Types*	CP-Types*	IF-26	IF-25	
Fans	IF-19	IF-21	IF-6	IF-25	IF-24
Floor Polishers	IF-18	IF-19	IF-6	IF-24	
Flour Bleachers	CI-Types*	CP-Types*			
Fluorescent Lamps	CI-Types*	CP-Types*	IF-54	IF-24	IF-6
Food Mixers	IF-19	IF-21	IF-6	IF-5	IF-20
Fruit Juice Extractors	IF-19	IF-21	IF-6	IF-5	IF-20
Hair Dryers	IF-6	IF-5	IF-20		
Heating Pads	IF-19	IF-6	IF-5	IF-20	
Humidifiers	IF-19	IF-6	IF-5	IF-20	
Massage Machines	IF-19	IF-21	IF-6	IF-5	IF-54
Motors	CI-Types*	CP-Types*	IF-54		
Motor Generators	CI-Types*	CP-Types*			
Oil Burners	IF-7A				
Ozonators	IF-19				
Radio Receivers	IF-18	IF-19	IF-4	IF-20	
Refrigerators	IF-18	IF-19	IF-6	IF-5	IF-20
Rotary Converters	CI-Types*	CP-Types*			
Sewing Machines	IF-19	IF-21	IF-6	IF-54	IF-20
Shavers	IF-21	IF-22	IF-20		
Sign Flashers	CI-Types*	CP-Types*	IF-54		
Stokers	CI-Types*	CP-Types*	IF-26	IF-25	IF-24
Vacuum Cleaners	IF-19	IF-21	IF-6	IF-5	
Washing Machines	IF-19	IF-6	IF-5		
X-Ray Equipment	CI-Types*	Plus Shielding			

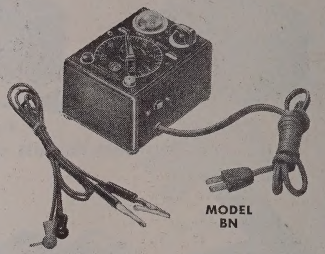
*Note: (CI) Capacitive-inductive and (CP) capacitive Quietones.

For additional applications write for complete data.

CAPACITOR TEST INSTRUMENTS



MODEL
BF-50



MODEL
BN

CAPACITOR ANALYZER

The Model BF-50 Capacitor Analyzer quickly and accurately measures all important characteristics of all types of capacitors. It offers the most accurate and thorough capacitor test of any instrument of its type, and may be operated on any 110-volt, 50-60 cycle power line.

The analyzer will determine the true condition of all paper, mica and electrolytic capacitors, including A.C. motor starting types.

Features of Model BF-50 Analyzer

1. Measures Capacity—Accurately measures capacity of paper, mica, air, electrolytic and motor-starting capacitors from .00001 to 240 mfd.
2. Measures Power Factor—Measurements of power factor from zero to 50 percent on all types of electrolytic capacitors including motor-starting types.
3. Employs Wien Bridge—Assures permanent accuracy of capacity and power factor measurements. Readings not affected by line voltage variations.
4. Indicates Insulation Resistance—Insulation resistance measurements of paper and mica capacitors up to 1500 megohms. Also measures many types of insulation.
5. Indicates Leakage—Measurements of leakage of electrolytic capacitors by means of built-in direct current power supply.
6. Visual Eye Leakage Indicator—Provides simplified and reliable leakage tests on all types of capacitors. Enables measurements to be made rapidly.
7. Detects Defective Capacitors—Character measurements, such as leaky, shorted, open, high and low capacity, and high power factor on all capacitors.
8. High Sensitivity on All Measurements—Amplifier for capacity, power factor and leakage tests provides sharp and accurate readings. Amplifier built-in Analyzer.
9. Balance Sensitivity Control—Provides sharp or broad balances for quick and accurate readings. All readings are made simply and directly.
10. Direct Reading Linear Scale Calibration—Provides simplified measurements. All scales on panel uniformly spaced, easy to read, thus avoiding possible errors in using multipliers or charts.
11. Push-Button Switching—For convenient and simplified adjustments, all tests and circuit changes are made by means of modern push-button switches.
12. Visual Eye Bridge Balance—Visual detector gives positive indication of bridge balance for convenient, simplified and accurate capacity and power factor measurements.
13. Six Color-Coded Scales—Accurately calibrated, six color-coded scales. Uniformly spaced over total spacing of sixty inches. Easy to read. No "blind" spots.
14. General Purpose Instrument—May be used to check continuity capacity between circuits, insulation of transformer windings and other types of coils, etc.
15. Self-Contained—Portable—An instrument complete in itself, requiring no external standard, headphones, meters or accessories. A portable unit, for 110 volt, 50-60 cycle operation, supplied in walnut cabinet, removable cover, with carrying handle. Size, 6½ x 12 x 9¾ inches. Weight, 9 pounds.

MODEL BF-50 CAPACITOR ANALYZER
Net Price complete with tubes.. **$46.92**

Replacement Tubes for Use in Model BF-50:
6E5—List Price $2.20—Net Price $1.32
12A7—List Price $3.20—Net Price $1.92

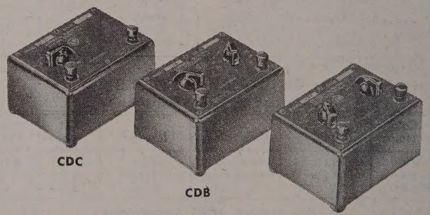
CAPACITOR BRIDGE

Features of Model BN Capacitor Bridge

1. Measures Capacity—Accurately measures capacity of paper, mica, electrolytic and air capacitors from .00001 mfd. to 50 mfds.
2. Indicates Power Factor—Power factor of electrolytic capacitor indicated by means of visual eye detector tube.
3. Detects Defective Capacitors—Detects open and short circuits, high and low capacity, and high power factor.
4. Checks Circuit Continuity—May be used as continuity meter. A handy instrument for checking circuits, coils, transformers and many other uses. For operation on 110 volts, 60 cycles.
5. Employs Wien Bridge—Employs Wien Bridge circuit for all measurements. Accuracy independent of line voltage variations.
6. Visual Eye Bridge Balance—Dual type visual bridge balance for accurate measurements facilitates quick tests on service jobs.
7. Direct Reading Scale—Direct reading ranges with all scale markings directly in microfarads. Clear reading dial scale. All capacity calibrations marked on panel. No charts or multipliers required.
8. Self-Contained—The Capacitor Bridge is complete in itself and requires no headphones, standards, external meters, etc.
9. Extremely Compact—The unusually small size of this bridge makes it particularly handy for portable use—3⅝" x 5" x 3" weight 2 pounds.
10. Attractive—Supplied in attractive walnut Bakelite case complete with detachable test leads and useful instruction booklet.

MODEL BN CAPACITOR BRIDGE
Net Price complete with tubes.. **$22.39**

Replacement tubes for use in Model BN Bridge:
6AF6G—List Price $2.65—Net Price $1.59
12A7—List Price $3.20—Net Price $1.92



CAPACITOR DECADES

C-D Capacitor Decades provide accurate standards over a wide range of capacity. May be used in groups of the three decades, shown above, or used individually for maximum flexibility. Each decade is furnished with calibration chart giving exact capacity values for all scale markings, extending use to more precise measurements.

Rated Voltage—600 D.C.—220 A.C.

Model	Capacity	+ or — Tol.	Dielectric	Net Price
CDA-5	.011 mfd. in. .0001 mfd. steps	5%	Mica	**$9.35**
CDB-5	1.1 mfd. in. .01 mfd. steps	5%	Oil-Paper	**9.35**
CDB-3	1.1 mfd. in .01 mfd. steps	3%	Oil-Paper	**13.20**
CDC-5	10.0 mfd. in 1.0 mfd. steps	5%	Oil-Paper	**19.25**
CDC-3	10.0 mfd. in 1.0 mfd. steps	3%	Oil-Paper	**21.45**

CORNELL DUBILIER

Low Cost
Easy Installation
Long Life

C-D POWERCONS

for DC to AC or AC to DC Power Conversion

POWERCON
VIBRATOR CONVERTER

Here is an assortment of converters that are outstanding for their dependable operation, their low initial cost and their simple, economical installation. A complete line for every purpose.

SUBSIDIARY

110 VOLT 60 CYCLE OUTPUT FROM DC INPUT

Model No.	Applications	DC Input Volts	Output - Watts Cont.	Output - Watts Int.	Size	Weight Lbs.	List Price
6R5	Automobile, Bus, Truck,	6	50	55	6¾ x 7¾ x 5⅞	12	$ 48.25
6R10	Airplane, Marine & other	6	100	125	7 x 12⅝ x 7½	19	68.45
12R8	General Uses: Mobile,	12	80	120	6¾ x 7¾ x 5⅞	12	48.25
12RU15	Portable, Stationary	12	150	200	7 x 12⅝ x 7½	22	90.80
32R8	Farm, Marine, Railroad,	32	80	100	6¼ x 7⅝ x 5⅞	13¼	55.80
32RU15	etc.	32	150	200	6⅜ x 12⅜ x 7½	22¼	84.55
110PA5	Record Players—Automatic	110	50 Volt-Amperes		3¾ x 6¼ x 2¾	2	17.20
110PB5	& Manual	110	50 Volt-Amperes		3¾ x 6¼ x 2¾	2	19.50
110R10	Radio and Business	110	100	150	6⅜ x 7¾ x 5¼	10½	45.95
110RA15	Machines	110	150	250	6¾ x 7¾ x 5⅞	13½	56.10
110RT15	Especially Designed for Television —Adjustable Frequency Control	110	150	250	6⅞ x 12¼ x 7½	16¾	74.75
110RT25		110	250	300	6½ x 12⅜ x 8½	22½	79.95
110RT35		110	350	500	7½ x 14 x 8⅝	40½	143.50
110WR15A	Wire or Tape Recorders	110	150	200	6⅞ x 12¼ x 7½	22½	76.50
110WR15B	Wire or Tape Recorders (Phantom switch)	110	150	200	6⅞ x 12¼ x 7½	21	90.75

HIGH-VOLTAGE DC OUTPUT — from 6-Volt DC Input

Model No.	Applications	Input Volts	Output Power (Continuous, Max.)	Type	List Price
6DS2	Operation of Mobile Trans-	6vDC	250vDC at 60ma., or 180vDC at 40ma.—15 watts	Synch.	$35.65
6DS3	mitters, Receivers, and similar	6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Synch.	39.10
6DR3	equipment from 6-volt Battery.	6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Rect. Tube	41.40
6DRA6	(12-volt units are available	6vDC	300vDC at 200ma.—60 watts	Rect. Tube	59.80
6DRB6	on special order.)	6vDC	400vDC at 150ma.—60 watts	Rect. Tube	59.80

HIGH-VOLTAGE DC & AC OUTPUT — from Battery or 110vAC Input (Dual Operation)

Model No.	Applications	Input Volts	Output Power (Continuous, Max.)	Type	List Price
6/110DH6	High-voltage DC, primarily for operation of transmitters, receivers, sound equipment, etc., from battery or AC power line —mobile or fixed station. See Output Power column for AC output. (12-volt units available on special order.)	(1) 6vDC	(1) 300vDC at 150ma., or 225vDC at 200ma. (45 watts); & 110v-AC, 60 cycles (15 watts, for phono motors)	Rect. Tube	Price on Request
		(2) 110vAC	(2) 300vDC at 150ma., or 225vDC at 200ma. (45 watts); & 6.3v-AC at 5 amperes (for heaters)	Rect. Tube	
6/110DH10		(1) 6vDC	(1) 400vDC at 200ma. (80 watts), or 325vDC at 200ma. (65 watts); & 110vAC, 60 cycles (20 watts, for phono motors)	Rect. Tube	Price on Request
		(2) 110vAC	(2) 400vDC at 200ma. (80 watts), or 325vDC at 200ma. (65 watts); & 6.3vAC at 5 amperes (for heaters)	Rect. Tube	

Prices subject to change without notice.

For CD Vibrators see pages M-38, 39

PLASTICON CAPACITORS

HIVOLT POWER SUPPLIES

Designed to transform 118V AC to high voltage—low current DC for use in radiation counters, oscilloscopes, dust precipitators, projection television sets, spectographic analysers, photoflash equipment, etc. Hi Volt Power Supplies are self-contained in hermetically sealed steel containers.

Cat. No.	VDC	Dimensions	List Price
PS-2	2400	3 3/16x3 3/4x5 1/2″	$31.00
PS-5	5000	4 9/16x3 3/4x6 1/2″	85.00
PS-10	10000	4 9/16x3 3/4x8″	115.00
PS-30	30000	7x7x7″	285.00
PS-50	50000	12 1/2x12 1/2x12 1/2″	850.00

In addition to the above standard Power Supplies we manufacture many special HIVOLT Power Supplies.

We have built self-contained Supplies varying from 3 Volt battery to 400 cycle input with output of a few microamperes to 10 milliamperes at voltages from 1000 to 100,000.

Your specifications are invited.

SPECIAL PRODUCTS

PULSE FORMING NETWORKS

Plasticon Type TS and LS Pulse Forming Networks are the smallest and lightest PFN's available. Type TS PFN's can be made for 150° operation; Type LS Networks operate up to 75° C.

Plasticon PFN's are furnished in metal containers and in our Glassmike style.

ZERO TEMPERATURE COEFFICIENT PLASTICONS

Relatively large capacitances of .01 mfd and up are supplied with temperature coefficients ranging from minus 1,000 ppm/°C to plus 1,000 ppm/°C. Temperature range for Type AL (SC) is minus 65° C to plus 85° C.

DISCHARGE, OR ENERGY STORAGE CAPACITORS

Plasticons are supplied for spark discharge, photoflash, pulse-coupling condensers, etc. Due to the low losses and high breakdown voltage, Plasticons are the lightest, smallest discharge capacitors made.

HIGH RESISTANCE AND "COMPUTER" PLASTICONS

In addition to our Laboratory Grade Capacitors shown on this page, other high resistance-low absorption Plasticon types are available. Types PA and TA Capacitors are used in computers operating at higher temperatures. Type FA can be supplied with resistances as high as 10^{15} ohms at 2000 volts.

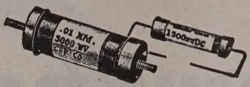
RF CAPACITORS

In addition to the 3500 volt RF Glassmikes shown on this page, Plasticon Type LSG and TSG Glassmikes are made for RF operation up to 28,000 volts. These Glassmikes are less expensive, are smaller and lighter, and more available than mica capacitors.

POWER FACTOR CORRECTION CAPACITORS

Plasticon Type LSC Capacitors are made with power factors as low as .00018 at 400—2800 cycles. Their heat losses are so negligible that amazingly small and light high voltage AC capacitors are produced.

GLASSMIKES ASG



Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Temperature range — 60° C to + 125° C. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications.

Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions	List Price
ASG 1	.01	600	19/32x1 3/16″	$1.50
ASG 2	.02	600	19/32x1 3/16″	1.60
ASG 3	.05	600	19/32x1 9/16″	1.75
ASG 4	.1	600	3/4x1 3/4″	1.95
ASG 5	.25	600	29/32x2 1/4″	2.25
ASG 6	.5	600	29/32x2 3/4″	2.60
ASG 7	.005	1,000	19/32x1 3/16″	1.50
ASG 8	.01	1,000	19/32x1 3/16″	1.60
ASG 9	.02	1,000	19/32x1 3/16″	1.70
ASG 10	.05	1,000	3/4x1 3/4″	1.85
ASG 11	.1	1,000	3/4x2 1/4″	2.15
ASG 12	.25	1,000	29/32x2 3/4″	2.50
ASG 13	.002	2,000	19/32x1 3/16″	1.90
ASG 14	.005	2,000	19/32x1 3/16″	2.05
ASG 15	.01	2,000	19/32x1 3/16″	2.25
ASG 16	.02	2,000	19/32x1 9/16″	2.50
ASG 17	.05	2,000	3/4x1 3/4″	2.80
ASG 18	.1	2,000	3/4x2 1/4″	3.20
ASG 19	.25	2,000	29/32x2 3/4″	3.70
ASG 20	.001	3,000	19/32x1 3/16″	5.15
ASG 21	.002	3,000	19/32x1 3/16″	5.25
ASG 22	.005	3,000	19/32x1 3/16″	5.40
ASG 23	.01	3,000	19/32x1 9/16″	5.60
ASG 24	.02	3,000	3/4x1 3/4″	5.85
ASG 25	.05	3,000	29/32x2 1/4″	6.15
ASG 26	.1	3,000	1 1/8x2 1/4″	6.50
ASG 27	.001	5,000	19/32x1 3/16″	6.50
ASG 28	.002	5,000	19/32x1 3/16″	6.70
ASG 29	.005	5,000	19/32x1 9/16″	6.95
ASG 30	.01	5,000	3/4x1 3/4″	7.25
ASG 31	.02	5,000	3/4x2 1/4″	7.65
ASG 32	.05	5,000	29/32x2 1/4″	8.15
ASG 33	.1	5,000	1 3/8x3 1/2″	9.10
ASG 34	.001	7,500	19/32x1 9/16″	7.00
ASG 35	.002	7,500	19/32x1 9/16″	7.25
ASG 36	.005	7,500	3/4x1 3/4″	7.55
ASG 37	.01	7,500	3/4x2 1/4″	8.15
ASG 38	.02	7,500	29/32x2 3/4″	9.25
ASG 39	.05	7,500	1 3/8x2 3/4″	11.50
ASG 40	.0005	10,000	19/32x1 5/8″	7.30
ASG 41	.001	10,000	19/32x1 5/8″	7.50
ASG 42	.002	10,000	19/32x1 5/8″	7.80
ASG 43	.005	10,000	13/16x1 3/4″	9.00
ASG 44	.01	10,000	29/32x2 1/4″	10.50
ASG 45	.02	10,000	1 1/8x2 3/4″	12.50
ASG 46	.03	10,000	1 3/8x2 3/4″	15.00
ASG 60	.06	10,000	1 3/8x4 1/4″	17.50
ASG 47	.0005	15,000	19/32x2 1/4″	14.50
ASG 48	.001	15,000	3/4x2 1/4″	14.80
ASG 49	.002	15,000	3/4x2 1/4″	15.50
ASG 50	.0005	20,000	19/32x3 1/2″	19.50
ASG 51	.001	20,000	3/4x3 1/2″	20.50
ASG 52	.0005	30,000	19/32x4 9/16″	22.50

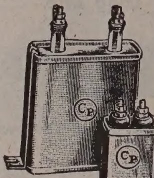
RF GLASSMIKES

GLASSMIKE
LSG 502
.005 MFD.
3500 WV DC

Plasticon L film-silicone fluid impregnant in Glassmike style case. Type LSG has Q of 2500 to 5000. Rated at 3500 WV—7500 V Test. Lower losses, more easily mounted, smaller and more economical than mica capacitors.

Cat. No.	Cap. Mfd.	Dimensions OD Length	List Price
LSG500	.00005	19/32x1 3/16″	$1.80
LSG101	.0001	19/32x1 3/16″	1.80
LSG251	.00025	19/32x1 3/16″	1.80
LSG501	.0005	19/32x1 3/16″	1.80
LSG102	.001	19/32x1 9/16″	2.05
LSG202	.002	3/4x1 9/16″	2.45
LSG502	.005	3/4x1 3/4″	3.50
LSG602	.006	29/32x1 9/16″	3.75
LSG103	.01	29/32x1 3/4″	4.25

INDUSTRIAL and TRANSMITTING



Plasticon A element, mineral oil impregnated in sturdy lead coated steel containers. Smaller, lighter and more economical than paper capacitors. Temperature range — 40°C to + 105° C. Type AOC-rectangular; Type AOCO-flattened oval.

Type ASC and ASCO (not listed) have Plasticon A element, silicone impregnated. Same dimensions as corresponding AO types. Temperature range — 60° C to + 125° C; greater capacitance stability. Prices on application.

DC RECTANGULARS

Cat. No.	Cap. Mfd.	Volts DC	Dimensions	List Price
AOC6C1	1.0	600	2 1/8 1 3/4 1″	$4.49
AOC6C2	2.0	600	2 3/4 1 3/4 1″	5.41
AOC6C4	4.0	600	3 1/2 2 1/2 1 3/16″	6.73
AOC6C8	8.0	600	4 3 3/4 1 1/4″	10.16
AOC6C10	10.0	600	4 3 3/4 1 3/4″	11.42
AOCIM1	1.0	1,000	2 3/8 1 3/4 1″	4.82
AOCIM2	2,0	1,000	4 1 3/4 1″	6.47
AOCIM4	4.0	1,000	4 2 1/2 1 3/16″	7.85
AOCIM8	8.0	1,000	4 5/8 3 3/4 1 3/4″	11.09
AOCIM10	10.0	1,000	4 5/8 3 3/4 1 3/4″	12.80
AOC2MO5	0.5	2,000	2 3/8 1 3/4 1″	5.81
AOC2M1	1.0	2,000	3 1/2 1 3/4 1″	7.06
AOC2M2	2.0	2,000	3 1/2 2 1/2 1 3/16″	8.18
AOC2M4	4.0	2,000	3 1/2 3 3/4 1 3/4″	11.09
AOC3M1	1.0	3,000	4 2 1/2 1 3/16″	14.52
AOC3M2	2.0	3,000	4 3 3/4 1 1/4″	18.48
AOC3M4	4.0	3,000	4 5/8 3 3/4 2 1/4″	25.54
AOC4M1	1.0	4,000	4 3 3/4 1 1/4″	33.00
AOC4M2	2.0	4,000	4 3 3/4 1 3/4″	39.60
AOC4M4	4.0	4,000	4 3 3/4 4 9/16″	60.53
AOC5M1	1.0	5,000	4 3 3/4 1 3/4″	39.60
AOC5M2	2.0	5,000	3 1/2 3 3/4 4 9/16″	49.50
AOC75C1	1.0	7,500	3 1/2 3 3/4 4 9/16″	59.40
AOC10M1	1.0	10,000	4 3 3/4 4 9/16″	105.60

DC OVALS

Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions	List Price
AOCO6C2	2.0	600	2 3/8 2 1 1/4″	$5.28
AOCO6C4	4.0	600	4 2 1 1/4″	6.34
AOCO1M1	1.0	1,000	2 3/8 2 1 1/4″	4.62
AOCO1M2	2.0	1,000	3 1/2 2 1 1/4″	6.20
AOCO3MO1	0.1	3,000	2 3/8 2 1 1/4″	9.11
AOCO5MO1	0.1	5,000	2 3/4 2 1 1/4″	16.90
AOCO5MO25	0.25	5,000	3 1/2 2 1 1/4″	18.48
AOCO5MO5	0.5	5,000	4 5/8 2 1 1/4″	21.78
AOCO8MOO5	0.05	8,000	2 3/4 2 1 1/4″	18.22
AOCO8MO1	0.1	8,000	3 1/2 2 1 1/4″	20.06
AOCO10MOO5	0.05	10,000	3 1/2 2 1 1/4″	23.10

LABORATORY CAPACITORS

Type LAG (Glassmike style) and Type LAC (Rectangular can) have the lowest dielectric absorption of any capacitor made. Residual charge is .01 — .02%. Dissipation factor at 1 MC is .0002 to 0003. Capacitance and Q is constant from DC to 100 KC. Resistance averages one million megohms per microfarad. Standard capacitance tolerance is ± 5%. Type LA units are used for timing and integrating circuits.

Cat. No.	Cap. Mfd.	Dimensions
LAG101	.0001	19/32x1″
LAG201	.0002	19/32x1″
LAG501	.0005	19/32x1″
LAG102	.001	3/4x1″
LAG202	.002	3/4x1″
LAG502	.005	3/4x1″
LAG103	.01	29/32x1″
LAG203	.02	29/32x1″
LAG503	.05	1 3/8x1″
LAC104	.1	2 1/4x1 3/4x1″
LAC204	.2	2 1/4x2 1/2x1 3/16″
LAC504	.5	4x2 1/2x1 3/16″
LAC105	1.	4 5/8x3 3/4x1 1/4″
LAC205	2.	4 5/8x3 3/4x2 1/4″
LAC505	5.	6x3 3/4x4 9/16″

Prices Upon Application

• ***Plasticons are manufactured by Condenser Products Company, Chicago 26, Illinois***

Effective June 15, 1951

AEROVOX PRICE LIST

Subject to Change Without Notice

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TYPE PRS

Singles

Mfds.	Volts	Price
2000	4	3.50
500	6	1.80
1000	6	2.40
2000	6	3.50
100	12	1.60
250	12	1.80
500	12	2.20
10	25	.75
16	25	.80
25	25	.85
50	25	1.00
100	25	1.30
500	25	2.60
10	50	.80
20	50	.90
25	50	.90
50	50	1.05
100	50	1.50
4	150	.75
8	150	.80
12	150	.85
20	150	.95
24	150	.95
30	150	1 00
40	150	1.10
50	150	1.20
8	250	.85
12	250	1.00
20	250	1.20
8	350	.90
10	350	1.00
12	350	1.10
24	350	1.40
4	450	.90
8	450	.95
10	450	1.10
12	450	1.15
16	450	1.35
20	450	1.50
30	450	1.65
40	450	2.00
10	500	2.45
15	500	2.55

Duals

50-30	150	1.95
50-50	150	2.10
20-20	250	1.85
8-8	450	1.70
10-10	450	1.85

Triples

20-20-20	150	2.00

AFH SINGLES

Aerovox Cat. No.	List Price
AFH1-01	2.90
AFH1-02	2.55
AFH1-03	3.45
AFH1-05	1.25
AFH1-06	1.35
AFH1-07	1.60
AFH1-08	2.55
AFH1-10	3.55
AFH1-12	1.80
AFH1-13	2.65
AFH1-15	1.50
AFH1-16	1.55
AFH1-17	1.60
AFH1-18	1.65
AFH1-20	1.85
AFH1-21	2.00
AFH1-23	2.15
AFH1-24	1.90
AFH1-25	1.70
AFH1-26	1.55
AFH1-27	1.60
AFH1-28	1.70
AFH1-29	1.80
AFH1-30	2.05
AFH1-32	1.60
AFH1-33	1.75
AFH1-34	2.10
AFH1-35	2.55
AFH1-36	2.90
AFH1-37	3.50
AFH1-39	1.90
AFH1-41	2.10
AFH1-42	2.85
AFH1-43	3.95
AFH1-44	1.50
AFH1-45	1.75
AFH1-46	2.00
AFH1-47	2.95
AFH1-48	1.55
AFH1-49	1.70
AFH1-50	1.80
AFH1-51	1.95
AFH1-52	2.05
AFH1-53	2.35
AFH1-55	3.05
AFH1-56	2.00
AFH1-57	3.50
AFH1-62	3.20
AFH1-64	1.70

AFH DUALS

Aerovox Cat. No.	List Price
AFH2-02	4.40
AFH2-04	1.60
AFH2-05	1.90
AFH2-06	1.70
AFH2-07	1.60
AFH2-08	1.70
AFH2-09	1.75
AFH2-11	1.85
AFH2-12	1.80
AFH2-14	1.90
AFH2-15	2.00
AFH2-16	2.15
AFH2-17	2.35
AFH2-19	2.30
AFH2-20	2.65
AFH2-22	3.75
AFH2-23	4.00
AFH2-25	1.70
AFH2-26	1.90
AFH2-29	2.50
AFH2-31	1.75
AFH2-32	1.85
AFH2-34	4.05
AFH2-35	4.00
AFH2-36	2.25
AFH2-37	2.30
AFH2-38	2.60
AFH2-42	2.30
AFH2-43	2.25
AFH2-45	3.40
AFH2-47	1.90
AFH2-48	2.05
AFH2-50	2.25
AFH2-51	2.55
AFH2-53	2.65
AFH2-54	3.05
AFH2-57	3.45
AFH2-61	3.95
AFH2-62	3.60
AFH2-63	3.90
AFH2-65	2.60
AFH2-66	3.10
AFH2-70	3.65
AFH2-72	4.40
AFH2-74	2.85
AFH2-75	3.30
AFH2-82	1.85
AFH2-83	2.65
AFH2-86	2.40
AFH2-89	2.45
AFH2-91	3.75
AFH2-93	2.90
AFH2-95	3.60
AFH2-96	2.60
AFH2-97	3.30
AFH2-99	3.65
AFH2-100	3.35
AFH2-101	3.75
AFH2-103	3.75
AFH2-104	3.30
AFH2-106	3.90
AFH2-107	3.75

AFH TRIPLES

Aerovox Cat. No.	List Price
AFH3-01	1.95
AFH3-02	2.15
AFH3-03	2.15
AFH3-04	2.35
AFH3-05	2.30
AFH3-08	2.40
AFH3-10	2.60
AFH3-13	2.90
AFH3-14	2.45
AFH3-16	2.75
AFH3-20	2.90
AFH3-21	4.90
AFH3-22	2.40
AFH3-25	3.45
AFH3-27	2.40
AFH3-29	4.25
AFH3-30	2.40
AFH3-31	2.60
AFH3-32	3.75
AFH3-33	2.95
AFH3-34	3.10
AFH3-36	3.60
AFH3-37	3.85
AFH3-39	4.35
AFH3-43	4.20
AFH3-44	4.90
AFH3-46	5.40
AFH3-47	2.70
AFH3-48	3.95
AFH3-49	4.00
AFH3-50	3.85
AFH3-58	2.40
AFH3-67	2.20
AFH3-68	2.60
AFH3-69	2.25
AFH3-70	2.30
AFH3-72	2.30
AFH3-73	2.50
AFH3-74	2.70
AFH3-75	2.35
AFH3-76	2.40
AFH3-78	2.70
AFH3-79	2.65
AFH3-84	2.55

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AFH TRIPLES (Cont'd)

Aerovox Cat. No.	List Price
AFH3-86	3.15
AFH3-87	2.35
AFH3-88	2.35
AFH3-89	2.80
AFH3-93	2.70
AFH3-95	3.00
AFH3-97	2.75
AFH3-98	2.95
AFH3-100	3.60
AFH3-103	2.25
AFH3-104	2.50
AFH3-105	2.70
AFH3-106	2.55
AFH3-107	2.80
AFH3-109	3.10
AFH3-115	2.55
AFH3-119	2.80
AFH3-120	2.85
AFH3-122	5.15
AFH3-124	2.35
AFH3-125	2.40
AFH3-126	2.70
AFH3-127	2.70
AFH3-128	2.90
AFH3-129	3.05
AFH3-131	3.55
AFH3-130	2.95
AFH3-133	3.95
AFH3-134	3.95
AFH3-137	2.80
AFH3-141	4.10
AFH3-146	3.75
AFH3-147	4.10
AFH3-145	3.95
AFH3-148	3.90
AFH3-150	2.85
AFH3-151	2.85
AFH3-152	2.85
AFH3-153	4.05
AFH3-154	3.30
AFH3-155	4.15
AFH3-165	4.20
AFH3-167	2.85
AFH3-169	3.15
AFH3-172	2.90
AFH3-173	5.35
AFH3-176	3.75
AFH3-184	3.05
AFH3-180	2.30
AFH3-183	2.95
AFH3-186	3.90
AFH3-187	3.35
AFH3-188	3.30
AFH3-189	3.05
AFH3-190	4.30
AFH3-193	3.10

AF QUADS

Aerovox Cat. No.	List Price
AFH4-02	4.55
AFH4-05	4.55
AFH4-10	3.35
AFH4-11	4.70
AFH4-12	5.30
AFH4-14	4.70
AFH4-18	4.45
AFH4-19	3.50
AFH4-21	3.15
AFH4-24	3.10
AFH4-25	2.90
AFH4-26	3.10
AFH4-28	3.10
AFH4-35	3.55
AFH4-39	3.20
AFH4-43	2.95
AFH4-44	4.00
AFH4-45	4.40
AFH4-46	4.65
AFH4-47	4.90
AFH4-49	3.10
AFH4-57	3.85
AFH4-59	3.15
AFH4-60	3.15
AFH4-66	3.55
AFH4-67	4.15
AFH4-72	4.65
AFH4-73	4.85
AFH4-74	4.05
AFH4-78	4.50
AFH4-79	5.00
AFH4-81	4.55
AFH4-83	4.60
AFH4-85	4.50
AFH4-86	4.55
AFH4-89	4.50
AFH4-94	4.85
AFH4-99	4.50
AFH4-100	4.50
AFH4-104	4.65
AFH4-111	3.80
AFH4-106	3.75
AFH4-121	3.85

TELEVISION CAPACITORS TYPE 38

Type 6038MTB

600 Volts

Mfds.	Price
.0005	2.75
.001	2.75
.005	2.75
.01	2.75
.05	3.20

TYPE P88

Type 6088

.0005	1.35
.001	1.35
.005	1.35

Type 10088

10,000 Volts

.0005	1.50

TYPE 1468L-HV

1500 Volts

.000005	.30
.00001	.30
.000025	.30
.00005	.30
.000075	.30
.0001	.35
.00015	.35
.0002	.40
.00025	.45
.0003	.50
.00035	.50
.0004	.55

TYPE 1467L-HV

1500 Volts

.0005	.70
.00075	.80
.001	.90

1000 Volts

.0015	.70
.002	.80
.0025	1.00
.003	1.10
.004	1.30
.005	1.60

TYPE 1441WL-HV

2000 Volts

Mfds.	Price
.0005	.65
.00075	.75
.001	.95

TYPE 84

Type 2584

2500 Volts

.001	.95
.00025	.95
.0005	.95
.001	.95
.003	.95
.005	1.00
.01	1.05
.03	1.10
.05	1.20
.1	1.50
.15	1.65

Type 5084

5000 Volts

.0001	1.05
.00025	1.05
.0005	1.05
.001	1.05
.003	1.05
.005	1.10
.01	1.15
.03	1.30
.05	1.40

Type 6084

6000 Volts

.0001	1.10
.00025	1.10
.0005	1.10
.001	1.10
.003	1.15
.005	1.15
.01	1.40
.03	1.50
.05	1.60

Type 7584

7500 Volts

.0001	1.10
.00025	1.10
.0005	1.10
.001	1.10
.003	1.15
.005	1.15
.01	1.50
.03	1.75

Type 10084

10,000 Volts

.0001	1.15
.00025	1.15
.0005	1.15
.001	1.15
.003	1.20
.005	1.35
.01	1.60

Type 15084

15,000 Volts

.00025	1.75
.0005	1.75
.001	1.75
.003	1.85
.005	2.00

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Mfds. Price

TYPE PRVC

Singles

4	2.95
8	3.15
16	3.75

475 Volts

Singles & Doubles

4	2.75
12	2.95
16	3.15
8-8	4.10

450 Volts

Singles

4	2.00
8	2.20
10	2.30
12	2.40
16	2.45
20	2.70
30	3.00
40	3.15
80	4.90

Doubles

8-8	3.00
8-16	3.30
10-10	3.10
12-12	3.20
16-16	3.55
20-20	3.80

Triples

8-8-8	3.50
10-10-10	4.00

TYPE SRE

Mfds.	Volts	Price
100	3	1.10
200	3	1.15
300	3	1.30
500	6	1.40
50	6	.95
100	6	1.20
50	12	1.00
100	12	1.20
200	12	1.35
25	25	1.00
50	25	1.10
100	25	1.35
10	50	1.00
15	50	1.00
25	50	1.05
5	150	1.00
10	150	1.05
15	150	1.15
25	150	1.25

TYPE PRS

Singles

Mfds.	Volts	Price
100	6	1.20
250	6	1.35
500	6	1.55
1000	6	1.90
1500	6	2.10
2000	6	2.30
100	12	1.20
250	12	1.45
500	12	1.70
1000	12	2.25
100	15	1.25
250	15	1.80
500	15	2.20
10	25	.75
25	25	.85
50	25	1.00
100	25	1.30
250	25	2.10
500	25	2.60
10	50	.80
25	50	.90
50	50	1.05
100	50	1.50
4	150	.75
8	150	.80
12	150	.85
16	150	.90
20	150	.95
24	150	.95
30	150	1.00
40	150	1.10
50	150	1.20
100	150	1.70
4	250	.80
8	250	.85
12	250	1.00
16	250	1.10
20	250	1.20
40	250	1.35
4	350	.85
8	350	.90
12	350	1.10
16	350	1.25
24	350	1.40
4	450	.90
8	450	.95
10	450	1.10
12	450	1.15
16	450	1.35
20	450	1.50
30	450	1.65
40	450	2.00
8	500	2.30
10	500	2.45
12	500	2.50
16	500	2.55
8	600	2.75
10	600	2.95
12	600	3.10
16	600	3.25
8	700	3.00
10	700	3.50
12	700	3.75
16	700	4.50

Dual Dandees

10-10	25	1.40
10-10	50	1.40
8-8	150	1.50
8-16	150	1.50
20-20	150	1.65
30-30	150	1.70
20-40	150	1.75
30-30	150	1.80
30-40	150	1.80
30-50	150	1.95
40-40	150	1.80
40-80	150	2.20
50-30	150	1.95
50-50	150	2.10
80-40	150	2.25
100-100	150	3.20
8-8	200	1.50
8-16	200	1.60
16-16	200	1.70
30-30	200	2.15
8-16	250	1.65
10-10	250	1.65
16-16	250	1.70
20-20	250	1.85
30-30	250	2.25
8-8	450	1.70
8-16	450	2.00
10-10	450	1.85
16-16	450	2.25
20-20	450	2.50
*30-30	450	3.00
*40-20	450	2.95
*40-40	450	3.35

*Supplied in paper cases only.

Triple Dandees

20-20-20	150	2.20
30-30-10	150	2.15
30-30-30	150	2.35
40-20-20	150	2.25
40-30-20	150	2.35
40-40-40	150	2.45
50-30-10	150	2.35
50-30-20	150	2.45
80-40-20	150	2.75

Multiples

Type	Price
PRS64D20A	2.20
PRS86D4A	2.20
PRS106D20A	2.55
PRS1010D4A	2.50

TYPE PRSB

Duals

Mfds.	Volts	Price
8-8	450	2.15
8-16	450	2.45
16-16	450	2.80
8-16	250	2.10
16-16	250	2.20
20-20	150	2.05
20-40	150	2.20

TYPE GL

600 Volts

Singles

Mfds.	Price
4	2.95
9	3.15
16	3.75

475 Volts

8	2.75
12	2.95
16	3.15

Duals

8-8	4.10

450 Volts

Singles

4	2.00
8	2.20
10	2.30
12	2.40
16	2.45
20	2.75
30	3.00
40	3.15
80	4.90

Duals

8-8	3.00
8-16	3.30
10-10	3.10
12-12	3.20
16-16	3.55
20-20	3.80

Triples

8-8-8	5.00
10-10-10	5.30

TYPE GLS

450 Volts

Singles

4	2.00
8	2.20
12	2.40
16	2.45

TYPE GLS

450 Volts

Doubles

8-8	3.00

250 Volts

Singles

4	1.40
8	1.65
12	1.75
16	1.80

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TYPE G

475 Volts

Singles

Mfds.	Price
4	2.20
8	2.30

450 Volts

Singles

4	2.15
8	2.25
10	2.30
12	2.35
16	2.40
20	2.55
30	2.70
40	2.75
80	2.80

Duals

8-8	3.25
8-16	3.50
10-10	3.35
12-12	3.45
16-16	3.80
20-20	4.05

Singles

Type	Price
AEP5A	3.75
AEP4D	3.95
AEP8D	4.10
AEP2J	4.05
AEP3J	4.20
AEP4J	4.30
AEP6J	4.45
AEP8J	4.55
AEP16J	5.55
AEP2L	4.20

Duals

AEP44D	4.20
AEP88D	4.35
AEP22J	4.40
AEP44J	5.05

Triples

AEP444D	4.80
AEP88D4A	4.85
AEP222J	5.10
AEP22J4A	4.85
AEP44J4A	5.55
AEP444J	6.10

Quads

AEPG444D4A	5.35
AEPG444J4A	6.65

TYPE BT

Mfds.	Volts	Price
4	500	4.70
8	500	4.85
8	450	4.25
12	450	4.75
16	450	5.00
8	350	3.70
12	350	4.20
16	350	4.40
20	350	4.60
8	150	2.75
12	150	2.80
16	150	2.85
24	150	3.00
30	150	3.10
40	150	3.20
10	50	2.65
25	50	2.75
50	50	3.00
10	25	2.60
25	25	2.70
50	25	2.80

TYPE E

Singles

Aerovox Cat. No.		List Price
4	475	2.20
4	450	2.15
8	450	2.25
10	450	2.30
12	450	2.35
16	450	2.40
20	450	2.55
30	450	2.70
40	450	2.75
80	450	3.80
10	50	2.00
25	50	2.05
10	25	2.00
25	25	2.00

Duals

Aerovox Cat. No.		List Price
8-8	450	3.25
8-16	450	3.50
10-10	450	3.35
12-12	450	3.45
16-16	450	3.80
20-20	450	4.05

Triples

Aerovox Cat. No.		List Price
8-8-8	450	3.90
10-10-10	450	4.10

TYPE HCLV

Aerovox Cat. No.		List Price
500	12	2.70
1000	12	3.25
2000	12	3.65
3000	12	4.55
4000	12	4.75
500	18	3.00
1000	18	3.80
2000	18	4.75
4000	18	8.45
500	25	3.30
1000	25	4.30
2000	25	5.25
3000	25	8.00
4000	25	9.50
1000	50	6.50
2000	50	8.60

TYPE WR

Mfds.	Volts	Price
10	450	3.30
20	450	2.70
30	450	2.95
40	450	3.15

TYPE PBS
(Not Illustrated)

Singles

Aerovox Cat. No.		List Price
4	600	2.95
8	600	3.15
2	450	2.00
4	450	2.00
6	450	2.10
8	450	2.20
10	450	2.30
12	450	2.35
16	450	2.65

Duals

Aerovox Cat. No.		List Price
8-8	450	2.95
8-16	450	3.25

Triples

Aerovox Cat. No.		List Price
8-8-8	450	5.00

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TYPE P88
TYPE P288

200 Volts

Mfds.	Price
.015	.25
.04	.30
.047	.30
.05	.30
.068	.35
.075	.35
.1	.35
.15	.40
.33	.50
.47	.60
.5	.60

TYPE P488

400 Volts

Aerovox Cat. No.	List Price
.006	.25
.0068	.25
.0075	.25
.01	.25
.015	.25
.02	.25
.022	.30
.025	.30
.03	.30
.033	.30
.047	.30
.05	.30
.068	.35
.075	.35
.1	.35
.15	.40
.22	.45
.25	.45

TYPE P688

600 Volts

Aerovox Cat. No.	List Price
.001	.25
.0015	.25
.002	.25
.0022	.25
.003	.25
.0033	.25
.004	.25
.0047	.25
.005	.25
.006	.25
.0068	.25
.0075	.30
.01	.30
.015	.30
.02	.30
.022	.30
.025	.35
.03	.35
.033	.35
.04	.35
.047	.35
.05	.40
.068	.40
.075	.45
.1	.45

TYPE P1088

1000 Volts

Aerovox Cat. No.	List Price
.001	.50
.0015	.50
.002	.50
.0022	.50
.003	.50
.0033	.50
.004	.50
.0047	.50
.005	.50
.006	.50
.0068	.50
.0075	.50
.01	.50
.015	.50
.02	.50
.022	.50
.025	.50
.03	.50
.033	.60
.04	.60
.047	.60
.05	.60
.068	.70

TYPE P1688

1600 Volts

Aerovox Cat. No.	List Price
.001	.55
.0015	.55
.002	.55
.0022	.55
.003	.55
.0033	.55
.004	.55
.0047	.55
.005	.55
.006	.55
.0068	.60
.0075	.60
.01	.60
.015	.60
.02	.60
.022	.60
.025	.60
.03	.60
.033	.65

TYPE P85

100 Volts

Mfds.	Price
.25	.70
.5	.80

200 Volts

Mfds.	Price
.00025	.35
.0005	.35
.001	.35
.0015	.35
.002	.35
.0022	.35
.003	.35
.0033	.35
.004	.35
.0047	.35
.005	.35
.006	.35
.0068	.40
.01	.40
.015	.45
.02	.45
.022	.45
.03	.45
.033	.50
.04	.50
.047	.50
.05	.50
.068	.55
.1	.60

400 Volts

Aerovox Cat. No.	List Price
.00025	.35
.0005	.35
.001	.35
.0015	.35
.002	.35
.0022	.35
.003	.35
.0033	.35
.004	.35
.0047	.35
.005	.35
.006	.35
.0068	.40
.01	.45
.015	.45
.02	.45
.022	.45
.03	.45
.033	.50
.04	.50
.047	.50
.05	.50
.068	.55
.1	.65

600 Volts

Aerovox Cat. No.	List Price
.00025	.35
.0005	.35
.001	.35
.0015	.35
.002	.35
.0022	.35
.003	.35
.0033	.35
.004	.40
.0047	.40
.005	.40
.006	.45
.0068	.45
.01	.45
.015	.50
.02	.50
.022	.50
.03	.55
.033	.55
.04	.55
.047	.55
.05	.60
.068	.60
.1	.70

TYPE 89
TYPE 489

400 Volts

Aerovox Cat. No.	List Price
.001	1.00
.002	1.00
.003	1.00
.004	1.00
.005	1.00
.006	1.00
.0075	1.00
.01	1.00
.015	1.10
.02	1.10
.03	1.15
.04	1.15
.05	1.15
.075	1.20
.1	1.30
.25	1.60
.5	1.90

TYPE 689

600 Volts

Aerovox Cat. No.	List Price
.001	1.05
.002	1.05
.003	1.05
.004	1.05
.005	1.05
.006	1.05
.0075	1.05
.01	1.05
.015	1.10
.02	1.15
.03	1.20
.04	1.20
.05	1.20
.075	1.30
.1	1.40
.25	1.85
.5	2.40

TYPE 1089

Mfds.	Price
.001	1.20
.002	1.20
.003	1.20
.004	1.20
.005	1.20
.006	1.20
.0075	1.20
.01	1.20
.015	1.30
.02	1.30
.03	1.30
.04	1.30
.05	1.45
.075	1.55
.1	1.65
.25	2.20

TYPE 2089

2000 Volts

Aerovox Cat. No.	List Price
.001	1.40
.002	1.40
.003	1.40
.004	1.40
.005	1.40
.006	1.40
.0075	1.40
.01	1.40
.015	1.45
.02	1.50
.03	1.55
.04	1.55
.05	1.60
.075	1.95
.1	2.20

TYPE 2589

2500 Volts

Aerovox Cat. No.	List Price
.0005	1.50
.001	1.50
.005	1.50
.01	1.50
.02	1.65
.03	1.75
.05	1.95
.1	2.65

TYPE 3089

3000 Volts

Aerovox Cat. No.	List Price
.0005	1.65
.001	1.65
.005	1.65
.01	1.65
.02	1.80
.03	1.95
.05	2.10
.1	2.90

TYPE 3589

3500 Volts

Aerovox Cat. No.	List Price
.0005	1.95
.001	1.95
.005	1.95
.01	1.95
.02	2.10
.03	2.20
.05	2.35
.1	3.20

TYPE 4089

4000 Volts

Aerovox Cat. No.	List Price
.0005	2.20
.001	2.20
.005	2.20
.01	2.20
.02	2.35
.03	2.50
.05	2.65
.1	3.45

TYPE 5089

5000 Volts

Aerovox Cat. No.	List Price
.0005	2.50
.001	2.50
.005	2.50
.01	2.50
.02	2.65
.03	2.75
.05	2.90

TYPE 6089

6000 Volts

Aerovox Cat. No.	List Price
.0005	2.75
.001	2.75
.005	2.75
.01	2.75
.02	2.90
.03	3.05
.05	3.20

LO-VOLTAGE
TYPE 84
TYPE 484

400 Volts

Mfds.	Price
.001	.23
.002	.23
.003	.23
.004	.23
.005	.23
.006	.23
.0075	.23
.01	.23
.015	.23
.02	.23
.025	.27
.03	.27
.05	.27
.06	.32
.075	.32
.1	.32
.15	.36
.2	.36
.25	.41
.5	.54
1.0	.81

TYPE 684

600 Volts

Aerovox Cat. No.	List Price
.001	.23
.002	.23
.003	.23
.004	.23
.005	.23
.006	.23
.0075	.27
.01	.27
.015	.27
.02	.27
.025	.32
.03	.32
.05	.36
.06	.36
.075	.41
.1	.41
.15	.45
.2	.50
.25	.50
.5	.72
1.0	1.13

TYPE 1084

1000 Volts

Aerovox Cat. No.	List Price
.001	.45
.002	.45
.003	.45
.004	.45
.005	.45
.006	.45
.0075	.45
.01	.45
.015	.45
.02	.45
.025	.45
.03	.45
.05	.54
.06	.54
.075	.63
.1	.68
.15	.81
.2	.90
.25	1.04

TYPE 1684

1600 Volts

Aerovox Cat. No.	List Price
.001	.50
.002	.50
.003	.50
.004	.50
.005	.50
.006	.50
.0075	.54
.01	.54
.015	.54
.02	.54
.025	.54
.03	.63
.05	.68
.06	.72
.075	.81

HI-VOLTAGE
TYPE 84
(Not Illustrated)

2500 Volts

Aerovox Cat. No.	List Price
.0001	.95
.00025	.95
.0005	.95
.001	.95
.003	.95
.005	1.00
.01	1.05
.03	1.10
.05	1.20
.1	1.50
.15	1.65

5000 Volts

Aerovox Cat. No.	List Price
.0001	1.05
.00025	1.05
.0005	1.05
.001	1.05
.003	1.05
.005	1.10
.01	1.15
.03	1.30
.05	1.40

6000 Volts

Aerovox Cat. No.	List Price
.0001	1.10
.00025	1.10
.0005	1.10
.001	1.10
.003	1.15
.005	1.15
.01	1.40
.03	1.50
.05	1.60

7500 Volts

Mfds.	Price
.0001	1.10
.00025	1.10
.0005	1.10
.001	1.10
.003	1.15
.005	1.15
.01	1.50
.03	1.75

10000 Volts

Aerovox Cat. No.	List Price
.0001	1.15
.00025	1.15
.0005	1.15
.001	1.15
.003	1.20
.005	1.35
.01	1.60

15000 Volts

Aerovox Cat. No.	List Price
.0001	1.75
.00025	1.75
.0005	1.75
.001	1.75
.003	1.85
.005	2.00

TYPE PX

Aerovox Cat. No.	List Price
PX10D1	15.00
PX14D3	22.00
PX14D2	22.00
PX18D1	25.00
PX15D1B	37.00
PX20D1	24.00

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TYPE 09
TYPE 609

600 Volts

Mfds.	Price
.5	4.70
1.0	5.80
2.0	7.15
3.0	8.25
4.0	9.10
5.0	10.45
6.0	11.30
8.0	13.50
10.0	15.15
12.0	16.70
15.0	18.50

TYPE 1009
1000 Volts

Aerovox Cat. No.	List Price
.1	4.15
.25	4.70
.5	4.95
1.0	6.35
2.0	8.25
3.0	9.65
4.0	10.45
5.0	12.65
6.0	14.05
8.0	15.15
10.0	16.80
12.0	18.15
15.0	20.10

TYPE 2009
2000 Volts

Aerovox Cat. No.	List Price
.1	6.60
.25	7.15
.5	7.45
1.0	9.10
2.0	10.75
3.0	13.20
4.0	15.15
5.0	16.80
6.0	20.10
8.0	25.05
10.0	30.55
12.0	33.30
15.0	40.15

TYPE 2509
2500 Volts

Aerovox Cat. No.	List Price
.5	11.55
1.0	13.20
2.0	21.45
4.0	30.00
10.0	75.10

TYPE 3009

Aerovox Cat. No.	List Price
.1	14.05
.25	14.85
.5	16.80
1.0	20.10
2.0	25.05
4.0	36.85

TYPE 4009
4000 Volts

Aerovox Cat. No.	List Price
.1	14.05
.25	14.85
.5	16.80
Mfds.	Price
1.0	36.85
2.0	46.75
4.0	66.85

TYPE 5009
5000 Volts

Aerovox Cat. No.	List Price
.1	26.70
.25	30.25
.5	33.30
1.0	41.80
2.0	53.60

TYPE 6009
6000 Volts

Aerovox Cat. No.	List Price
.1	33.55
.25	41.80
.5	47.30
1.0	83.60

TYPE 7509

7500 Volts

Aerovox Cat. No.	List Price
.1	47.30
.25	50.05
.5	54.20

TYPE 16CT
TYPE 416

400 Volts

Aerovox Cat. No.	List Price
.01	2.85
.05	2.90
.1	3.15
.25	3.20
.5	3.25
1.0	3.65

TYPE 616

600 Volts

Aerovox Cat. No.	List Price
.01	2.90
.05	3.10
.1	3.20
.25	3.25
.5	3.35
1.0	3.75

TYPE 1016

1000 Volts

Aerovox Cat. No.	List Price
.01	3.10
.05	3.15
.1	3.25
.25	3.35
.5	3.65

TYPE 18CB
TYPE 418

400 Volts

Singles

Aerovox Cat. No.	List Price
.05	3.15
.1	3.25
.25	3.35
.5	3.45
1.0	3.85

TYPE 618

600 Volts

Aerovox Cat. No.	List Price
.05	3.20
.1	3.35
.25	3.45
.5	3.70
1.0	4.00

TYPE 1018

1000 Volts

Aerovox Cat. No.	List Price
.05	3.35
.1	3.45
.25	3.65
.5	3.85

TYPE 418

400 Volts

Duals

Aerovox Cat. No.	List Price
.05-.05	4.00
.1-.1	4.15
.25-.25	4.30
.5-.5	4.70

TYPE 618

600 Volts

Aerovox Cat. No.	List Price
.05-.05	4.20
.1-.1	4.30
.25-.25	4.55
.5-.5	4.95

TYPE 1018

1000 Volts

Aerovox Cat. No.	List Price
.05-.05	4.55
.1-.1	4.90
.25-.25	5.00

TYPE 418

400 Volts

Triples

Aerovox Cat. No.	List Price
.05-.05-.05	4.95
.1-.1-.1	5.30
.25-.25-.25	5.70

TYPE 618

600 Volts

Aerovox Cat. No.	List Price
.05-.05-.05	5.00
.1-.1-.1	5.95
.25-.25-.25	5.85

TYPE 1018

1000 Volts

Aerovox Cat. No.	List Price
.05-.05-.05	5.90
.1-.1-.1	5.85

TYPE 14
TYPE 2014

2000 Volts

Aerovox Cat. No.	List Price
.01	6.60
.05	7.30
.1	7.70
.25	8.35

Effective June 15, 1951

AEROVOX PRICE LIST

Subject to Change Without Notice

TYPE 3014
3000 Volts

Aerovox Cat. No.	List Price
.01	8.25
.05	8.80
.1	9.35
.25	10.45

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TYP 05
TYPE 605
600 Volts

Mfds.	Price
1.0	4.30
2.0	5.45
4.0	7.55

TYPE 1005
1000 Volts

1.0	4.60
2.0	6.25
4.0	8.00

TYPE 1505
1500 Volts

1.0	5.85
2.0	8.00
4.0	10.45

TYPE 2005
2000 Volts

1.0	7.55
2.0	8.35
4.0	11.85

TYPE 2505
2500 Volts

1.0	10.05
2.00	16.50

TYPE 3005
3000 Volts

1.0	15.15
2.0	18.45

TYPE 10
TYPE 610
600 Volts

2.0	4.55
4.0	6.25

TYPE 1010
1000 Volts

1.0	4.20
2.0	5.45

TYPE 1510
1500 Volts

.5	5.00
1.0	5.45

TYPE 20
TYPE 6020
6000 Volts

Mfds.	Price
2.0	150.00
4.0	184.00
5.0	208.00
6.0	233.00
10.0	290.00

TYPE 7520
7500 Volts

.5	83.00
1.0	108.00
2.0	166.00
4.0	250.00
6.0	300.00

TYPE 10020
10,000 Volts

1.0	217.00
2.0	275.00
4.0	336.00
5.0	368.00

TYPE 12520
12,500 Volts

.5	184.00
1.0	233.00
2.0	292.00
5.0	551.00

TYPE 15020
15,000 Volts

.25	175.00
.5	208.00
1.0	292.00
2.0	384.00
3.0	526.00

TYPE 20020
20,000 Volts

.25	208.00
.5	267.00
1.0	359.00
1.5	484.00
2.0	576.00
4.0	1,011.00

TYPE 25020
25,000 Volts

.2	217.00
.25	292.00
.5	317.00
1.0	475.00

Prices on Types 37520, 50020 and 12520VD supplied on request.

TYPE UC
(Not Illustrated)
200 Volts

Mfds.	Price
.1	.70
.25	.75
.5	.85
1.0	1.10

400 Volts

.1	.75
.25	.80
.5	.85
1.0	1.15
2.0	1.80
4.0	3.00

600 Volts

.25	.90
.5	1.05
1.0	1.40
2.0	2.10
4.0	3.80

1000 Volts

.5	1.55
1.0	2.30
2.0	3.80

TYPE 12
TYPE 2012
2000 Volts

Mfds.	Price
1.0	8.10
2.0	10.00

TYPE 3012
3000 Volts

.05	10.25
.1	11.00
.25	12.10
.5	13.20
1.0	16.80

TYPE 4012
4000 Volts

.05	9.90
.1	10.25
.25	11.55

TYPE 6012
6000 Volts.

.03	13.20
.05	14.85
.1	18.15

TYPE 7512
7500 Volts

.01	13.20
.02	14.30
.03	15.40
.05	17.05
.1	19.90

TYPE 30
TYPE 430
400 Volts
Singles

.05	1.95
.1	2.20
.25	2.50
.5	2.65
.75	2.95
1.0	3.15
2.0	3.95

TYPE 630
600 Volts

.05	2.85
.1	2.90
.25	3.10
.5	3.30
.75	3.50
1.0	3.75
2.0	5.00

TYPE 1030
1000 Volts

.05	3.05
.1	3.15
.25	3.25
.5	3.50
.75	4.20
1.0	4.40

TYPE 430
400 Volts
Duals

.05-.05	3.05
.1-.1	3.30
.25-.25	3.60
.5-.5	4.15
1.0-1.0	4.95

TYPE 630
600 Volts

.05-.05	3.65
.1-.1	3.70
.25-.25	3.75
.5-.5	4.30
1.0-1.0	5.30

TYPE 1030
1000 Volts

.05-.05	3.85
.1-.1	3.95
.25-.25	4.20
.5-.5	5.45

TYPE 430
400 Volts
Triples

.05-.05-.05	3.85
.1-.1-.1	4.00
.25-.25-.25	4.40

TYPE 630
600 Volts

.05-.05-.05	4.05
.1-.1-.1	4.20
.25-.25-.25	4.75

TYPE 1030
1000 Volts

.05-.05-.05	4.25
.1-.1-.1	4.55
.25-.25-.25	5.50

TYPE PWC
(Not Illustrated)
600 Volts

4	2.10
8	3.50
8-8	4.30

TYPE PWP
(Not Illustrated)
600 Volts

4	2.00
8	3.25

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AEROLITE METALLIZED PAPER CAPACITORS

TYPE P82
200 Volts

Mfds.	Price
.01	.60
.02	.60
.03	.60
.05	.65
.1	.70
.25	.90
.5	1.05
1.0	1.30
2.0	1.80

400 Volts

.01	.65
.02	.65
.03	.65
.05	.70
.1	.80
.25	1.00
.5	1.15
1.0	1.60

600 Volts

.01	.70
.02	.70
.03	.80
.05	.80
.1	.90
.25	1.10
.5	1.45
1.0	1.80

TYPE P83Z
200 Volts

.005	.30
.01	.30

400 Volts

.002	.30
.003	.30
.008	.35
.01	.35

600 Volts

.0005	.30
.001	.30
.002	.30
.0022	.30
.0047	.30
.005	.30
.0068	.30

TYPE P30Z
200 Volts

.5	3.30
1.0	3.55

150 Volts

2.0	4.45
4.0	5.75
6.0	6.10
8.0	8.40
10.0	9.70
12.0	11.00

400 Volts

.25	3.35
.5	3.55
1.0	3.95
2.0	4.90
4.0	7.85

TYPE P30Z
600 Volts

.1	3.50
.25	3.55
.5	4.25
1.0	4.90
2.0	6.25

TYPE P89ZXY
150 Volts

Mfds.	Price
3.0	3.40
4.0	4.35
6.0	5.30

200 Volts

.05	1.40
.1	1.45
.25	1.60
.5	1.70
1.0	2.10
2.0	2.60

400 Volts

.03	1.40
.05	1.45
.1	1.60
.25	1.80
.5	2.00
1.0	2.50
2.0	3.60

600 Volts

.01	1.40
.02	1.45
.03	1.50
.05	1.55
.1	1.70
.25	2.00
.5	2.40
1.0	3.00
2.0	4.00

TYPE P123ZG
200 Volts

.0005	2.50
.001	2.55
.002	2.55
.003	2.60
.005	2.65
.01	2.65
.047	2.85
.050	2.85
.068	2.90
.10	2.95
.15	3.00
.2	3.15
.22	3.25
.25	3.40
.33	3.55
.47	3.85
.50	4.00
.68	4.15
1.0	4.70
1.5	5.40
2.0	6.80

400 Volts

.0005	2.60
.001	2.65
.002	2.65
.003	2.70
.02	2.90
.022	2.90
.033	2.95
.04	3.00
.047	3.05
.050	3.10
.068	3.15
.10	3.30
.15	3.55

TYPE P123ZG
400 Volts

Mfds.	Price
.2	3.70
.22	3.85
.25	3.95
.33	4.10
.47	4.65
.50	4.85
.68	5.05
1.0	5.65

600 Volts

.01	2.90
.015	2.95
.02	2.95
.022	3.00
.033	3.15
.04	3.15
.047	3.20
.050	3.25
.068	3.35
.10	3.65
.15	3.85
.2	4.00
.22	4.20
.25	4.50
.33	4.80
.47	5.15
.50	5.85
.68	6.05
1.0	6.70

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HI Q CERAMIC CAPACITORS

Mmf.	Type	Price
50	CS-1	.60
100		.60
500		.60
1000		.60
1500		.60
3000	CS-2	.60
4000	CS-3	.60
7500	CS-4	.60
50	CIS-1	.60
100		.60
500		.60
1000	CIS-2	.60
1500		.60

TYPE HV10
10,000 Volts

500	1.75

TYPE HV20
20,000 Volts

Mmf.	Type	Price
500		2.25
1500	CF-1	1.00
3000	CF-2	1.00
4000	CF-3	1.00
7000	CF-4	1.00
1500	CFS-1	1.00

TYPE NPO

1.5	SI-1	.50
3.0	SI-1	.50
3.3	SI-1	.50
4.7	SI-1	.50
5.0	SI-1	.50
6.8	SI-1	.50
8.2	SI-1	.50
10	SI-1	.50
20	SI-1	.50
25	SI-13	.50
33	SI-2	.50
50	SI-27	.55
75	SI-7	.55
100	SI-7	.55
150	SI-3	.60
175	SI-4	.60

TYPE N750

5	SI-1	.50
10	SI-1	.50
47	SI-27	.50
75	SI-7	.50
100	SI-7	.50

TYPE N080

10	SI-1	.60
22	SI-1	.60
33	SI-2	.60
47	SI-27	.60
62	SI-7	.60

Type	Price
BPD .00047	.25
BPD .0008	.25
BPD .001	.25
BPD .0015	.25
BPD .002	.25
BPD .004	.25
BPD .005	.25
BPD .01	.30
BPD 2 x .001	.40
BPD 2 x .0015	.40
BPD 2 x .002	.40
BPD 2 x .004	.45
BPD 3 x .0015	.50
BPD 3 x .002	.50
BPD 2 x .003	.45

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Mmfd.	Type	Price
5	SI-1	.25
10	SI-1	.25
12	SI-1	.25
15	SI-1	.25
18	SI-1	.25
20	SI-1	.25
22	SI-1	.25
24	SI-1	.25
25	SI-1	.25
27	SI-1	.25
30	SI-1	.25
33	SI-1	.25
39	SI-1	.25
47	SI-1	.25
50	SI-1	.25
51	SI-1	.25
56	SI-1	.25
68	SI-1	.25
75	SI-1	.25
82	SI-1	.25
100	SI-1	.25
110	SI-1	.25
120	SI-1	.25
150	SI-1	.25
180	SI-1	.25
200	SI-1	.25
220	SI-1	.25
240	SI-1	.25
250	SI-1	.25
270	SI-1	.25
300	SI-1	.25
330	SI-1	.25
360	SI-1	.25
390	SI-1	.25
470	SI-1	.25
500	SI-1	.25
510	SI-1	.25
560	SI-1	.25
680	SI-1	.25
750	SI-1	.25
1000	SI-2	.25
1200	SI-2	.25
1500	SI-2	.25
1800	SI-2	.25
2000	SI-2	.25
2200	SI-7	.25
2400	SI-7	.25
2500	SI-7	.25
2700	SI-7	.25
3000	SI-19	.25
3300	SI-19	.25
4000	SI-19	.25
4700	SI-7	.30
5000	SI-3	.30
5100	SI-3	.30
6000	SI-3	.30
6800	SI-4	.30
7500	SI-4	.30
10,000	SI-5	.30
15,000	SI-6	1.00
17,500	SI-6	1.00
20,000	SI-5GMV	1.00
25,000	SI-5GMV	1.00
30,000	SI-6GMV	1.00
33,000	SI-6GMV	1.00
5	CI-1	.25
10	CI-1	.25
12	CI-1	.25
15	CI-1	.25
18	CI-1	.25
20	CI-1	.25
22	CI-1	.25
24	CI-1	.25
25	CI-1	.25
27	CI-1	.25
30	CI-1	.25
33	CI-1	.25
39	CI-1	.25
47	CI-1	.25
50	CI-1	.25
51	CI-1	.25
56	CI-1	.25
68	CI-1	.25
75	CI-1	.25
82	CI-1	.25
100	CI-1	.25
110	CI-1	.25
120	CI-1	.25
150	CI-1	.25
180	CI-1	.25
200	CI-1	.25
220	CI-1	.25
240	CI-1	.25
250	CI-1	.25
270	CI-1	.25
300	CI-1	.25
330	CI-1	.25
360	CI-1	.25
390	CI-1	.25
470	CI-1	.25
500	CI-1	.25
510	CI-1	.25
560	CI-1	.25
680	CI-1	.25
750	CI-1	.25
1000	CI-2	.25
1200	CI-2	.25
1500	CI-2	.25
1800	CI-2	.25
2000	CI-2	.25
2200	CI-3	.25
2400	CI-3	.25
2500	CI-3	.25
2700	CI-3	.25
3000	CI-3	.25
3300	CI-3	.25
4000	CI-3	.25
4700	CI-3	.30
5000	CI-3	.30
5100	CI-3	.30
6000	CI-3	.30

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FILTERS

Type	Price
IN-23	1.05
IN-27	1.50
IN-28	2.00
IN-29	1.75
IN-30	2.50
IN-31	3.00
IN-42	7.50

FILTERS

Type	Price
IN-101	3.75
IN-103	22.00
IN-110	7.50
IN-111	12.50
IN-112	22.00
IN-104	1.20
IN-105	1.25
IN-106	3.80
IN-133	1.75
IN-109	3.80

HEAVY DUTY FILTERS

Type	Price
INB-104	12.50
INB-100	7.50
INB-101	27.50
INB-105	20.00
INB-102	30.00
INB-103	49.00
INB-106	27.50
INB-107	42.50
INB-108	71.00

VIBRATOR BUFFER CAPACITORS

Cap. Mfd.	Type	Price
.001	VBC-2	.50
.002	VBC-3	.50
.0022	VBC-4	.50
.003	VBC-5	.50
.0033	VBC-6	.50
.004	VBC-7	.50
.0047	VBC-8	.50
.005	VBC-9	.50
.006	VBC-22	.50
.0068	VBC-23	.50
.007	VBC-24	.55
.0075	VBC-25	.55
.008	VBC-26	.55
.01	VBC-27	.55
.015	VBC-28	.55
.02	VBC-29	.55
.025	VBC-32	.55
.03	VBC-33	.65
.05	VBC-34	.70
.015-.015	VBC-35	.80
.5	VHC-36	.50

SUPPRESSOR CONDENSORS

1120	1.75
1140	.90
1141	3.25
1144	.90
1150	.90
1466	.90
1160	.90
1143-G	.90
1142-O	.90

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SI-TV CERAMIC CAPACITORS

Cap. Mmf.	Volts	Price
4.7	6000	1.00
8.2	6000	1.00
12.0	6000	1.00
15.0	6000	1.00
18.0	6000	1.00
20.0	6000	1.00
22.0	6000	1.00
24.0	6000	1.00
27.0	6000	1.00
30.0	6000	1.00
47.0	6000	1.00

INTERFERENCE FILTERS

Type	DC Voltage	Price
INA-117	150	6.00
INA-116	150	7.50
INA-118	150	10.00
IN-148	150	11.00
IN-150	150	12.50
IN-151	150	14.00
IN-152	150	16.25
IN-153	150	23.00
IN-156	150	29.50
IN-154	150	39.00

RESONANT CAPACITORS

Cat. No.	Mfd.	Price
RC2	.05	.50
RC3	.1	.65
RC4	.2	.70

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AEROVOX MICA CAPACITORS

TYPE 1441W
500 Volts

Mfds.	Price
.0005	.25
.00075	.25
.001	.30
.0015	.30
.002	.40
.0025	.45
.003	.50
.004	.55
.005	.55
.006	.75
.007	.90
.008	1.00

TYPE 1441WX
300 Volts

.004	.50
.005	.55
.006	.70
.007	.80
.008	.90
.009	1.00
.01	1.10

Effective June 15, 1951

AEROVOX PRICE LIST

Subject to Change Without Notice

TYPE 1467

500 Volts

Aerovox Cat. No.	List Price
.0005	.25
.0075	.25
.001	.30
.0015	.30
.002	.40
.0025	.45
.003	.50
.004	.55
.005	.60
.006	.75
.007	.90
.008	1.00
.009	1.10
.01	1.20

TYPE 1467X

300 Volts

Aerovox Cat. No.	List Price
.007	.80
.008	.90
.01	1.10
.012	1.25
.013	1.35
.014	1.45
.015	1.55

TYPE 1468

500 Volts

Aerovox Cat. No.	List Price
.000001	.25
.000005	.25
.00001	.25
.000025	.25
.00004	.20
.00005	.20
.000075	.20
.0001	.20
.00015	.20
.0002	.20
.00025	.25
.0003	.25
.00035	.25
.0004	.25
.0005	.25
.00075	.25
.001	.30

TYPE 1478

500 Volts

Aerovox Cat. No.	List Price
.0005	.30
.00075	.30
.001	.40
.0015	.45
.002	.50

TYPE 1445

600 Volts

Aerovox Cat. No.	List Price
.00005	1.20
.0001	1.20
.00015	1.20
.0002	1.20
.00025	1.20
.0003	1.20
.00035	1.20
.0004	1.20
.0005	1.20
.001	1.20
.0015	1.20
.002	1.30
.0025	1.30
.003	1.45
.004	1.50
.005	1.55
.006	1.80
.008	1.90
.01	2.15
.015	2.65
.02	3.05
.025	3.60
.03	4.45
.04	5.65

TYPE 1446

1200 Volts

Aerovox Cat. No.	List Price
.00005	1.60
.0001	1.60
.00015	1.60
.0002	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	1.80
.0015	2.30
.002	2.40
.0025	2.80
.003	3.05
.004	3.05
.005	3.30
.006	3.30
.008	3.85
.01	5.10
.015	6.00

TYPE 1447

2500 Volts

Aerovox Cat. No.	List Price
.00005	1.90
.000075	1.90
.0001	1.90
.00015	1.90
.0002	1.90
.00025	2.20

Aerovox Cat. No.	List Price
.0003	2.25
.00035	2.25
.0004	2.30
.0005	2.40
.001	2.80
.0015	3.55
.002	4.15
.0025	4.60
.003	4.90
.004	5.65
.005	6.40

TYPE 1455

600 Volts

Aerovox Cat. No.	List Price
.00005	1.20
.0001	1.20
.00015	1.20
.0002	1.20
.00025	1.20
.0003	1.20
.00035	1.20
.0004	1.20
.0005	1.20
.001	1.20
.0015	1.20
.002	1.30
.0025	1.30
.003	1.45
.004	1.50
.005	1.55
.006	1.80
.008	1.90
.01	2.15
.015	2.65
.02	3.05
.025	3.60
.03	4.45

TYPE 1456

1200 Volts

Aerovox Cat. No.	List Price
.00005	1.60
.0001	1.60
.00015	1.60
.0002	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	1.80
.0015	2.30
.002	2.40
.0025	2.80
.003	3.05
.004	3.05
.005	3.30
.006	3.30
.008	3.85
.01	5.10

TYPE 1457

2500 Volts

Aerovox Cat. No.	List Price
.00005	1.90
.000075	1.90
.0001	1.90
.00015	1.90
.0002	1.90
.00025	2.20
.0003	2.25
.00035	2.25
.0004	2.30
.0005	2.40
.001	2.80
.0015	3.55
.002	4.15
.0025	4.60
.003	4.90

TYPE 1650

600 Volts

Aerovox Cat. No.	List Price
.00005	1.45
.0001	1.45
.00025	1.45
.0003	1.45
.00035	1.45
.0004	1.45
.0005	1.45
.001	1.45
.0015	1.45
.002	1.65
.0025	1.70
.003	1.85
.004	2.00
.005	2.10
.006	2.20
.008	2.45
.01	2.80
.015	3.05
.02	3.55
.025	4.35
.03	4.55
.04	5.85
.05	7.10
.06	8.05

TYPE 1651

1200 Volts

Mfds.	Price
.00005	1.60
.0001	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60

Aerovox Cat. No.	List Price
.001	1.90
.0015	2.25
.002	2.50
.0025	2.80
.003	2.95
.004	3.10
.005	3.30
.006	3.45
.008	4.10
.01	4.70
.015	5.80
.02	7.05
.025	7.90
.03	8.10

TYPE 1652

2500 Volts

Aerovox Cat. No.	List Price
.00005	1.90
.000075	1.90
.0001	1.90
.00015	2.00
.0002	2.10
.00025	2.15
.0003	2.20
.00035	2.25
.0004	2.50
.0005	2.55
.001	2.90
.0015	3.90
.002	4.25
.0025	4.60
.003	5.10
.004	5.65
.005	6.20
.006	6.35
.008	6.85
.01	7.30

TYPE 1653L

3750 Volts

Aerovox Cat. No.	List Price
.00005	3.30
.000075	3.65
.0001	3.80
.00015	4.15
.0002	4.30
.00025	4.75
.0003	4.90
.00035	5.75
.0004	5.90
.0005	6.50
.001	7.70
.0015	10.10
.002	11.50
.0025	12.90
.003	14.25

TYPE 1654L

5000 Volts

Aerovox Cat. No.	List Price
.00005	3.75
.000075	4.15
.0001	4.65
.00015	5.05
.0002	6.25
.00025	6.80
.0003	7.15
.00035	7.50
.0004	7.70
.0005	9.90
.001	12.50

TYPE 1450

600 Volts

Aerovox Cat. No.	List Price
.00025	.45
.0003	.45
.00035	.45
.0004	.45
.0005	.45
.001	.50
.0015	.55
.002	.55
.0025	.60
.003	.70
.004	.70
.005	.70
.006	.80
.008	.90
.01	1.00
.015	1.35
.02	1.45
.025	1.75
.03	2.05
.04	2.65
.05	3.30

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TYPES 1991-1996

Mfds.	Types	Price
.00005	1996	10.40
.0001	1996	10.40
.00025	1996	10.40
.0005	1996	10.40
	1994	8.45
.001	1996	10.40
	1994	9.45
	1992	8.45
.0015	1996	12.35
	1994	10.40
	1993	13.65
	1992	8.45
	1991	6.50
.002	1996	14.30
	1995	13.35
	1994	12.35
	1993	11.40
	1992	10.40
	1991	8.45
.003	1996	19.85
	1995	16.90
	1994	13.35
	1993	12.35
	1992	11.40
	1991	9.10
.005	1995	18.85
	1994	14.30
	1993	13.65
	1992	13.65
	1991	11.05
.01	1994	19.85
	1993	19.85
	1992	20.80
	1991	18.20
.02	1992	20.80
	1991	19.20
.05	1992	24.05
	1991	22.10
.1	1991	24.05

TYPE 1464

500 Volts

Mfds.	Price
.00075	.90
.0008	.95
.0009	1.00
.001	1.10
.0015	1.35
.002	1.35
.0025	1.80
.003	2.05
.004	2.15
.005	2.25
.006	3.00

TYPE 1464X

300 Volts

Aerovox Cat. No.	List Price
.004	2.15
.005	2.25
.006	3.00
.007	3.40
.008	4.00
.01	4.80

TYPE 1469

500 Volts

Aerovox Cat. No.	List Price
.000005	.45
.00001	.40
.000025	.40
.00004	.40
.00005	.40
.00007	.40
.000075	.40
.0001	.40
.00015	.45
.0002	.45
.00025	.45
.0003	.55
.00035	.60
.0004	.65
.0005	.70

TYPE 1479

500 Volts

Aerovox Cat. No.	List Price
.0001	.40
.00015	.45
.0002	.45
.00025	.45
.0003	.55
.00035	.60
.0004	.65
.0005	.70
.0007	.85
.00075	.90
.0008	.95
.0009	1.00
.001	1.10

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AEROVOX RESISTORS TYPE 931

10 Watts

Ohms	Price
1	.75
1.5	.75
2	.75
3	.75
4	.75
5	.75
7.5	.75
10	.75
12	.75
15	.75
20	.75
25	.75
30	.75
35	.75
40	.75
50	.75
75	.75
100	.75
125	.75
150	.75
200	.75
225	.75
250	.75
300	.75
350	.75
400	.75
450	.75
500	.75
600	.75
700	.75
750	.75
800	.75
900	.75
1000	.75
1100	.80
1200	.80
1250	.80
1500	.80
1750	.80
2000	.80
2250	.80
2500	.80
3000	.80
3500	.80
4000	.80
4500	.80
5000	.80
6000	.90
7000	.90
7500	.90
8000	.90
8500	.90
9000	.90
10,000	.90
11,000	1.05
12,500	1.05
13,500	1.05
14,300	1.05
15,000	1.05
16,000	1.05
17,500	1.05
18,000	1.05
20,000	1.05
22,500	1.10
25,000	1.10
30,000	1.20
35,000	1.20
35,000	1.20
40,000	1.20
45,000	1.20
50,000	1.20

TYPE 933

20 Watts

Ohms	Price
1	.95
3	.95
5	.95
10	.95
15	.95
25	.95
50	.95
75	.95
100	.95
150	.95
175	.95
200	.95
250	.95
300	.95
350	.95
400	.95
500	.95
650	.95
700	.95
750	.95
800	.95
850	.95
1000	.95
1200	.95
1250	.95
1500	.95
1750	.95
1850	.95
2000	.95
2250	.95
2400	.95
2500	.95
2750	.95
3000	.95
3500	.95
3500	.95
4000	.95
4500	.95
5000	.95
6000	1.10
7000	1.10
7500	1.10
8000	1.10
10,000	1.10
12,500	1.20
15,000	1.20
20,000	1.20
25,000	1.35
30,000	1.35
35,000	1.35
40,000	1.35
45,000	1.60
50,000	1.60
55,000	1.60
60,000	1.60
65,000	1.85
70,000	1.85
75,000	1.85
80,000	1.85
85,000	2.10
90,000	2.10
95,000	2.10
100,000	2.10

TYPE 952

25 Watts

Aerovox Cat. No.	List Price
1	1.85
2	1.85
3	1.85
4	1.85
5	1.85
7	1.85
10	1.85
15	1.85
20	1.85
25	1.85
50	1.85
75	1.85
100	1.85
150	1.85
200	1.85
250	1.85
300	1.85
400	1.85
500	1.85
750	1.85
800	1.85
850	1.85
1000	1.85
1250	1.85
1500	1.85
2000	1.85
2250	1.85
2500	1.85
3000	1.85
3500	1.85
4000	1.85
4500	1.85
5000	1.85
6000	1.90
7000	1.90
7200	1.90
7500	1.90
8000	1.90
8500	1.90
9000	1.90
10,000	1.90
12,000	1.90
15,000	1.90
20,000	1.90
25,000	1.90

TYPE 954

50 Watts

Aerovox Cat. No.	List Price
1	3.00
2	2.35
3	2.35
4	2.35
5	2.35
10	2.35
25	2.35
50	2.35
75	2.35
100	2.35
150	2.35
200	2.35
250	2.35
300	2.35
400	2.35
500	2.35
750	2.35
800	2.35
1000	2.35
1250	2.45
1500	2.45
2000	2.45
2250	2.45
2500	2.45
3000	2.45
3500	2.45
4000	2.45
4500	2.45
5000	2.45
6000	2.65
7000	2.65
7200	2.65
7500	2.65
8000	2.65
9000	2.65
10,000	2.65
12,000	2.85
15,000	2.85
20,000	2.85
25,000	3.10
30,000	3.10
40,000	3.10
50,000	3.30
60,000	3.30
75,000	3.60
80,000	3.60
100,000	3.90

TYPE 956

80 Watts

Ohms	Price
1	3.55
2	3.55
3	2.70
4	2.70
5	2.70
10	2.70
15	2.70
25	2.70
50	2.70
75	2.70
100	2.70
200	2.70
250	2.70
300	2.70
400	2.70
500	2.70
750	2.70
800	2.70
1000	2.70
1250	2.85
1500	2.85
2000	2.85
2250	2.85
2500	2.85
3000	2.85
3500	2.85
4000	2.85
4500	2.85
5000	2.85
6000	3.00
7000	3.00
7200	3.00
7500	3.00
8000	3.00
9000	3.00
10,000	3.00
15,000	3.15
20,000	3.15
25,000	3.50
30,000	3.50
35,000	3.50
40,000	3.50
45,000	3.60
50,000	3.60
60,000	3.60
70,000	3.95
80,000	3.95
100,000	4.35

TYPE 957

100 Watts

Aerovox Cat. No.	List Price
1	4.55
2	4.55
3	4.55
4	3.60
5	3.60
10	3.60
25	3.60
25	3.60
100	3.60
200	3.60
250	3.60
400	3.60
500	3.60
750	3.60
1000	3.60
1500	3.65
2000	3.65
2500	3.65
3000	3.65
4000	3.65
4500	3.65
5000	3.65
6000	3.85
7500	3.85
10,000	3.85
15,000	4.10
20,000	4.10
25,000	4.35
30,000	4.35
40,000	4.35
50,000	4.55
60,000	4.55
75,000	4.75
100,000	4.95

TYPE 958

200 Watts

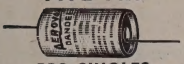
Aerovox Cat. No.	List Price
5	5.65
10	4.35
25	4.35
50	4.35
100	4.35
250	4.35
500	4.35
1000	4.35
1500	4.45
2000	4.45
2500	4.45
3000	4.45
3500	4.45
4000	4.45
4500	4.45
5000	4.45
10,000	4.70
15,000	4.90
20,000	4.90
25,000	5.05
30,000	5.05
40,000	5.05
50,000	5.15
60,000	5.15
75,000	5.40
100,000	5.65

Type		Price
1097	½ Watt	.17
1098	1 Watt	.25

Television Capacitors

AEROVOX
corporation

TYPE PRS



PRS SINGLES

Mfd.	Volts	Size: Ins. D. × L.
2000	4	1 1/16 x 2¾
500	6	13/16 x 1¾
1000	6	15/16 x 2¼
2000	6	1 1/16 x 2¾
100	12	11/16 x 1½
250	12	13/16 x 1¾
500	12	15/16 x 2¼
10	25	9/16 x 1¼
16	25	9/16 x 1¼
25	25	9/16 x 1¼
50	25	11/16 x 1½
100	25	13/16 x 1½
500	25	1 1/16 x 2½
10	50	9/16 x 1¼
20	50	11/16 x 1¼
25	50	11/16 x 1¼
50	50	11/16 x 1¾
100	50	13/16 x 1¾
4	150	9/16 x 1¼
8	150	11/16 x 1¼
12	150	11/16 x 1¼
20	150	11/16 x 1¾
24	150	11/16 x 1¾
30	150	13/16 x 1½
40	150	13/16 x 1¾
50	150	15/16 x 1¾
8	250	11/16 x 1½
12	250	11/16 x 1¾
20	250	13/16 x 1½
8	350	13/16 x 1½
10	350	13/16 x 1¾
12	350	13/16 x 1¾
24	350	15/16 x 1¾
4	450	11/16 x 1½
8	450	13/16 x 1½
10	450	13/16 x 1¾
12	450	15/16 x 1½
16	450	15/16 x 1¾
20	450	1 1/16 x 1¾
30	450	1 1/16 x 2¼
40	450	1 1/16 x 2½
10	500	15/16 x 3 1/16
15	500	1 1/16 x 3 3/16

PRS DUALS

Mfd.	Volts	Size: Ins. D. × L.
50-30	150	15/16 x 2¼
50-50	150	15/16 x 2¼
20-20	250	15/16 x 2¼
8-8	450	13/16 x 2¼
10-10	450	15/16 x 2¼

PRS TRIPLES

Mfd.	Volts	Size: Ins. D. × L.
20-20-20	150	15/16 x 1¾

FREE AEROVOX Research Worker

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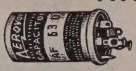
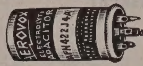
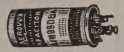
TYPE AFH (85°C) ELECTROLYTICS







AFH SINGLES

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AF600R	3000	10	1⅜x3	AFH1-01
AF200P	1000	15	1 x3	AFH1-02
AF400P	2000	15	1⅜x3	AFH1-03
AF5A	25	25	1 x2	AFH1-05
AF8A	40	25	¾x2	AFH1-06
AF20A	100	25	¾x2	AFH1-07
AF100A	500	25	1 x2½	AFH1-08
AF200A	1000	25	1⅜x2	AFH1-10
AF30B	150	50	¾x2½	AFH1-12
AF100B	500	50	1⅜x2½	AFH1-13
AF5D	25	150	1 x2	AFH1-15
AF6D	30	150	1 x2	AFH1-16
AF8D	40	150	1 x2	AFH1-17
AF10D	50	150	1 x2	AFH1-18
AF16D	80	150	1 x2	AFH1-20
AF20D	100	150	1 x2	AFH1-21
AF28D	140	150	1 x3	AFH1-23
AF30D	150	150	1 x3	AFH1-24
AF8E	40	200	1 x2	AFH1-25
AFH3F	15	250	1 x2	AFH1-26
AF4F	20	250	1 x2	AFH1-27
AF6F	30	250	¾x2	AFH1-28
AF8F	40	250	1 x2	AFH1-29
AF12F	60	250	1 x2½	AFH1-30
AF3G	15	300	1 x2	AFH1-32
AF6G	30	300	1 x2	AFH1-33
AF10G	50	300	1 x2½	AFH1-34
AFH16G	80	300	1 x3	AFH1-35
AFH20G	100	300	1 x3½	AFH1-36
AF25G	125	300	1⅜x3	AFH1-37
AF6H	30	350	1 x2	AFH1-39
AF10H	50	350	1 x3	AFH1-41
AFH16H	80	350	1⅜x2½	AFH1-42
AF25H	125	350	1⅜x3	AFH1-43
AF2I	10	400	¾x2	AFH1-44
AF4I	20	400	1⅜x2½	AFH1-45
AFH8I	40	400	1⅜x2	AFH1-46
AF16I	80	400	1⅜x2½	AFH1-47
AF2J	10	450	1 x2	AFH1-48
AF3J	15	450	1 x2	AFH1-49
AF4J	20	450	1 x2	AFH1-50
AF6J	30	450	1 x2½	AFH1-51
AF8J	40	450	1 x3	AFH1-52
AF10J	50	450	1 x3	AFH1-53
AF16J	80	450	1⅜x3	AFH1-55
AF6X	30	475	1 x3	AFH1-56
AF18X	90	475	1⅜x3½	AFH1-57
AF16K	80	500	1⅜x3	AFH1-62
AF2W	10	525	1 x2	AFH1-64

AFH DUALS

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AF200200P	1000-1000	15	1 x3½	AFH2-02
AF88A	40-40	25	1 x2	AFH2-04
AF3010A	150-50	25	1 x2	AFH2-05
AF1010B	50-50	50	1 x2	AFH2-06
AFH24D	10-20	150	1⅜x2	AFH2-07
AF44D	20-20	150	1 x2	AFH2-08
AF63D	30-15	150	1 x2	AFH2-09
AF66D	30-30	150	1 x2	AFH2-11
AF84D	40-20	150	1 x2	AFH2-12
AF88D	40-40	150	1 x2	AFH2-14
AF106D	50-30	150	1 x2	AFH2-15
AF1010D	50-50	150	1 x2½	AFH2-16
AF1212D	60-60	150	1 x3	AFH2-17
AF168D	80-40	150	1 x3	AFH2-19
AF1616D	80-80	150	1⅜x2	AFH2-20
AF4025D	200-125	150	1⅜x3	AFH2-22
AFH4040D	200-200	150	1⅜x3	AFH2-23
AF22F	10-10	250	1 x2	AFH2-25
AF44F	20-20	250	1 x2	AFH2-26
AF88F	40-40	250	1 x3	AFH2-29
AF22G	10-10	300	1 x2	AFH2-31
AF33G	15-15	300	1 x2	AFH2-32
AFH1616G	80-80	300	1⅜x3	AFH2-34
AFH244G	120-20	300	1⅜x3	AFH2-35
AF33H	15-15	350	1 x2	AFH2-36
AF44H	20-20	350	1 x2½	AFH2-37
AF64H	30-20	350	1 x3	AFH2-38
AFH26I	10-30	400	1 x3	AFH2-42
AF33I	15-15	400	1 x2½	AFH2-43
AF162I	80-10	400	1⅜x3	AFH2-45
AF22J	10-10	450	1 x2	AFH2-47
AF32J	15-10	450	1 x2½	AFH2-48
AF42J	20-10	450	1 x3	AFH2-50
AF44J	20-20	450	1 x3	AFH2-51
AFH63J	30-15	450	1⅜x2	AFH2-53
AF66J	30-30	450	1⅜x2	AFH2-54
AF88J	40-40	450	1⅜x3	AFH2-57
AFH128J	60-40	450	1⅜x3½	AFH2-61
AFH162J	80-10	450	1⅜x3	AFH2-62
AF164J	80-20	450	1⅜x3½	AFH2-63
AF62X	30-10	475	1⅜x2	AFH2-65
AF82X	40-10	475	1⅜x2½	AFH2-66
AF58K	25-40	500	1⅜x3	AFH2-70
AF88K	40-40	500	1⅜x3	AFH2-72
AF50R200S	250/1000	10/6	1⅜x2	AFH2-74
AF50R400S	250/2000	10/6	1⅜x2	AFH2-75
AF4G4A	20/20	300/25	1 x2	AFH2-82
AF6G6H	30/30	300/350	1 x3	AFH2-83
AFH8H2E	40/10	350/200	1⅜x2	AFH2-86
AFH8J4A	40/20	450/25	1 x3	AFH2-89
AFH16J10B	80/50	450/50	1⅜x3	AFH2-91
AF4J20C	20/100	450/100	1⅜x2	AFH2-93
AFH4J16H	20/80	450/350	1⅜x3	AFH2-95
AFH8J2H	40/10	450/350	1⅜x2	AFH2-96
AFH8J8H	40/40	450/350	1⅜x3	AFH2-97
AF15X10B	75/40	475/50	1⅜x3	AFH2-99
AF4X20G	20/100	475/300	1⅜x3	AFH2-100
AF8X8I	40/40	475/400	1⅜x3	AFH2-101
AF12K16D	60/80	500/150	1⅜x3	AFH2-103
AF8K10E	40/50	500/200	1⅜x3	AFH2-104
AF4K20G	20/100	500/300	1⅜x3	AFH2-106
AF8K8I	40/40	500/400	1⅜x3	AFH2-107

AFH TRIPLES

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AF444A	20-20-20	25	1 x2	AFH3-01
AF888A	40-40-40	25	1 x2	AFH3-02
AF666B	30-30-30	50	1 x2	AFH3-03
AF266D	10-30-30	150	1 x2	AFH3-04
AF444D	20-20-20	150	1 x2	AFH3-05
AF844D	40-20-20	150	1 x2	AFH3-08
AF888D	40-40-40	150	1 x2½	AFH3-10
AF1684D	80-40-20	150	1 x3	AFH3-13
AF233F	10-15-15	250	1 x2	AFH3-14
AF336F	15-15-30	250	1 x2	AFH3-16
AF844F	40-20-20	250	1 x3	AFH3-20
AFH161612F	80-80-60	250	1⅜x3	AFH3-21
AF222G	10-10-10	300	1 x2	AFH3-22
AFH1242G	60-20-10	300	1⅜x2	AFH3-25
AF222H	10-10-10	350	1 x2½	AFH3-27
AFH1284H	60-40-20	350	1⅜x3½	AFH3-29
AF222I	10-10-10	400	1 x2½	AFH3-30
AF222J	10-10-10	450	1 x3	AFH3-31
AFH266J	10-30-30	450	1⅜x3	AFH3-32
AF332J	15-15-10	450	1 x3	AFH3-33
AF333J	15-15-15	450	1 x3	AFH3-34
AF444J	20-20-20	450	1⅜x2½	AFH3-36

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AF644J	30-20-20	450	1⅜x3	AFH3-37
AF666J	30-30-30	450	1⅜x3	AFH3-39
AFH882J	40-40-10	450	1⅜x3	AFH3-43
AF888J	40-40-40	450	1⅜x3½	AFH3-44
AF1684J	80-40-20	450	1⅜x4	AFH3-46
AF222X	10-10-10	475	1 x3	AFH3-47
AF644X	30-20-20	475	1⅜x3	AFH3-48
AF662X	30-30-10	475	1⅜x3	AFH3-49
AF822X	40-10-10	475	1⅜x3	AFH3-50
AF64D20S	30-20/100	150/6	1 x2	AFH3-58
AF44D4A	20-20/20	150/25	1 x2	AFH3-67
AF44D40A	20-20/200	150/25	1 x3	AFH3-68
AF64D4A	30-20/20	150/25	1 x2	AFH3-69
AF66D4A	30-30/20	150/25	1 x2	AFH3-70
AF84D4A	40-20/20	150/25	1 x2	AFH3-72
AF84D20A	40-20/100	150/25	1 x3	AFH3-73
AF84D40A	40-20/200	150/25	1 x3	AFH3-74
AF86D4A	40-30/20	150/25	1 x2½	AFH3-75
AF88D4A	40-40/20	150/25	1 x2½	AFH3-76
AF106D20A	50-30/100	150/25	1 x3	AFH3-78
AF1010D4A	50-50/20	150/25	1 x3	AFH3-79
AF64E4A	30-20/20	200/25	1 x2	AFH3-84

ALL CAPACITORS LISTED WILL MEET THE HIGH TEMPERATURES ENCOUNTERED IN TV RECEIVERS.

Aerovox capacitors are available in JAN size and will meet all the requirements of the applicable JAN specs. Order by JAN type No.

(See Pages P-47 to P-50 for AEROVOX Prices)

AEROVOX corporation

Television Capacitors

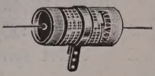
AFH TRIPLES (Cont'd)

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AFH202E8B	100-10/40	200/50	1⅜x2	AFH3-86
AF33F4A	15-15/20	250/25	1 x2	AFH3-87
AF43F4A	30-30/20	250/25	1 x2	AFH3-88
AF66F4A	30-30/20	250/25	1 x2½	AFH3-89
AFH84F2D	40-20/10	250/150	1⅜x2	AFH3-93
AF24F6H	10-20/20	250/350	1 x3	AFH3-95
AF44G4A	20-20/20	300/25	1 x2	AFH3-97
AF83G4A	40-15/20	300/25	1 x2½	AFH3-98
AFH88G4D	40-40/20	300/150	1⅜x2	AFH3-100
AF22H4A	10-10/20	350/25	1 x2	AFH3-103
AF32H4A	15-10/20	350/25	1 x2	AFH3-104
AF33H4A	15-15/20	350/25	1 x2½	AFH3-105
AF42H4A	20-10/20	350/25	1 x2½	AFH3-106
AF44H4A	20-20/20	350/25	1 x2½	AFH3-107
AF64H4A	30-20/20	350/25	1 x3	AFH3-109
AF42H1F	20-10/5	350/250	1 x2½	AFH3-115
AF3318A	15-15/40	400/25	1 x2½	AFH3-119
AF4414A	20-20/20	400/25	1 x3	AFH3-120
AFH168130B	80-40/150	400/50	1⅜x4	AFH3-122
AF22J2A	10-10/10	450/25	1 x2	AFH3-124
AF22J4A	10-10/20	450/25	1 x2	AFH3-125
AF24J4A	10-20/20	450/25	1 x3	AFH3-126
AF33J4A	15-15/20	450/25	1 x3	AFH3-127
AF43J4A	20-15/20	450/25	1 x3	AFH3-128
AF44J4A	20-20/20	450/25	1 x3	AFH3-129
AF66J4A	30-30/20	450/25	1⅜x2½	AFH3-131
AF6J205A	30/100-25	450/25	1⅜x2	AFH3-130
AF88J4A	40-40/20	450/25	1⅜x3	AFH3-133
AFH88J8A	40-40/40	450/25	1⅜x3	AFH3-134
AFH42J8B	20-10/40	450/50	1 x3	AFH3-137
AFH88J16B	40-40/80	450/50	1⅜x3½	AFH3-141
AF82J16D	40-10/80	450/150	1⅜x3½	AFH3-146
AFH88J8D	40-40/40	450/150	1⅜x3½	AFH3-147
AFH8J1810D	40/90-50	450/150	1⅜x3	AFH3-145
AFH82J16E	40-10/80	450/200	1⅜x3	AFH3-148
AF33J2G	15-15/10	450/300	1 x3	AFH3-150
AF4J32G	20/15-10	450/300	1 x3	AFH3-151
AF31J3H	15-5/15	450/350	1 x3	AFH3-152
AFH44J12H	20-20/60	450/350	1⅜x3	AFH3-153
AF82J2H	40-10/10	450/350	1⅜x2	AFH3-154
AF88J2K	40-40/10	450/500	1⅜x3½	AFH3-155
AFH20G12D4A	100/60/20	300/150/25	1⅜x3	AFH3-165
AFH2H10D20B	10/150/100	350/150/50	1 x3	AFH3-167
AF6H6G4A	30/30/20	350/300/25	1 x3	AFH3-169
AFH218G2D	10/40/10	400/300/150	1⅜x2	AFH3-172
AF1110G16F	55/50/80	400/300/250	1⅜x3½	AFH3-173
AFH8J8D26B	40/40/130	450/150/50	1⅜x3	AFH3-176
AF4J3H2G	20/15/10	450/300/300	1 x3	AFH3-184
AF2J2H4A	10/10/20	450/350/25	1 x2	AFH3-180
AF3J4H4F	15/20/20	450/350/250	1⅜x2	AFH3-183
AFH6J1018A	30/50/40	450/400/25	1⅜x3	AFH3-186
AFH2J616G	10/30/30	450/400/300	1⅜x2½	AFH3-187
AF2X20E8B	10/100/40	475/200/50	1⅜x2½	AFH3-188
AF4X4G8A	20/20/40	475/300/25	1⅜x2	AFH3-189
AF8X815B	40/40/25	475/400/50	1⅜x3	AFH3-190
AF4K4G8A	20/20/40	500/300/25	1⅜x2	AFH3-193

AFH QUADS

Old Cat. No.	Cap.	Volt	Size	New Cat. No.
AF8842G	40-40-20-10	300	1⅜x2½	AFH4-02
AF16222H	80-10-10-10	350	1⅜x3	AFH4-05
AF2222J	10-10-10-10	450	1⅜x2	AFH4-10
AF3662J	15-30-30-10	450	1⅜x3	AFH4-11
AFH3666J	15-30-30-30	450	1⅜x4	AFH4-12
AF4444J	20-20-20-20	450	1⅜x2½	AFH4-14
AF8422J	40-20-10-10	450	1⅜x3	AFH4-18
AF2222X	10-10-10-10	475	1⅜x2	AFH4-19
AF644D40R	30-20-20/200	150/10	1⅜x2	AFH4-21
AFH2412D4A	10-20-60/20	150/25	1⅜x2	AFH4-24
AF444D4A	20-20-20/20	150/25	1⅜x2	AFH4-25
AF666D8A	30-30-30/40	150/25	1⅜x2	AFH4-26
AF886D4A	40-40-30/20	150/25	1⅜x2	AFH4-28
AF101010D4A	50-50-50/20	150/25	1⅜x2	AFH4-35
AF842E4A	40-20-10/20	200/25	1⅜x2	AFH4-39
AF222G4A	10-10-10/20	300/25	1⅜x2	AFH4-43
AFH844G5A	40-20-20/25	300/25	1⅜x2	AFH4-44
AF884G4A	40-40-20/20	300/25	1⅜x3	AFH4-45
AFH1284G10A	60-40-20/50	300/25	1⅜x3	AFH4-46
AFH888G4D	40-40-40/20	300/150	1⅜x3	AFH4-47
AF421H4A	20-10-5/20	350/25	1⅜x2	AFH4-49
AF4414A	20-20-20/20	400/25	1⅜x2½	AFH4-57
AF222J4A	10-10-10/20	450/25	1⅜x2	AFH4-59
AF222J5A	10-10-10/25	450/25	1⅜x2	AFH4-60
AF43J44A	20-15/20-20	450/25	1⅜x2	AFH4-66
AF444J4A	20-20-20/20	450/25	1⅜x2½	AFH4-67
AFH822J50A	40-10-10/250	450/25	1⅜x3	AFH4-72
AFH822J60A	40-10-10/300	450/25	1⅜x3	AFH4-73
AF832J5A	40-15-10/25	450/25	1⅜x3	AFH4-74
AF862J4A	40-30-10/20	450/25	1⅜x3	AFH4-78
AF884J4A	40-40-20/20	450/25	1⅜x3½	AFH4-79
AF663J6B	30-30-15/30	450/50	1⅜x3	AFH4-81
AF842J20B	40-20-10/100	450/50	1⅜x3½	AFH4-83
AFH88J26B	40-40/10-30	450/50	1⅜x3	AFH4-85
AFH1222J4D	60-10-10/20	450/50	1⅜x3	AFH4-86
AF44J66G	20-20/30-30	450/300	1⅜x3	AFH4-89
AF824X2A	40-10-20/10	475/25	1⅜x3	AFH4-94
AFH3H168E40A	15/80-40/200	350/200/25	1⅜x3	AFH4-99
AFH8H84G4A	40/40-20/20	350/300/25	1⅜x3	AFH4-100
AF812H162F	40/10/80-10	400/350/250	1⅜x3	AFH4-104
AF4J33H4A	20/15-15/20	450/350/25	1⅜x2	AFH4-111
AF8J8D26B	40/40/10-30	450/150/50	1⅜x3	AFH4-106
AF2X2J16E10B	10/10/80/50	475/450/200/50	1⅜x2½	AFH4-121

TYPE 38



OIL FILLED METAL-CASED TUBULARS

Type 6038MTB
6000 V.D.C.

Cap. Mfd.	Size: Ins.
.0005	1 1/16 x 1 15/16
.001	1 1/16 x 1 15/16
.005	1 1/16 x 2 1/16
.01	1 1/16 x 2 7/16
.05	1 5/16 x 3 7/16

TYPE P88

MOLDED TUBULAR CAPACITORS

Type 6088
6000 V.D.C.

Cap. Mfd.	Size: Ins.
.0005	21/32 x 2
.001	21/32 x 2
.005	21/32 x 2

Type 10088
10,000 V.D.C.

Cap. Mfd.	Size: Ins.
.0005	21/32 x 2

HI-VOLTAGE MICA CAPACITORS

Type 1468L-HV
Size: 45/64 x 29/64 x 3/16 ins.

1500 V.D.C.W.

Cap. Mfd.		
.000005	.000075	.00025
.00001	.0001	.0003
.000025	.00015	.00035
.00005	.0002	.0004

Type 1467L-HV
Size: 53/64 x 53/64 x 21/64 ins.

1500 V.D.C.W.

Cap. Mfd.		
.0005	.00075	.001

1000 V.D.C.W.

.0015	.0025	.004
.002	.003	.005

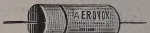
Type 1441WL-HV
Size: 1 x ⅝ x 5/16 ins.

2000 V.D.C.W

Cap. Mfd.		
.0005	.00075	.001

Standard Tolerance ±20%

TYPE 84



CARDBOARD CASE PAPER TUBULARS

(85°C)

Type 2584
2500 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	⅜ x 1½
.00025	⅜ x 1½
.0005	⅜ x 1½
.001	⅜ x 1½
.003	7/16 x 1⅝
.005	½ x 1⅝
.01	9/16 x 1⅞
.03	¾ x 2⅛
.05	¾ x 2⅝
.1	1 x 2⅝
.15	1 x 3⅛

Type 5084
5000 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	⅜ x 1⅝
.00025	⅜ x 1⅝
.005	⅜ x 1⅝
.001	½ x 1⅝
.003	½ x 2
.0005	⅝ x 2
.01	13/16 x 2
.03	1 x 2½
.05	1⅛ x 3

Type 6084
6000 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	⅜ x 1⅝
.00025	⅜ x 1⅝
.005	⅜ x 1⅝
.001	½ x 1⅝
.003	9/16 x 2
.0005	⅝ x 2
.01	13/16 x 2
.03	1 3/16 x 2½
.05	1 3/16 x 3

Type 7584
7500 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	⅜ x 1⅞
.00025	7/16 x 1⅞
.0005	½ x 1⅞
.001	11/16 x 1⅞
.003	¾ x 2⅜
.005	⅞ x 2⅜
.01	1 x 2⅞
.03	1⅜ x 3⅜

Type 10084
10,000 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	7/16 x 2⅛
.00025	9/16 x 2⅛
.0005	⅝ x 2⅛
.001	13/16 x 2⅛
.003	15/16 x 2⅝
.005	1 x 2⅞
.01	1⅜ x 2⅞

Type 15084
15,000 V.D.C.

Cap. Mfd.	Size: Ins.
.0001	9/16 x 2⅜
.00025	11/16 x 2⅜
.0005	13/16 x 2⅜
.001	1 x 2⅜
.003	1¼ x 2⅞
.005	1⅜ x 3⅛

ALL CAPACITORS LISTED WILL MEET THE HIGH TEMPERATURES ENCOUNTERED IN TV RECEIVERS.

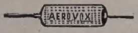
Aerovox capacitors are available in JAN size and will meet all the requirements of the applicable JAN specs. Order by JAN type No.

(See Pages P-47 to P-50 for AEROVOX Prices)

Electrolytic Capacitors

AEROVOX corporation

BANTAM* CAPACITORS

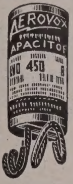


TYPE SRE

Tiniest Aerovox electrolytic. Handles full sized jobs, especially suitable for hearing aids, personal radios, screen filter circuits and similar functions. Hermetically sealed, aluminum tube with waxed cardboard insulating jacket. New stud terminals with No. 18 gauge tinned copper wire leads.

Volts	Cap. Mfd.	Size: Ins. Dia. × Lgth.
3	100	⅜ x 1
3	200	⅜ x 1⅝
3	300	½ x 1⅛
3	500	½ x 1⅝
6	50	⅜ x 1
6	100	⅜ x 1⅝
12	50	⅜ x 1⅛
12	100	½ x 1
12	200	½ x 1⅝
25	25	⅜ x 1
25	50	⅜ x 1⅝
25	100	½ x 1⅝
50	10	⅜ x 1
50	15	⅜ x 1⅛
50	25	⅜ x 1⅝
150	5	⅜ x 1
150	10	⅜ x 1⅝
150	15	½ x 1⅛
150	25	½ x 1⅝

CLEAT-MOUNTING METAL-CAN CAPACITORS TYPE PRVC



Originally designed by Aerovox. Replaces other electrolytics requiring mounting hole in chassis. Installed in a jiffy by center screw and metal cleat. Separate sections, two leads each section. Coded leads.

Type PRVC 600

600 V.D.C.W.—Single Section

Cap. Mfd.	Size: Ins. Dia. × Hght.
4	1⅜ x 4
8	1½ x 4
16	1½ x 4

Type PRVC 475

475 V.D.C.W—Single & Double

8	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3
8-8	1⅜ x 4

Type PRVC 450

450 V.D.C.W.—Single Section

4	1⅜ x 3
8	1⅜ x 3
10	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3
20	1⅜ x 3
30	1⅜ x 3
40	1⅜ x 3
80	1⅜ x 4

Type PRVC 450

Double Section

8-8	1⅜ x 4
8-16	1⅜ x 4
10-10	1⅜ x 4
12-12	1⅜ x 4
16-16	1⅜ x 4
20-20	1⅜ x 4

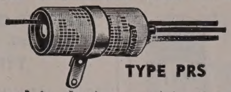
Type PRVC 450

Triple Section

8-8-8	1⅜ x 4
10-10-10	1⅜ x 4

*Trade Mark.

TUBULAR ALUMINUM CAN DANDEES*



TYPE PRS

Tubular units encased in aluminum containers especially suited for compact assemblies. The higher voltage listings meet the new radio and electronic circuit potentials, particularly in cathode-ray applications like television receivers and oscillographs.

PRS units are normally supplied with etched foil but plain foil is available. High-purity aluminum construction. Vented for excessive gas pressures. Dual, triple and quad units supplied with insulated standard wire leads and mounting bands. Single element units have solid wire leads. Sizes indicated below are for units with outer insulating tube.

SINGLE ELEMENT UNITS

Cap. Mfd.	V.D.C.W.	Size: Ins. Dia. × Lgth.
100	6	11/16 x 1¼
250	6	11/16 x 1¾
500	6	13/16 x 1¾
1000	6	15/16 x 2¼
1500	6	1 1/16 x 2¼
2000	6	1 1/16 x 2¾
100	12	11/16 x 1½
250	12	13/16 x 1¾
500	12	15/16 x 2¼
1000	12	1 1/16 x 3¼
100	15	11/16 x 1½
250	15	13/16 x 2¼
500	15	15/16 x 2¼
10	25	9/16 x 1¼
25	25	9/16 x 1¼
50	25	11/16 x 1½
100	25	13/16 x 1½
250	25	15/16 x 2¼
500	25	1 1/16 x 2½
10	50	9/16 x 1¼
25	50	11/16 x 1¼
50	50	11/16 x 1¾
100	50	13/16 x 1¾
4	150	9/16 x 1¼
8	150	11/16 x 1¼
12	150	11/16 x 1¼
16	150	11/16 x 1½
20	150	11/16 x 1¾
24	150	11/16 x 1¾
30	150	13/16 x 1½
40	150	13/16 x 1¾
50	150	15/16 x 1¾
100	150	15/16 x 2¼
4	250	11/16 x 1¼
8	250	11/16 x 1½
12	250	11/16 x 1¾
16	250	13/16 x 1½
20	250	13/16 x 1½
40	250	13/16 x 2¼
4	350	11/16 x 1½
8	350	13/16 x 1½
12	350	13/16 x 1¾
16	350	13/16 x 1¾
24	350	15/16 x 1¾
4	450	11/16 x 1½
8	450	13/16 x 1½
10	450	13/16 x 1¾
12	450	15/16 x 1½
16	450	15/16 x 1¾
20	450	1 1/16 x 1¾
30	450	1 1/16 x 2¼
40	450	1 1/16 x 2½
8	500	13/16 x 3 1/16
10	500	15/16 x 3 1/16
12	500	15/16 x 3 1/16
16	500	1 1/16 x 3 1/16
8	600	15/16 x 3 1/16
10	600	15/16 x 3 1/16
12	600	1 1/16 x 3 1/16
16	600	1 1/16 x 3 9/16
8	700	15/16 x 3 1/16
10	700	1 1/16 x 3 1/16
12	700	1 1/16 x 3 9/16
16	700	1 1/16 x 3 9/16

DUAL DANDEES

(Dual-Element Units)

Cap. Mfd.	V.D.C.W.	Size: Ins. Dia. × Lgth.
10-10	25	11/16 x 1¼
10-10	50	11/16 x 1½
8-8	150	11/16 x 1¾
8-16	150	11/16 x 2¼
20-20	150	13/16 x 1¾
20-30	150	13/16 x 2¼
20-40	150	15/16 x 1¾
30-30	150	15/16 x 1¾
30-40	150	15/16 x 2¼
30-50	150	15/16 x 2¼
40-40	150	15/16 x 2¼
40-80	150	15/16 x 2¾
50-30	150	15/16 x 2¼
50-50	150	15/16 x 2¼
80-40	150	15/16 x 2¾
100-100	150	1 1/16 x 3¼
8-8	200	11/16 x 1¾
8-16	200	11/16 x 2¼
16-16	200	13/16 x 1¾
30-30	200	15/16 x 2¼
8-16	250	13/16 x 1¾
10-10	250	13/16 x 1¾
16-16	250	13/16 x 2¼
20-20	250	15/16 x 2¼
30-30	250	15/16 x 2¼
8-8	450	13/16 x 2¼
8-16	450	15/16 x 2¼
10-10	450	15/16 x 2¼
16-16	450	1 1/16 x 2¼
20-20	450	1 1/16 x 3¼
†30-30	450	1⅜ x 2¾
†40-20	450	1⅜ x 2¾
†40-40	450	1⅜ x 3¼

†Supplied in paper cases only.

TRIPLE DANDEES

(Triple-Element Units)

Cap. Mfd.	V.D.C.W.	Size: Iins. Dia. × Lgth.
20-20-20	150	15/16 x 1¾
30-20-10	150	15/16 x 1¾
30-30-30	150	15/16 x 2¼
40-20-20	150	15/16 x 2¼
40-30-20	150	15/16 x 2¼
40-40-40	150	1 1/16 x 2¼
50-30-10	150	15/16 x 2¼
50-30-20	150	1 1/16 x 2¼
80-40-20	150	1 1/16 x 2½

TYPE PRS MULTIPLES

(Common Negative)

Size: 15/16 Dia. x 2¼ Lgth. (ins.)

Type PRS 64D20A

Cap. Mfd. × V.D.C.W.

30-20 x 150 + 100 x 25

Type PRS 86D4A

40-30 x 150 + 20 x 25

Size: 1 1/16 Dia. x 2¼ Lgth. (ins.)

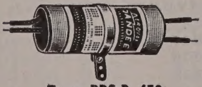
Type PRS 106D20A

50-30 x 150 + 100 x 25

Type PRS 1010D4A

50-50 x 150 + 20 x 25

TYPE PRSB DUAL ELEMENT



Type PRS-B 450

450 V.D.C.W. 500v Surge Peak

Cap. Mfd.	Can Size: Ins. Dia. × Lgth.
8-8	1 x 3
8-16	1⅛ x 3½
16-16	1⅜ x 3½

Type PRS-B 250

250 V.D.C.W. 300v Surge Peak

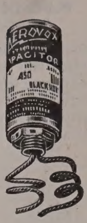
8-16	1 x 2½
16-16	1 x 3

Type PRS-B 150

150 V.D.C.W. 200v Surge Peak

20-20	1 x 2½
20-40	1 x 3

SCREW-MOUNTING WIRE-LEAD CAPACITORS TYPE GL



Inverted mounting, aluminum can unit in single, double and triple elements. Two separate color-coded leads, 5" long brought out from each section. Convenient mounting with palnut and threaded neck.

Type GL600 (Single Element)

600 V.D.C.W. 750v Surge Peak

Cap. Mfds.	Can Size: Ins. Dia. × Hght.
4	1⅜ x 4
8	1⅜ x 4½
16	1⅜ x 4½

Type GL475 (Single Element)

475 V.D.C.W. 525v Surge Peak

8	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3

Type GL475 (Dual Element)

8-8	1⅜ x 4

Type GL450 (Single Element

450 V.D.C.W. 500v Surge Peak

4	1⅜ x 3
8	1⅜ x 3
10	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3
20	1⅜ x 3
30	1⅜ x 3
40	1⅜ x 3
80	1⅜ x 4

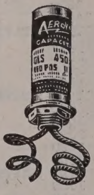
Type GL450 (Dual Element)

8-8	1⅜ x 4
8-16	1⅜ x 4
10-10	1⅜ x 4
12-12	1⅜ x 4
16-16	1⅜ x 4
20-20	1⅜ x 4

Type GL450 (Triple Element

8-8-8	1⅜ x 4
10-10-10	1⅜ x 4

MIDGET SCREW-MOUNTING WIRE-LEAD CAPACITORS TYPE GLS



Similar to Type GL. Smaller diameter cans and minimum length. Best for compact assemblies.

Type GLS450 (Single Element)

450 V.D.C.W. 500v Surge Peak

Cap. Mfds.	Can Size: Ins. Dia. × Hght.
4	1 x 2 3/16
8	1 x 2 11/16
12	1 x 3¼
16	1 x 3¼

Type GLS450 (Double Element)

8-8	1⅜ x 3

Type GLS250 (Single Element)

250 V.D.C.W. 300v Surge Peak

4	1 x 2 3/16
8	1 x 2 11/16
12	1 x 2 11/16
16	1 x 3¼

AEROVOX corporation — Electrolytic Capacitors

PLUG-IN ELECTROLYTIC CAPACITORS TYPE AEP

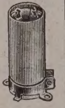
Quick change, hermetically sealed dry electrolytic. Plugs into standard octal socket for fast replacement or testing when continuous service is important. High capacity and ultra-compact, using etched foil in small can sizes. Non-corrosive aluminum internal construction throughout. Vented for safety.

Type	Cap. Mfds. × V.D.C.W.	Size: Ins. Dia. × Hght.
Single Element Units		
AEP5A	25 x 25	1 5/32 x 2½
AEP4D	20 x 150	1 5/32 x 2½
AEP8D	40 x 150	1 5/32 x 2½
AEP2J	10 x 450	1 5/32 x 2½
AEP3J	15 x 450	1 5/32 x 2½
AEP4J	20 x 450	1 5/32 x 2½
AEP6J	30 x 450	1 5/32 x 2½
AEP8J	40 x 450	1 5/32 x 2½
AEP16J	80 x 450	1⅜ x 3½
AEP2L	10 x 600	1⅜ x 4¼
Dual Element Units		
AEP44D	20-20 x 150	1 5/32 x 2½
AEP88D	40-40 x 150	1 5/32 x 2½
AEP22J	10-10 x 450	1 5/32 x 2½
AEP44J	20-20 x 450	1⅜ x 2½
Triple Element Units		
AEP444D	20-20-20 x 150	1 5/32 x 2½
AEP88D4A	40-40 x 150/20 x 25	1 5/32 x 2½
AEP222J	10-10-10 x 450	1 5/32 x2½
AEP22J4A	10-10 x 450/20 x 25	1 5/32 x 2½
AEP44J4A	20-20 x 450/20 x 25	1⅜ x 2½
AEP444J	20-20-20 x 450	1⅜ x 3
Quadruple Element Units		
AEPG444D4A	20-20-20 x 150/20 x 25*	1⅜ x 2½
A1PG444J4A	20-20-20 x 450/20 x 25*	1⅜ x 3

*Ground lug provided for cathode connection.

HIGH CAPACITY LOW VOLTAGE CAPACITORS

TYPE HCLV



High capacity — low voltage units used in electric fence control and other applications requiring these capacity-voltage values. Unit supplied with outer insulating tube and mounting ring. External tube sizes indicated below.

Cap. Mfds.	Size Dia. × Hght.
Type HCLV12—12 V.D.C.W.	
500	1 7/16 x 3
1000	1 7/16 x 3½
2000	1 7/16 x 4½
3000	2 1/16 x 4½
4000	2 1/16 x 4½
Type HCLV18—18 V.D.C.W.	
500	1 7/16 x 3
1000	1 7/16 x 4½
2000	1 7/16 x 4½
4000	2 9/16 x 4½
Type HCLV25—25 V.D.C.W.	
500	1 7/16 x 3
1000	1 7/16 x 4½
2000	2 1/16 x 3½
3000	2 9/16 x 4½
4000	2 9/16 x 4½
Type HCLV50—50 V.D.C.W.	
1000	2 1/16 x 3½
2000	2 9/16 x 4½

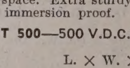
REPLACEMENT FOR WET ELECTROLYTICS

TYPE WR

Dry electrolytic for replacement of wet electrolytic units. Furnished in round aluminum cans, the range of capacities covers most applications in standard radio receivers and other equipment originally using wet type electrolytic capacitors. 450 V.D.C.

Cap. Mfd.	Replacement For	Size Dia. × Hght.
10	4 to 12 mfd.	1⅜ x 3
20	16 to 20 mfd.	1⅜ x 3
30	20 to 30 mfd.	1⅜ x 3
40	30 to 40 mfd.	1⅜ x 3

DRAWN-CASE "BATHTUB"



TYPE BT

Designed for rigid mounting in minimum space. Extra sturdy construction, immersion proof.

Cap. Mfd.	L. × W. × H.
Type BT 500—500 V.D.C.W.	
4	2 x 2 x 1⅛
8	2 x 2 x 1⅛
Type BT 450—450 V.D.C.W.	
8	1¾ x 1 x 1
12	1¾ x 1¼ x 1
16	2 x 1¾ x 1
Type BT 350—350 V.D.C.W.	
8	1¾ x 1 x ⅞
12	1¾ x 1 x 1
16	1¾ x 1 x 1
20	1¾ x 1¼ x 1
Type BT 150—150 V.D.C.W.	
8	1¾ x 1 x ⅞
12	1¾ x 1 x ⅞
16	1¾ x 1 x ⅞
24	1¾ x 1 x ⅞
30	1¾ x 1 x 1
40	1¾ x 1 x 1
Type BT 50—50 V.D.C.W.	
10	1¾ x 1 x ⅞
25	1¾ x 1 x ⅞
50	1¾ x 1 x ⅞
Type BT 25—25 V.D.C.W.	
10	1¾ x 1 x ⅞
25	1¾ x 1 x ⅞
50	1¾ x 1 x ⅞

UPRIGHT OR INVERTED MOUNTING CAPACITORS TYPE E

Popular hermetically sealed units widely used in high quality radio, electronic, communication and similar equipment. Can be mounted in any position with ring-type clamp provided with unit. Single or multiple elements. Two terminals on singles, three on dual, and 4 terminals on triple element units.

Type E475 (Single Element)
475 V.D.C.W.—525 V. Surge Pk.

Cap. Mfds.	Can Size Dia. Hght.
4	1⅜ x 2¼

Type E450 (Single Element)
450 V.D.C.W.—500 V. Surge Pk.

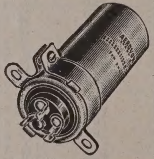
Cap. Mfds.	Can Size Dia. Hght.
4	1⅜ x 2¼
8	1⅜ x 2¼
10	1⅜ x 2¼
12	1⅜ x 2¼
16	1⅜ x 2¼
20	1⅜ x 2¼
30	1⅜ x 2¼
40	1⅜ x 2¾
80	1⅜ x 4¼

Type E50 (Single Element)
50 V.D.C.W.—75 V. Single Pk.

Cap. Mfds.	Can Size Dia. Hght.
10	1 x 1¾
25	1 x 1¾

Type E25 (Single Element)
25 V.D.C.W.—40 V. Surge Pk.

Cap. Mfds.	Can Size Dia. Hght.
10	1 x 1¾
25	1 x 1¾



Type E450 (Dual Element)
450 V.D.C.W.—500 V. Surge Pk.

Cap. Mfds.	Can Size Dia. Hght.
8-8	1⅜ x 2¼
8-16	1⅜ x 2¼
10-10	1⅜ x 2¼
12-12	1⅜ x 2¼
16-16	1⅜ x 2¾
20-20	1⅜ x 2¾

Type E450 (Triple Element)

Cap. Mfds.	Can Size Dia. Hght.
8-8-8	1⅜ x 2¼
10-10-10	1⅜ x 2¼

INSULATED SCREW-MOUNTING CAPACITORS TYPE G

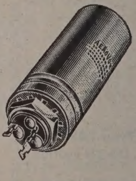
Hermetically-sealed aluminum can unit used in best quality equipment. Top performance and construction. Has threaded cover with hex nut and washer for convenient mounting on chassis. Washer can be used to insulate can from chassis. Terminals molded in cover. Cathode connection through terminal in cover.

Type G475 (Single Element)
475 V.D.C.W.—525 V. Surge Pk.

Cap. Mfds.	Can Size Dia. Hght.
4	1⅜ x 2¼
8	1⅜ x 2¼

Type G450 (Single Element)
450 V.D.C.W.—500 V. Surge Pk.

Cap. Mfds.	Can Size Dia. Hght.
4	1⅜ x 2¼
8	1⅜ x 2¼
10	1⅜ x 2¼
12	1⅜ x 2¼
16	1⅜ x 2¼
20	1⅜ x 2¼
30	1⅜ x 2¼
40	1⅜ x 2¾
80	1⅜ x 4¼



Type G450 (Dual Element)

Cap. Mfds.	Can Size Dia. Hght.
8-8	1⅜ x 2¼
8-16	1⅜ x 2¼
10-10	1⅜ x 2¼
12-12	1⅜ x 2¼
16-16	1⅜ x 2¾
20-20	1⅜ x 2¾

(See Pages P-47 to P-50 for AEROVOX Prices)

Paper Capacitors

AEROVOX corporation

DURANITE* MOLDED TUBULAR CAPACITORS

TYPE P88

Toughest capacitors ever offered for radio-electronic equipment. DURANITE capacitors are entirely new—in design, impregnant, processing and casing. New technique glove-fitting contact and seal throughout. DURANITE provides a permanent, non-varying, rock-hard casing, does not dry out, does not develop cracks or fissures. Pig-tail leads firmly imbedded, won't pull out, won't work loose. Moisture-proof; operate from sub-zero to over 212°F. Exposure to temperatures of 250°F. will not impair life or performance, no deterioration on the shelf.

SIZE: Diameter x Length

Cap. Mfd.	P288 200 VDCW	P488 400 VDCW	P688 600 VDCW	P1088 1000 VDCW	P1688 1600 VDCW
.001			1 1/8 x 11/32	1 1/8 x 11/32	1 3/8 x 13/32
.0015			1 1/8 x 11/32	1 1/8 x 11/32	1 3/8 x 13/32
.002			1 1/8 x 11/32	1 1/8 x 11/32	1 3/8 x 13/32
.0022			1 1/8 x 11/32	1 1/8 x 11/32	1 3/8 x 13/32
.003			1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 13/32
.0033			1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 13/32
.004			1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 13/32
.0047			1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 15/32
.005			1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 15/32
.006		1 1/8 x 11/32	1 1/8 x 15/32	1 3/8 x 13/32	1 3/8 x 15/32
.0068		1 1/8 x 11/32	1 3/8 x 15/32	1 3/8 x 13/32	1 5/8 x 15/32
.0075		1 1/8 x 11/32	1 3/8 x 15/32	1 3/8 x 13/32	1 5/8 x 17/32
.01		1 1/8 x 11/32	1 3/8 x 15/32	1 3/8 x 13/32	1 5/8 x 17/32
.015	1 1/8 x 11/32	1 3/8 x 13/32	1 3/8 x 15/32	1 3/8 x 15/32	1 5/8 x 17/32
.02		1 3/8 x 13/32	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32
.022		1 3/8 x 13/32	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32
.025		1 3/8 x 13/32	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32
.03		1 3/8 x 13/32	1 5/8 x 17/32	1 5/8 x 17/32	2 x 21/32
.033		1 3/8 x 13/32	1 5/8 x 17/32	1 5/8 x 17/32	2 x 21/32
.04	1 3/8 x 13/32		1 5/8 x 17/32	2 x 21/32	
.047	1 3/8 x 13/32	1 3/8 x 15/32	1 5/8 x 17/32	2 x 23/32	
.05	1 3/8 x 13/32	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32	
.068	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32	2 x 21/32	
.075	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32		
.1	1 3/8 x 15/32	1 5/8 x 17/32	2 x 21/32		
.15	1 5/8 x 17/32	2 x 21/32			
.22		2 x 21/32			
.25		2 x 21/32			
.33	2 x 21/32				
.47	2 x 21/32				
.5	2 x 21/32				

AEROCON* MINIATURE CAPACITORS

TYPE P85

The new, tiny, Aerolene-impregnated tubular unit. DURANITE endfill excludes humidity. Designed especially for personal radios, hearing aids and electronics assemblies requiring good performance and minimum size.

SIZE: Diameter x Length

Cap. Mfd.	100 VDCW	200 VDCW	400 VDCW	600 VDCW
.00025	—	3/16 x 9/16	3/16 x 5/8	3/16 x 5/8
.0005	—	3/16 x 9/16	3/16 x 11/16	3/16 x 11/16
.001	—	3/16 x 9/16	3/16 x 11/16	7/32 x 11/16
.0015	—	3/16 x 9/16	3/16 x 11/16	7/32 x 11/16
.002	—	3/16 x 9/16	3/16 x 11/16	1/4 x 11/16
.0022	—	3/16 x 9/16	3/16 x 11/16	1/4 x 11/16
.003	—	3/16 x 9/16	7/32 x 11/16	9/32 x 11/16
.0033	—	3/16 x 9/16	7/32 x 11/16	9/32 x 11/16
.004	—	3/16 x 9/16	7/32 x 11/16	9/32 x 3/4
.0047	—	7/32 x 9/16	7/32 x 3/4	9/32 x 3/4
.005	—	7/32 x 9/16	7/32 x 3/4	9/32 x 3/4
.006	—	7/32 x 9/16	1/4 x 3/4	5/16 x 3/4
.0068	—	1/4 x 9/16	1/4 x 3/4	5/16 x 13/16
.01	—	1/4 x 5/8	1/4 x 13/16	5/16 x 7/8
.015	—	9/32 x 5/8	9/32 x 7/8	11/32 x 1
.02	—	9/32 x 11/16	5/16 x 7/8	3/8 x 1 1/16
.022	—	9/32 x 3/4	5/16 x 7/8	3/8 x 1 1/8
.03	—	9/32 x 13/16	11/32 x 15/16	7/16 x 1 1/8
.033	—	5/16 x 13/16	11/32 x 1	7/16 x 1 3/16
.04	—	5/16 x 15/16	13/32 x 1	15/32 x 1 3/16
.047	—	5/16 x 15/16	13/32 x 1	15/32 x 1 1/4
.05	—	5/16 x 15/16	13/32 x 1	1/2 x 1 1/4
.068	—	3/8 x 1	7/16 x 1 3/16	9/16 x 1 1/4
.1	—	13/32 x 1	15/32 x 1 3/16	21/32 x 1 1/4
.25	15/32 x 1 1/8	—	—	—
.5	5/8 x 1 1/8	—	—	—

*Trade Mark.

OIL-FILLED TUBULARS TYPE 89

Immersion-proof, oil-impregnated, oil-filled units in handy, space-saving tubes. Ideal for vibrator applications, coupling and by-pass functions in transmitters, high-voltage and in test equipment. Fully sealed against oil leakage or moisture penetration. Case is insulated, not connected to the capacitor section. Supplied with mounting strap and outer insulating tube.

Diameter x Length

Cap. Mfd.	Type 489 400 VDCW	Type 689 600 VDCW
.001	11/32 x 1 1/8	13/32 x 1 1/8
.002	11/32 x 1 1/8	13/32 x 1 1/8
.003	11/32 x 1 1/8	13/32 x 1 1/8
.004	11/32 x 1 1/8	13/32 x 1 1/8
.005	11/32 x 1 1/8	13/32 x 1 1/8
.006	11/32 x 1 1/8	13/32 x 1 1/8
.0075	13/32 x 1 1/8	13/32 x 1 1/8
.01	13/32 x 1 1/8	13/32 x 1 1/8
.015	15/32 x 1 1/8	15/32 x 1 1/8
.02	15/32 x 1 1/4	15/32 x 1 1/4
.03	15/32 x 1 1/4	15/32 x 1 3/8
.04	9/16 x 1 7/16	9/16 x 1 7/16
.05	9/16 x 1 7/16	5/8 x 1 7/16
.075	5/8 x 1 11/16	5/8 x 1 11/16
.1	5/8 x 1 13/16	11/16 x 1 13/16
.25	3/4 x 2 1/16	7/8 x 2 1/16
.5	1 x 2 1/16	1 1/16 x 2 3/16

Cap. Mfd.	Type 1089 1000 VDCW	Type 2089 2000 VDCW
.001	15/32 x 1 1/8	13/16 x 1 11/16
.002	15/32 x 1 1/8	13/16 x 1 11/16
.003	15/32 x 1 1/8	13/16 x 1 11/16
.004	15/32 x 1 1/8	11/16 x 1 11/16
.005	15/32 x 1 1/8	13/16 x 1 11/16
.006	15/32 x 1 1/8	13/16 x 1 11/16
.0075	15/32 x 1 1/8	13/16 x 1 11/16
.01	15/32 x 1 1/8	13/16 x 1 11/16
.015	15/32 x 1 1/4	13/16 x 1 11/16
.02	15/32 x 1 3/8	13/16 x 1 13/16
.03	9/16 x 1 7/16	7/8 x 1 13/16
.04	5/8 x 1 7/16	7/8 x 1 15/16
.05	5/8 x 1 9/16	7/8 x 2 1/16
.075	11/16 x 1 11/16	15/16 x 2 3/16
.1	11/16 x 1 13/16	1 1/16 x 2 3/16
.25	15/16 x 2 3/16	

Cap. Mfd.	Type 2589 2500 VDCW	Type 3089 3000 VDCW
.0005	13/16 x 1 9/16	15/16 x 1 11/16
.001	13/16 x 1 9/16	15/16 x 1 11/16
.005	13/16 x 1 11/16	15/16 x 1 13/16
.01	13/16 x 1 15/16	15/16 x 1 15/16
.02	13/16 x 2 3/16	15/16 x 2 3/16
.03	13/16 x 2 7/16	1 1/16 x 2 7/16
.05	15/16 x 2 11/16	1 1/16 x 2 11/16
.1	1 1/16 x 3 3/16	1 7/16 x 2 15/16

Cap. Mfd.	Type 3589 3500 VDCW	Type 4089 4000 VDCW
.0005	1 1/16 x 1 13/16	1 1/16 x 1 13/16
.001	1 1/16 x 1 13/16	1 1/16 x 1 13/16
.005	1 1/16 x 1 15/16	1 1/16 x 2 1/16
.01	1 1/16 x 2 3/16	1 1/16 x 2 7/16
.02	1 1/16 x 2 7/16	1 1/16 x 3 3/16
.03	1 1/16 x 2 11/16	1 7/16 x 2 11/16
.05	1 1/16 x 3 7/16	1 7/16 x 3 7/16
.1	1 7/16 x 3 7/16	1 7/16 x 4 15/16

Cap. Mfd.	Type 5089 5000 VDCW	Type 6089 6000 VDCW
.0005	1 1/16 x 1 13/16	1 1/16 x 2 1/16
.001	1 1/16 x 1 13/16	1 1/16 x 2 3/16
.005	1 1/16 x 2 3/16	1 1/16 x 2 11/16
.01	1 1/16 x 2 11/16	1 1/16 x 3 7/16
.02	1 7/16 x 2 11/16	1 7/16 x 3 3/16
.03	1 7/16 x 3 3/16	1 7/16 x 3 15/16
.05	1 7/16 x 4 3/16	1 7/16 x 5 3/16

TUBULAR LO-VOLTAGE TYPE 84

Lo-voltage, type 84 units are wax-impregnated, wax-sealed capacitors in paper cases, used for non-critical applications such as in home and auto radio receivers where they perform satisfactorily. These capacitors are available with HYVOL H impregnation for operation at temperatures up to 85°C., and for lower voltages at higher than 85°C. For over 600 VDC, units are available with HYVOL M impregnation. Type 84 capacitors, with HYVOL M impregnation and at ratings less than 600 volts, are slightly larger than those listed. Sizes available upon request. Units are obtainable with a radial mounting band on request at extra cost.

Wax-Impregnated, Wax-Sealed Cardboard Tubular Capacitors
Diameter x Length

Cap. Mfd.	Type 484 400 VDCW	Type 684 600 VDCW
.001	3/8 x 1 1/8	3/8 x 1 1/8
.002	3/8 x 1 1/8	3/8 x 1 1/8
.003	3/8 x 1 1/8	3/8 x 1 1/8
.004	3/8 x 1 1/8	3/8 x 1 1/8
.005	3/8 x 1 1/4	3/8 x 1 1/4
.006	3/8 x 1 1/4	3/8 x 1 1/4
.0075	3/8 x 1 1/4	3/8 x 1 1/4
.01	3/8 x 1 1/4	3/8 x 1 1/4
.015	3/8 x 1 1/8	1/16 x 1 1/4
.02	3/8 x 1 1/4	7/16 x 1 1/4
.025	3/8 x 1 1/2	7/16 x 1 1/2
.03	3/8 x 1 1/2	7/16 x 1 1/2
.05	7/16 x 1 1/2	1/2 x 1 5/8
.06	1/2 x 1 1/2	9/16 x 1 1/2
.075	1/2 x 1 1/2	9/16 x 1 1/2
.1	9/16 x 1 1/2	9/16 x 1 3/4
.15	9/16 x 1 3/4	5/8 x 2
.2	5/8 x 2	11/16 x 2
.25	11/16 x 2	3/4 x 2
.5	7/8 x 2	1 x 2 1/8
1.0	1 1/16 x 2 1/2	1 1/4 x 2 1/2

Cap. Mfd.	Type 1084 1000 VDCW	Type 1684 1600 VDCW
.001	3/8 x 1 1/8	7/16 x 1 1/4
.002	3/8 x 1 1/4	7/16 x 1 1/4
.003	3/8 x 1 1/4	7/16 x 1 1/2
.004	3/8 x 1 1/4	7/16 x 1 1/2
.005	7/16 x 1 1/4	1/2 x 1 1/2
.006	7/16 x 1 1/4	1/2 x 1 1/2
.0075	7/16 x 1 3/8	1/2 x 1 1/2
.01	7/16 x 1 1/2	9/16 x 1 1/2
.015	1/2 x 1 1/2	5/8 x 1
.02	1/2 x 1 1/2	9/16 x 2
.025	9/16 x 1 1/2	9/16 x 2
.03	5/8 x 1 1/2	5/8 x 2
.05	9/16 x 2	13/16 x 2
.06	5/8 x 2	7/8 x 2 1/8
.075	11/16 x 2	1 x 2 5/16
.1	3/4 x 2	1 1/8 x 2 5/16
.15	7/8 x 2 1/8	
.2	1 x 2 1/8	
.25	1 3/16 x 2 5/16	

COMPACT ENERGY-STORAGE CAPACITORS TYPE PX

For high-speed flash photography, flash signaling equipment, pulsing and other energy storage uses requiring extremely high currents during short, discharge periods Compact, minimum weight, solder lug terminals, terne plate containers.

Type No.	VDCW Peak	Nominal Cap. Mfd.
22.5 Watt Seconds		
PX10D1	1500	20
50.0 Watt Seconds		
PX14D3	2000	28
75.0 Watt Seconds		
PX14D2	2500	24
PX18D1	3000	16
100.0 Watt Seconds		
PX15D1B	2500	30
PX20D1	4000	12.5

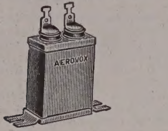
SIZE: Length x Width x Height

PX10D1	2 1/2" x 3 3/4" x 4 5/8"
PX15D1B	4 9/16" x 3 3/4" x 6 1/2"
ALL OTHERS	4 9/16" x 3 3/4" x 4 5/8"

(See Pages P-47 to P-50 for AEROVOX Prices)

AEROVOX corporation Paper Capacitors

COMPACT HYVOL* CAPACITORS



TYPE 16CT

Compact, immersion-proof unit, of minimum size and weight. Corrosion-proof metal container. Special immersion-proof terminals for severe atmospheric and climatic conditions. Suitable for by-pass and filter applications in receivers and low-power transmitters. Type 16CT is standard, but Type 16CB (terminals on bottom) units also available. Dual units with can grounded, available on request.

Type 416
400 VDCW

Cap. Mfds.	
.01	1 1/16
.05	1 1/16
.1	1 1/16
.25	1⅜
.5	1⅝
1.0	2

Type 616
600 VDCW

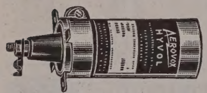
Cap. Mfds.	
.01	1 1/16
.05	1 1/16
.1	1⅜
.25	1⅝
.5	2
1.0	2½

Type 1016
1000 VDCW

Cap. Mfds.	
.01	1 1/16
.05	1⅜
.1	1⅜
.25	1⅝
.5	2

Standard: Width 15/16″, Depth 11/16″.

AEROVOX "HYVOL" VERTICAL-MOUNTING HIGH-VOLTAGE CAPACITORS



Type 14

Particularly applicable for high-voltage filter circuits such as cathode-ray tube power supplies and high-voltage by-pass circuits in transmitters and high-powered public address equipment. Standard 1⅜″ diameter, grounded can, with one-piece molded-bakelite pillar insulator to provide maximum spacing between live terminal and can. Mounting ring furnished for upright or inverted mounting.

Type 2014
2000 VDCW

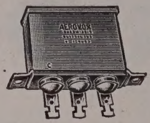
Cap. Mfds.	Hght. × Dia.
.01	2¼ x 1⅜
.05	2¼ x 1⅜
.1	2¾ x 1⅜
.25	3¼ x 1⅜

Type 3014
3000 VDCW

Cap. Mfds.	Hght. × Dia.
.01	2¼ x 1⅜
.05	2¼ x 1⅜
.1	2¾ x 1⅜
.25	3¾ x 1⅜

*Trade Mark.

COMPACT HYVOL* CAPACITORS



TYPE 18CB

Compact, immersion-proof unit, smaller in height and depth than Type 16. However, greater width makes Types 18 adaptable for applications where small-sized dual- and triple-element capacitors with three terminals are required. Different base sizes make units adaptable for duals and triples. Even on single sections, different base sizes makes unit fit in particular applications where Type 16's do not fit. Type 18CB is standard, but Type 18CT (terminals on top) also available.

Type 418

Cap. Mfds.	
400 VDCW—Single Element	
.05	1
.1	1
.25	1¼
.5	1½
1.0	2
400 VDCW—Dual Element	
.05-.05	1
.1 -.1	1¼
.25-.25	1½
.5 -.5	2
400 VDCW—Triple Element	
.05-.05-.05	1
.1 -.1 -.1	1½
.25-.25-.25	2

Type 618

Cap. Mfds.	
600 VDCW—Single Element	
.05	1
.1	1
.25	1⅜
.5	1 11/16
1.0	2½
600 VDCW—Dual Element	
.05-.05	1
.1 -.1	1⅜
.25-.25	1 11/16
.5 -.5	2½
600 VDCW—Triple Element	
.05-.05-.05	1 1/16
.1 -.1 -.1	1½
.25-.25-.25	2½

Type 1018

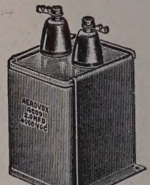
Cap. Mfds.	
1000 VDCW—Single Element	
.05	1
.1	1
.25	1½
.5	1 13/16
1000 VDCW—Dual Element	
.05-.05	1 1/16
.1 -.1	1½
.25-.25	1 13/16
1000 VDCW—Triple Element	
.05-.05-.05	1⅜
.1 -.1 -.1	1⅝

Standard: Width 1¾″, Depth 1 9/16″.

AEROVOX HYVOLS*

Type 09
(Basic)

Type 09MB
(Mounting Bracket)



Type 09MS
(Strap Mounting)

TYPE 09

Immersion-proof in sturdy rectangular metal can. High-voltage screw type pillar terminals fitted with soldering lugs. Use of "HYVOL" allows exceptionally compact size for capacity, working voltage, and safety factor. Intended for heavy-duty continuous service in transmitters, amplifiers, etc. Type MB bracket is supplied unless otherwise specified, except on units with base size 3¾″ x 3 3/16″ and 3¾″ x 4 9/16″ where Type MS bracket is supplied. MSB is available for all types upon request.

Cap. Mfds.	H. × W. × D.
Type 609—600 VDCW	
.5	2⅛ x 1 13/16 x 1 1/16
1.0	2⅛ x 1 13/16 x 1 1/16
2.0	2⅞ x 1 13/16 x 1 1/16
3.0	3⅞ x 1 13/16 x 1 1/16
4.0	3¼ x 2½ x 1 3/16
5.0	4⅜ x 2½ x 1 3/16
6.0	4⅝ x 2½ x 1 3/16
8.0	3⅞ x 3¾ x 1¼
10.0	4⅝ x 3¾ x 1¼
12.0	4¾ x 3¾ x 1½
15.0	4¾ x 3¾ x 1¾
Type 1009—1000 VDCW	
.1	2 x 1 13/16 x 1 1/16
.25	2⅛ x 1 13/16 x 1 1/16
.5	2⅛ x 1 13/16 x 1 1/16
1.0	2⅛ x 1 13/16 x 1 1/16
2.0	3⅞ x 1 13/16 x 1 1/16
3.0	3½ x 2½ x 1 3/16
4.0	4⅝ x 2½ x 1 3/16
5.0	3⅞ x 3¾ x 1¼
6.0	4¾ x 3¾ x 1¼
8.0	4¾ x 3¾ x 1¼
10.0	4⅝ x 3¾ x 1¾
12.0	3⅞ x 3¾ x 2¼
15.0	4¾ x 3¾ x 2½
Type 1509—1500 VDCW	
.5	2⅞ x 1 13/16 x 1 1/16
1.0	4 x 1 13/16 x 1 1/16
2.0	4⅛ x 2½ x 1 3/16
3.0	4¾ x 2½ x 1 3/16
4.0	4⅝ x 3¾ x 1¼
5.0	4¾ x 3¾ x 1¾
6.0	4¾ x 3¾ x 1¾
8.0	4¾ x 3¾ x 2½
10.0	4¾ x 3¾ x 3 3/16
12.0	4¾ x 3¾ x 3 3/16
15.0	4¾ x 3¾ x 4 9/16
Type 2009—2000 VDCW	
.1	2 x 1 13/16 x 1 1/16
.25	2⅛ x 1 13/16 x 1 1/16
.5	2⅞ x 1 13/16 x 1 1/16
1.0	3⅜ x 2½ x 1 3/16
2.0	4 x 3¾ x 1¼
3.0	4¾ x 3¾ x 1¼
4.0	3⅞ x 3¾ x 2¼
5.0	4¾ x 3¾ x 2¼
6.0	4⅝ x 3¾ x 3 3/16
8.0	4⅝ x 3¾ x 3 3/16
10.0	4¾ x 3¾ x 4 9/16
12.0	5⅜ x 3¾ x 4 9/16
15.0	6½ x 3¾ x 4 9/16

Cap. Mfds.	H. × W. × D.
Type 2509—2500 VDCW	
.5	3½ x 2½ x 1 3/16
1.0	3¼ x 3¾ x 1¾
2.0	4⅝ x 3¾ x 1¾
4.0	4⅝ x 3¾ x 3 3/16
10.0	6⅜ x 3¾ x 4 9/16
Type 3009—3000 VDCW	
.1	2 x 2½ x 1 3/16
.25	2½ x 2½ x 1 3/16
.5	3⅞ x 2½ x 1 3/16
1.0	3⅞ x 3¾ x 1¾
2.0	4⅛ x 3¾ x 3 3/16
4.0	4¾ x 3¾ x 4 9/16
Type 4009—4000 VDCW	
.1	2¾ x 3¾ x 2¼
.25	2¾ x 3¾ x 2¼
.5	3⅞ x 3¾ x 2¼
1.0	5⅛ x 3¾ x 2¼
2.0	5⅛ x 3¾ x 4 9/16
4.0	8 x 3¾ x 4 9/16
Type 5009—5000 VDCW	
1.	2¾ x 3¾ x 2¼
.25	3⅜ x 3¾ x 2¼
.5	4¼ x 3¾ x 2¼
1.0	4⅜ x 3¾ x 4 9/16
2.0	6 x 3¾ x 4 9/16
Type 6009—6000 VDCW	
1.	3⅜ x 3¾ x 2¼
.25	4⅝ x 3¾ x 2¼
.5	4⅜ x 3¾ x 4 9/16
1.0	8 x 3¾ x 4 9/16
Type 7509—7500 VDCW	
.1	3⅞ x 3¾ x 2¼
.25	5⅛ x 3¾ x 2½
.5	5⅛ x 3¾ x 4 9/16

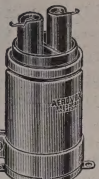
(See Pages P-47 to P-50 for AEROVOX Prices)

Paper Capacitors

AEROVOX corporation

AEROVOX "HYVOL" VERTICAL-MOUNTING HIGH-VOLTAGE CAPACITORS OIL-IMPREGNATED OIL-FILLED

TYPE 12



High-voltage, inverted or vertical, immersion-proof unit suitable for such high-voltage circuit applications as in television, cathode-ray tube power supplies, high-voltage rectifiers, or as a high-voltage by-pass capacitor. Recommended where long leakage path between terminals is required. Barrier in bakelite top increases insulation and creepage path between terminals. For certain applications, ceramic insulators may be removed if desired. Mounting ring furnished for upright or inverted mounting.

Type 2012—2000 VDCW

Cap. Mfd.	Hght.×Dia.
1.0	3¾ x 2¼
2.0	5¼ x 2¼

Type 3012—3000 VDCW

Cap. Mfd.	Hght.×Dia.
.05	2¼ x 2¼
.1	2¼ x 2¼
.25	3¼ x 2¼
.5	3¾ x 2¼
1.0	5¼ x 2¼

Type 4012—4000 VDCW

Cap. Mfd.	Hght.×Dia.
.05	2¾ x 2¼
.1	3¾ x 2¼
.25	5¼ x 2¼

Type 6012—6000 VDCW

Cap. Mfd.	Hght.×Dia.
.03	2¾ x 2¼
.05	3¾ x 2¼
.1	4¾ x 2¼

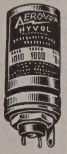
Type 7512—7500 VDCW

Cap. Mfd.	Hght.×Dia.
.01	3¼ x 2¼
.02	3¼ x 2¼
.03	3¾ x 2¼
.05	4¼ x 2¼
.1	4¾ x 2¼

AEROVOX HYVOL* OIL-IMPREGNATED OIL-FILLED CAPACITORS

In Round Aluminum Cans —Inverted Mounting

TYPE 10



New immersion-proof unit, physically interchangeable with the old single terminal type unit. In round aluminum can-inverted mounting. Ideal for crowded assemblies; especially in filter circuits of power supplies, high-gain high-fidelity amplifiers and small transmitters. One piece molded bakelite terminal assembly. Both terminal lugs insulated from container.

Type 610—600 VDCW

Cap. Mfd.	Hght.×Dia.
2.0	2⅞ x 1½
4.0	4½ x 1½

Type 1010—1000 VDCW

Cap. Mfd.	Hght.×Dia.
1.0	2⅞ x 1½
2.0	4½ x 1½

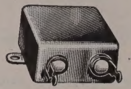
Type 1510—1500 VDCW

Cap. Mfd.	Hght.×Dia.
.5	2⅞ x 1½
1.0	4½ x 1½

*Trade Mark.

BATHTUB CASE HYVOL* CAPACITORS

TYPE 30



A compact superior-grade oil-impregnated, oil-filled, drawn-metal case capacitors. Hermetically sealed, immersion-proof. Built for severe operating conditions as in aircraft, police, broadcast, public address and other types of communications equipment. They are standard capacitors in Governmental radio and electrical apparatus.

The Aerovox-designed terminals are constructed with "double rubber* bakelite" insulators permanently riveted to the case, and make a sturdy, absolutely immersion-proof assembly.

*Rubber or a suitable gasket material depending on the impregnant used and the operating conditions.

Type 430—400 VDCW

Cap. Mfds.	L. × W. × H.
Single Element	
.05	1¾ x 1 x ¾
.1	1¾ x 1 x ¾
.25	1¾ x 1 x ¾
.5	1¾ x 1 x ⅞
.75	2 1/16 x 1¼ x ¾
1.0	2 x 1¾ x 13/16
2.0	2 x 2 x 1⅛
Dual Element	
.05- .05	1¾ x 1 x ¾
.1 - .1	1¾ x 1 x ¾
.25- .25	1¾ x 1 x ⅞
.5 - .5	2 x 1¾ x 13/16
1.0 -1.0	2 x 2 x 1⅛
Triple Element	
.05-.05-.05	1¾ x 1 x ¾
.1 -.1 -.1	1¾ x 1 x 13/16
.25-.25.-25	2 x 1¾ x ⅞

Type 630—600 VDCW

Cap. Mfds.	L. × W. × H.
Single Element	
.05	1¾ x 1 x ¾
.1	1¾ x 1 x ¾
.25	1¾ x 1 x ¾
.5	1¾ x 1 x ⅞
.75	2 1/16 x 1¼ x ⅞
1.0	2 x 1¾ x ⅞
2.0	2 x 2 x 1 3/16
Dual Element	
.05- .05	1¾ x 1 x ¾
.1 - .1	1¾ x 1 x ¾
.25- .25	1¾ x 1 x ⅞
.5 - .5	2 x 1¾ x ⅞
1.0 -1.0	2 x 2 x 1 3/16
Triple Element	
.05-.05-.05	1¾ x 1 x ¾
.1 -.1 -.1	1¾ x 1 x 13/16
.25-.25-.25	2 x 1¾ x ⅞

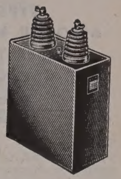
Type 10301000 VDCW

Cap. Mfds.	L. × W. × H.
Single Element	
.05	1¾ x 1 x ¾
.1	1¾ x 1 x ¾
.25	1¾ x 1 x ¾
.5	2 1/16 x 1¼ x ⅞
.75	2 x 1¾ x ⅞
1.0	2 x 1¾ x 1
Dual Element	
.05- .05	1¾ x 1 x ¾
.1 - .1	1¾ x 1 x ¾
.25- .25	2 1/16 x 1¼ x ⅞
.5 - .5	2 x 1¾ x 1
Triple Element	
.05-.05-.05	1¾ x 1 x 13/16
.1 -.1 -.1	1¾ x 1¼ x ⅞
.25-.25-.25	2 x 2 x 1

SEE PAGE P-52
TELEVISION PAPER CAPACITOR LISTING
FOR OTHER PAPER TUBULAR CAPACITORS SEE PAGE P-55

HIGH VOLTAGE TRANSMITTER CAPACITORS

TYPE 20



High quality oil-capacitors designed to meet the exacting service requirements of communications and electronic equipment, and general DC applications in industrial equipment. Single capacitors or parallel grouped capacitors available in ratings from 6000 to 50,000 VDCW. These units consist of precision wound, adequately insulated sections connected in parallel and assembled in heavy, welded copper bearing steel tanks, designed to expand or contract with changes in temperature. Finished in long lasting dark grey lacquer. Heavy duty, wet process porcelain insulator assemblies are gasketed, pressure sealed, and oil-filled to prevent internal creepage and corona. The assembled units are heat vacuum dried, vacuum impregnated with Aerovox Hyvol and hermetically sealed for long life under exacting operating conditions. Single units rated at 30 KV or less are normally supplied with the capacitor element insulated from ground. Type 20 units not carried in stock but are built to order. Submit full application information when ordering.

Type 6020—6000 VDCW

Cap. Mfds.	H. × W. × D.
2.0	11 x 8 x 4
4.0	11 x 12 x 4
5.0	11 x 12 x 4
6.0	13 x 12 x 4
10.0	13 x 12 x 6

Type 7520—7500 VDCW

Cap. Mfds.	H. × W. × D.
.5	11 x 8 x 4
1.0	11 x 8 x 4
2.0	11 x 8 x 4
4.0	13 x 12 x 4
6.0	13 x 12 x 6

Type 10020—10,000 VDCW

Cap. Mfds.	H. × W. × D.
1.0	11 x 8 x 4
2.0	11 x 12 x 4
4.0	13 x 12 x 6
5.0	13 x 12 x 6

Type 12520—12,500 VDCW

Cap. Mfds.	H. × W. × D.
.5	11 x 8 x 4
1.0	11 x 12 x 4
2.0	13 x 12 x 6
5.0	15 x 12 x 9½

Type 15020—15,000 VDCW

Cap. Mfds.	H. × W. × D.
.25	11 x 8 x 4
.5	~~11 x 12~~ x 4
1.0	13 x 12 x 4
2.0	15 x 12 x 9½
3.0	15 x 12 x 9½

Type 20020—20,000 VDCW

Cap. Mfds.	H. × W. × D.
.25	11 x 8 x 4
.5	11 x 12 x 4
1.0	13 x 12 x 6
1.5	15 x 12 x 9½
2.0	15 x 12 x 9½
4.0	15 x 14 x 16

Type 25020—25,000 VDCW

Cap. Mfds.	H. × W. × D.
.2	11 x 12 x 4
.25	11 x 12 x 4
.5	11 x 12 x 6
1.0	15 x 12 x 9½

Type 37520—37,500 VDCW

Cap. Mfds.	H. × W. × D.
.1	13 x 13½ x 4
.25	13 x 13½ x 6
.5	15 x 13½ x 8½
1.0	15 x 13½ x 15

Type 50020—50,000 VDCW

Cap. Mfds.	H. × W. × D.
.1	13 x 13½ x 4
.25	15 x 13½ x 8½
.5	15 x 15½ x 15

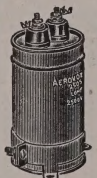
Type 12520 VD

25,000 Volts Output
(12,500 — 12,500 Volts)
Dual Units
(For Voltage-Doubler Circuits)

Cap. Mfds.	H. × W. × D.
0.25-0.25	11 x 8 x 4
0.5-0.5	11 x 12 x 4

AEROVOX HYVOLS*

TYPE 05



Hermetically sealed, round metal can unit. High-voltage pillar terminals. Very conservative ratings for continuous operation. Mounting ring furnished for upright or inverted mounting.

Type 605—600 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2 x 2
2.0	2 x 2
4.0	2 x 2½

Type 1005—1000 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2 x 2
2.0	2 x 2¼
4.0	2 x 3

Type 1505—1500 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2 x 2⅜
2.0	2 x 3⅝
4.0	2½ x 4

Type 2005—2000 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2 x 2¾
2.0	2 x 4½
4.0	3 x 4

Type 2505—2500 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2½ x 3
2.0	2½ x 4½

Type 3005—3000 VDCW

Cap. Mfd.	Dia.×Hght.
1.0	2½ x 4½
2.0	3 x 4½

AEROVOX corporation Metallized Papers

TYPE P82 AEROLITE METALLIZED-PAPER TUBULAR CAPACITORS

Tiny Aerolite Metallized-Paper tubular units. Hyvol K impregnated, in moisture resistant wax impregnated cardboard cases. Up to 78% reduction in size over equivalent paper foil units, also corresponding reduction in weight. Power factor less than 1%. Std. tolerance ± 20%.

Cap. Mfd.	Size
200 V.	
.01	3/8 x 5/8
.02	3/8 x 5/8
.03	3/8 x 5/8
.05	3/8 x 5/8
.1	3/8 x 5/8
.25	15/32 x 5/8
.5	15/32 x 1 1/8
1.0	9/16 x 1 1/8
2.0	5/8 x 1 5/8
400 V.	
.01	3/8 x 5/8
.02	3/8 x 5/8
.03	3/8 x 5/8
.05	15/32 x 5/8
.1	15/32 x 1 1/8
.25	9/16 x 1 1/8
.5	5/8 x 1 5/8
1.0	23/32 x 2 1/8
600 V.	
.01	3/8 x 5/8
.02	3/8 x 5/8
.03	15/32 x 5/8
.05	15/32 x 5/8
.1	15/32 x 1 1/8
.25	5/8 x 1 1/8
.5	23/32 x 1 1/8
1.0	23/32 x 2 5/8

TYPE P83Z MICROMINIATURES

Ultra-small, new metallized-dielectric capacitor particularly applicable in the electronic field to replace the low capacity paper units now being used. Hyvol K impregnated in humidity resistant molded thermo-plastic cases. The improved metallized dielectric provides both the dielectric and the electrodes. Capacitance is predetermined mechanically in the initial processing.

Standard Tolerance 25%

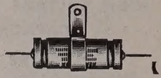
Case Size 3/16 x 7/16

Cap.	Volt
.0005	600
.001	600
.002	400
.003	400
.005	200
.01	200
.04	200

Case Size 1/4 x 9/16

Cap.	Volt
.002	600
.0022	600
.0047	600
.005	600
.0068	600
.01	400

TYPE 89ZXY METALLIZED-PAPER CAPACITORS



Tubular Aerolites in hermetically-sealed, metal cases. Hyvol K or M impregnated. Unique self-healing feature and Aerovox service-proven, double rubber bakelite terminal seals. Ideal for extreme conditions and hard use. Meets JAN moisture, emmersion and vibration test requirements. Available with insulating cardboard or plastic sleeve and with mounting bracket. Std. Tolerance ±20%. See footnotes below table.

Cap. Mfd.	Size
150 V.D.C.	
3.0	3/4 x 2
4.0	13/16 x 2
6.0	1 x 2
200 V.D.C.	
.05	3/8 x 1
.1	7/16 x 1
.25	1/2 x 1
.5	1/2 x 1 5/16
1.0	5/8 x 1 1/2
2.0	5/8 x 2
400 V.D.C.	
.03	3/8 x 1
.05	7/16 x 1
.1	7/16 x 1 5/16
.25	5/8 x 1 5/16

Cap. Mfd.	Size
400 V.D.C. (Continued)	
.5	5/8 x 2
1.0	3/4 x 2 1/2
2.0	1 x 2 1/2
600 V.D.C.	
.01	3/8 x 1
.02	7/16 x 1
.03	7/16 x 1
.05	1/2 x 1
.1	1/2 x 1 1/2
.25	5/8 x 1 5/8
.5	3/4 x 2
1.0	13/16 x 2 1/2
2.0	1 1/4 x 2 1/2

Sizes shown are floating case without insulating tube.

NOTE: For grounded section, insulated case, deduct 3/16" from lengths specified above and add G to type designation; (Example 89ZGXY). For plastic insulating tube, add 1/16" to length and 1/16" to diameter and replace Y type designation with P. (Example 89ZXP). For cardboard insulating tube, add 1/16" to diameter and 3/16" to length and omit Y in type designation. (Example (89ZX). For mounting bracket, omit X in type designation. (Example 89ZY).

AEROLITE TYPE P30Z METALLIZED-PAPER CAPACITORS

AEROVOX
CAPACITOR
P302 600 3X.1

Aerolite Metallized-Paper capacitors. Hyvol K or M impregnated in bathtub, hermetically sealed metal cases. Photo shows terminals in standard position. Units with terminals in other positions or with stud-nut terminals are available on special order. Meets rigid JAN requirements for moisture immersion and vibration testing. Std. Tolerance ±20%.

Cap. Mfds.	Volts	Size
.6	200	1 3/4 x 1 x 3/4
1.0	200	1 3/4 x 1 x 3/4
2.0	200	1 3/4 x 1 x 3/4
4.0	150	1 3/4 x 1 x 7/8
6.0	150	2 x 1 3/4 x 7/8
8.0	150	2 x 2 x 1
10.0	150	2 x 2 x 1 1/8
12.0	150	2 x 2 x 1 1/8
.25	400	1 3/4 x 1 x 3/4
.5	400	1 3/4 x 1 x 3/4
1.0	400	1 3/4 x 1 x 7/8
2.0	400	2 x 1 3/4 x 7/8
4.0	400	2 x 2 x 1 1/8
.1	600	1 3/4 x 1 x 3/4
.25	600	1 3/4 x 1 x 3/4
.5	600	1 3/4 x 1 x 3/4
1.0	600	1 3/4 x 1 1/4 x 7/8
2.0	600	2 x 2 x 1

TYPE P123ZG ULTRA-COMPACT METALLIZED-PAPER CAPACITORS

VITRIFIED CERAMIC SEAL
AEROVOX

Ultra-compact, tiny capacitors in hermetically-sealed, metal cases. Bonded glass to metal terminal construction to minimize size. This is the smallest unit available. Similar to the 89ZXY except tinier. Ideal for military and aircraft applications where minimum size and weight with maximum durability is rigidly specified. Can be supplied with Plastic insulating tubes. Std. Tolerance ±20%.

Cap. Mfds.	Volts	Size
.0005	200	.175 x 7/16
.001	200	.175 x 7/16
.002	200	.175 x 7/16
.003	200	.175 x 7/16
.005	200	.175 x 7/16
.01	200	.175 x 7/16
.047	200	.235 x 23/32
.050	200	.235 x 23/32
.068	200	.312 x 23/32
.10	200	.312 x 23/32
.15	200	.312 x 1 1/32
.2	200	.312 x 1 1/32
.22	200	.312 x 1 1/32
.25	200	.312 x 1 1/32
.33	200	.400 x 1 1/32
.47	200	.400 x 1 1/32
.50	200	.400 x 1 1/32
.68	200	.562 x 1 1/32
1.0	200	.562 x 1 7/32
1.5	200	.562 x 1 23/32
2.0	200	.562 x 1 23/32
.0005	400	.235 x 7/16
.001	400	.235 x 7/16
.002	400	.235 x 7/16
.003	400	.235 x 7/16
.02	400	.235 x 23/32
.022	400	.312 x 23/32
.033	400	.312 x 23/32
.040	400	.312 x 23/32
.047	400	.400 x 23/32
.050	400	.400 x 23/32
.068	400	.400 x 1 1/32
.10	400	.400 x 1 1/32
.15	400	.500 x 1 1/32
.2	400	.500 x 1 1/32
.22	400	.562 x 1 1/32
.25	400	.562 x 1 1/32
.33	400	.562 x 1 1/32
.47	400	.562 x 1 23/32
.50	400	.562 x 1 23/32
.68	400	.670 x 1 23/32
1.0	400	.670 x 2 7/32
.01	600	.312 x 23/32
.015	600	.312 x 23/32
.02	600	.312 x 23/32
.022	600	.312 x 23/32
.033	600	.400 x 23/32
.040	600	.400 x 23/32
.047	600	.400 x 23/32
.050	600	.400 x 23/32
.068	600	.400 x 1 1/32
.10	600	.500 x 1 1/32
.15	600	.500 x 1 1/32
.2	600	.562 x 1 7/32
.22	600	.562 x 1 7/32
.25	600	.562 x 1 11/32
.47	600	.670 x 1 23/32
.50	600	.670 x 1 23/32
.68	600	.670 x 1 23/32
1.0	600	:750 x 2 7/32

METALLIZED-PAPER CAPACITORS CHARACTERISTICS

Stable characteristics and high safety factor are designed into Aerolite capacitors.

Over voltage tests at 25°C, maximum time one minute.

Insulation resistance measured at or referred to 25°C, will equal or exceed values below, after applying rated voltage or 500 V.D.C. (whichever is lower) for two minutes.

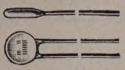
Rated Voltage	Over Voltage Test	Voltage Rating V.D.C.	Capacitance	Insulation Resistance
150	225	200	2.5 mfd. or less	500 megohms x mfd. or 1500* megohms
200	300	150	3.0 mfd. or more	250 megohms x mfd.
400	600	400	all capacities	1000 megohms x mfd. or 3000* megohms
600	900	600	all capacities	1000 megohms x mfd. or 3000* megohms

* Need not exceed values shown above.

Ceramic Capacitors

AEROVOX
corporation

HI-Q DISK CAPACITORS



Hi-Q Disc Ceramic Capacitors are high dielectric by-pass, blocking or coupling capacitors. In many instances, their geometrical shape is more adaptable to space saving than are tubulars for comparable capacity. Multiple capacities can be fabricated on a single disc and serve to eliminate two or more conventional units.

Characteristics of the basic dielectric material are identical to those of Hi-Q BC Capacitors. The well-proven Durez and high temperature micro crystalline wax coating insures the utmost protection from moisture and high humidities. The high silver content electrodes, fired directly to the low loss dielectric, make noiseless performance a certainty.

Leads are pure dead soft copper, tin coated to provide good soldering connections and so placed that close connections are easily made, thus reducing inductance to a minimum, a highly desirable feature in high frequency design such as television and FM circuits.

Type	A Diameter Max.	B Lead Width
BPD .00047	5/16″	3/16″±1/16″
BPD .0008	5/16″	3/16″±1/16″
BPD .001	7/16″	¼″±1/16″
BPD .0015	7/16″	¼″±1/16″
BPD .002	19/32″	¼″±⅛″ O
BPD .004	19/32″	¼″±⅛″ O
BPD .005	19/32″	¼″±⅛″ O
BPD .01	¾″	⅜″±⅛″
BPD 2 x .001	19/32″	⅜″±⅛″
BPD 2 x .0015	19/32″	⅜″±⅛″
BPD 2 x .002	19/32″	⅜″±⅛″
BPD 2 x .003	¾″	⅜″±⅛″
BPD 2 x .004	¾″	⅜″±⅛″
BPD 2 x .0015	¾″	⅜″±⅛″
BPD 2 x .002	¾″	⅜″±⅛″

HI-Q ZERO TEMPERATURE COEFFICIENT CAPACITORS

The temperature coefficient of ceramic capacitors is an inherent characteristic of the ceramic body. By controlling this coefficient, the use of ceramics has been extended to countless applications in the electronic and communications fields. Temperature coefficient is determined by the ceramic mix and therefore certain tolerances are standardized. Following is a list of standard recommended tolerances used in this listing:

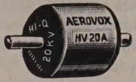
Temp. Coef.	Tolerance—PPM
NPO	±30
N080	±30
N750	±100

The tolerances shown are maximum deviation. The actual average temperature coefficient usually runs close to nominal.

NPO TYPE SI

The zero temperature coefficient is the most stable ceramic commercial capacitor available. The type SI is a tubular ceramic insulated with a synthetic coating (Durez) and impregnated with a high-melting point, Low-loss, microcrystalline wax.

HI-Q HIGH VOLTAGE CERAMIC CAPACITORS TYPE HV



The new type HV ceramic is built to handle high voltages at high humidity and temperatures. It has a high potential electrode design and a newly developed plastic jacket which has exceptional arc resistant qualities. The silver electrodes are fired to the base and are integrally soldered to the silvered brass terminals for positive contact.

Type HV units provide an excellent working parameter when used with the new horizontal output transformer design. Combining high voltage, small size, and three types of terminal connections, HV units will fit virtually any high voltage or television application.

LISTING

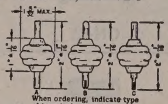
Cat. No.	Cap. Mmf.	VDC
HV10	500	10,000
HV20	500	20,000

Tolerance: ±20%

Power Factor: 2% max.

Insulation Resistance: 50,000 megohms

Flash Tests: 27,000 VDC



When ordering, indicate type of terminal connection.

NOTES

Insulation: Durez and Wax impregnated.

Leads: 22 gauge pure tinned dead soft copper 1½″ long except for the 5/16″ dia. units which are 1¼″ long.

Capacity: Guaranteed minimum as stamped.
All capacitance measurements made at 25°C at 1KC and at a test voltage not over 5 volts RMS.

Insulation Resistance: 7500 megohms min.

Power Factor: 2.5% at 1 KC at not over 5 volts RMS.

Test Voltage: 1500 volts D.C.

Zero Temperature Coefficient Capacitors

Type NPO

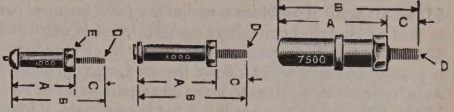
	Mmfd.		Mmfd.
SI-1	1.5	**SI-1**	20
SI-1	3.0	**SI-13**	25
SI-1	3.3	**SI-2**	33
SI-1	4.7	**SI-27**	50
SI-1	5.0	**SI-7**	75
SI-1	6.8	**SI-7**	100
SI-1	8.2	**SI-3**	150
SI-1	10	**SI-4**	175

Negative Temperature Coefficient Capacitors

Type N750	Mmfd.	Type NO80	Mmfd.
SI-1	5	**SI-1**	10
SI-1	10	**SI-1**	22
SI-27	47	**SI-2**	33
SI-7	75	**SI-27**	47
SI-7	100	**SI-7**	62

When ordering the above units, designate type and MMFD fully. For example: NPOSI-1-1.5 MMFD.

HI-Q STAND-OFF CAPACITORS



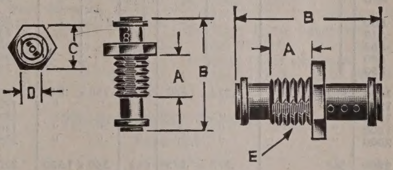
Hi-Q "stand-off" capacitors are tubular with a screw fixture for mounting to the chassis or common ground. Close coupling and their unique construction make them an excellent choice for bypassing R.F. in the high frequencies.

The multiple tapped model is a compact, bypassing unit when mounted next to tube sockets. Three capacities can be supplied as one unit, with capacity ranges available up to 2000 MMF per section. When fewer than three taps are required, it is possible to obtain higher capacities. Standard capacity tolerance is ±20% and GMV for "stand-off" capacitors and —20%, +30% and GMV for multiple tap units. Closer tolerances are available on the lower capacity units wherever economical manufacturing permits.

All units are flash tested for 1000 V.D.C., power factor is under 3% maximum and the insulation resistance is above 7500 megohms. All units are coated with a polymerized high temperature enamel, stamped for capacity and supplied with a nut, if desired. Leads are 20 gauge and a minimum of 1½″ long for CS units and 1¼″ for CIS units.

Type	Cap. MMF.	Dimensions — inches A	B	C	Thread D	Across Flats — in. E
CI-1	50 100 500 1000 1500	21/32	1	11/32	#4-40	¼
CS-2	3000	27/32	1 3/16	11/32	#4-40	¼
CS-3	4000	29/32	1¼	11/32	#4-40	¼
CS-4	7500	1 5/32	1½	11/32	#6-32	⅜
CIS-1	50 100 500	⅝	⅞	¼	#6-32	¼
CIS-2	1000 1500	⅞	1⅛	¼	#6-32	¼

HI-Q FEED-THRU CAPACITORS



Hi-Q Feed-Thru Capacitors provide means to transmit thru shields or ground potentials and simultaneously by-pass unwanted frequencies. A good mechanical connection is provided by the silver-plated bushing. These are excellent dependable units even under severe mechanical vibrations as in aircraft, missiles and automotive requirements.

The minimum standard tolerance for feed-thru capacitors is ±20%. All units are flash tested at 1000 volts D.C.

Type	Cap. MMF.	Dimensions — inches A	B	C	D	Thread E
CF-1	1500	9/32	11/16	5/16	11/64	¼-28
CF-2	3000	5/16	⅞	⅜	¼	5/16-24
CF-3	4000	5/16	13/32	⅜	¼	5/16-24
CF-4	7000	5/16	1 1/16	9/16	21/64	⅜-24
CFS-1	1500	9/32	11/16	5/16	11/64	¼-28

CFS-1 not illustrated

Tolerance ±20%

(See Pages P-47 to P-50 for AEROVOX Prices)

AEROVOX corporation

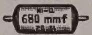
Ceramic Capacitors

HI-Q TUBULAR CERAMIC CAPACITORS

STYLE SI: Style SI provides a radial lead unit for applications requiring an insulated capacitor. Performance is comparable to that of insulated capacitors manufactured in accordance with JAN and REC specifications.

STYLE CI: Tubular ceramic capacitors, in three standard sizes, insulated with a ceramic (Steatite) cover-tube sealed with a special end seal which allows the wax, vacuum impregnant to enter and thoroughly fill all voids inside the cover tube. Axial leads in three sizes to meet all requirements of the JAN C20A specifications for insulated capacitors.

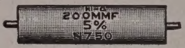
STYLE CN: Style CN is not listed but is available. It identifies the non-insulated tubular ceramic capacitors as established by the Armed Services Electronics Standards Agency (JAN C20A) and (RMA, REC107) specifications. This style capacitor has radial leads and is coated with a high moisture proof, low factor, non-hydroscopic styrene resin.



CI-1

L101K
100 mmf
500V

CI-2



CI-3

Capacity in MMFD.	Type	Max. Dimensions	Type	Max. Dimensions	Capacity in MMFD.
5	SI-1	.234 x .437	CI-1	.250 x .562	5
10	↑	↑	↑	↑	10
12					12
15					15
18					18
20					20
22					22
24					24
25					25
27					27
30					30
33					33
39					39
47					47
50					50
51					51
56					56
68					68
75	↓	↓	↓	↓	75
82	SI-1	.234 x .437	CI-1	.250 x .562	82
100	↑	↑	↑	↑	100
110					110
120					120
150					150
180					180
200					200
220					220
240					240
250					250
270					270
300					300
330					330
360					360
390					390
470					470
500					500
510					510
560					560
680					680
750	↓	↓	↓	↓	750
1000	SI-2	.234 x .687	CI-2	.250 x .812	1000
1200	"	" "	"	" "	1200
1500	"	" "	"	" "	1500
1800	"	" "	"	" "	1800
2000	"	" "	"	" "	2000
2200	SI-7	.275 x .875	CI-3	.340 x 1.320	2200
2400	"	" "	"	" "	2400
2500	"	" "	"	" "	2500
2700	SI-2GMV	.234 x .687	"	" "	2700
3000	SI-19	.312 x .937	"	" "	3000
3300	"	" "	"	" "	3300
4000	"	" "	"	" "	4000
4700	SI-7GMV	.275 x .875	CI-3	.340 x 1.320	4700
5000	SI-3	.312 x 1.25	"	" "	5000
5100	"	" "	"	" "	5100
6000	"	" "	"	" "	6000
6800	SI-4	.375 x 1.093			6800
7500	"	" "			7500
10000	SI-5	.375 x 1.600			10000
15000	SI-6	.375 x 1.968			15000
17500	"	" "			17500
20000	SI-5GMV	.375 x 1.600			20000
25000	SI-5GMV	" "			25000
30000	SI-6GMV	.375 x 1.968			30000
33000	SI-6GMV	" "			33000

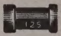
CN types, non insulated are available in the same capacities as SI's.

Types SI and CI, std. tol. ±20

CN-1

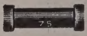
SI-1

CN-13



SI-13

CN-2

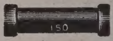


SI-2

CN-27

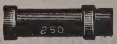
SI-27

CN-7



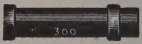
SI-7

CN-19



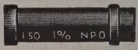
SI-19

CN-3



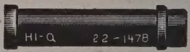
SI-3

CN-4

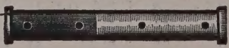


SI-4

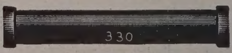
CN-5



SI-5



CN-6



SI-6

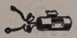
Aerovox capacitors are available in JAN size and will meet all the requirements of the applicable JAN specs. Order by JAN type No.

(See Pages P-47 to P-50 for AEROVOX Prices)

Interference Filters

AEROVOX corporation

TYPE IN-23



Especially used for neon sign fixtures. Convenient mounting bracket. One filter for each fixture. Flexible leads. Also used on small motors. Size: 1 x 2⅛ inches.

TYPE IN-27

Simple, inexpensive, plug-in unit where interference is slight. Size: 1⅜ x 1½ inches.

TYPE IN-28

For use where ground is at considerable distance. Most efficient when mounted on appliance. Bracket supplied. Size: 1⅜ x 2 inches.

TYPE IN-29

Efficient plug-in unit for local noise sources of variable character but strong intensity. Especially suited for shavers and other vibrating devices. Size: 1⅜ x 3 inches.

TYPE IN-30

Similar to IN-29 but with greater inductance to handle more severe noise interference. Size: 1⅜ x 3 inches.

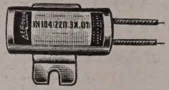
TYPE IN-31

Bracket mounted unit with high inductance. Size: 1⅜ x 3 inches.

TYPE IN-42

Heavy duty unit for serious interference from power transmission lines, etc. Plugs into outlet. Appliance or radio plugs into receptacle in filter. Mounting ring provided. Rating: 110/220 v. A.C.; 6 amps. Size: 2½" dia. x 3¾".

TYPE IN-104



Small, inexpensive filter unit of low impedance, delta-connected capacitors. Connect one unit for each fluorescent light fixture or across line leads every eight feet in core lighting. Tubular with single hole mounting bracket. 6" stranded wire insulated leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1" dia. x 2$\frac{3}{16}$".

TYPE IN-105

Same as IN-104 except container is bathtub type metal can. Size: 1¾" x 1" x ¾" high.

TYPE IN-106

Best filter for fluorescents. Balanced network. Especially suited for radio and television salesrooms. One unit per fixture in series where power leads enter. Metal container with four stranded wire leads. Rating: 125 v. AC or DC; 2.6 amps. Size: 1⅞" x 3" x 1⅜" high.

TYPE IN-133

Hermetically sealed, metal cased unit — bracket mounted. Delta-connected capacitor combination for connecting across line. Excellent for use in areas near radio stations. 6" insulated stranded wire leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1⅞" x 1$\frac{5}{16}$" x $\frac{9}{16}$" high.

TYPE IN-109

Balanced network filter for severe r-f noises from small appliances. Metal container and four insulated, stranded wire leads. Case common for grounding. Rating: 125 v. AC or DC; 2.5 amps. Size: 1⅞" x 3" x 1⅜" high.

THE INTERFERENCE ANALYZER TYPE ANL-37

The Aerovox Filter Selector eliminates the guess work in determining the proper filter to use. Plugs between interfering device and outlet. Adjust selector switch until noise is eliminated or minimized. Dial then indicates type filter (IN27 thru IN42) to be used.

Unit in handsome, sturdy metal cabinet. Compartment contains necessary attachment plugs and clips. Size: 5½ x 5½ x 8 inches.

BUILT-IN FILTERS

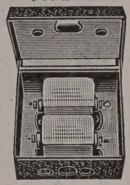
High attenuation type, hermetically sealed units for use where severe interference is encountered and dependability is required. For permanently mounted applications.

Aerovox special "Pi type" construction insures efficient radio noise reduction over low frequency broadcast, shortwave, and television bands. Suitable for Army-Navy or aircraft equipment where immersion and severe humidity tests must be met.

For single wire unbalanced applications. For two wire filtering use one filter in each line. Filter case must be securely bonded to the filter appliance and ground for maximum efficiency. These filters when used on high-voltage AC should be used only on permanently grounded equipment.

Aerovox Type	Max. Volt. VAC	Max. Amps.	Size L × W × H
IN-101	125	1.5	2$\frac{1}{16}$ x1¼ x ¾
IN-103	50	50	3$\frac{1}{16}$ x2⅛ x2⅞
IN-110	250	5	2 x2 x1
IN-111	250	10	2 x2 x1¼
IN-112	250	30	3$\frac{1}{16}$ x2⅛ x2⅞

HEAVY-DUTY INDUSTRIAL TYPE FILTERS TYPE INB

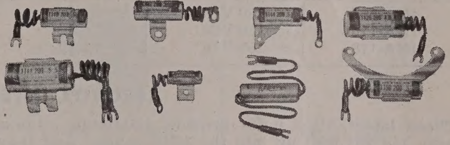


Heavy duty, industrial-type interference filters consisting of one or more highly efficient radio noise filter elements. Enclosed in black painted steel surface cabinet for permanent installations of power equipment. One element per line. Cabinets meet Underwriters' requirements, and have standard knockouts. Rating: 250 v. AC — 25 to 60 cps. or 600 v. DC.

Type	Max. Amps.	Elements
INB-104	5	1
INB-100	10	1
INB-101	30	1
Single-Phase Balanced Network		
INB-105	5	2
INB-102	10	2
INB-103	30	2
Three-Phase Network		
INB-106	5	3
INB-107	10	3
INB-108	30	3

Other INB filters available for up to 200 amperes. Write for information.

AUTO-RADIO CONDENSERS



Car Generators	
Type 1120	1.0 Cap. Mfd.
Type 1140	0.5 Cap. Mfd.
Dual Element	
Type 1141	0.5-0.5 Cap. Mfd.
Ford Auto Radios	
Type 1144	0.5 Cap. Mfd.
For 1936 Models	
Type 1150	0.5 Cap. Mfd.
Motorola Auto Radios	
Type 1466	.0008 Cap. Mfd.
Ammeter Condenser	
Type 1160	.05 Cap. Mfd.
Gas Gage Filter Condenser	
Type 1143-G	0.05 Cap. Mfd.
Oil Gage Filter Condenser	
Type 1142-O	0.25 Cap. Mfd.

Vibrator Buffer Capacitors
Type VBC

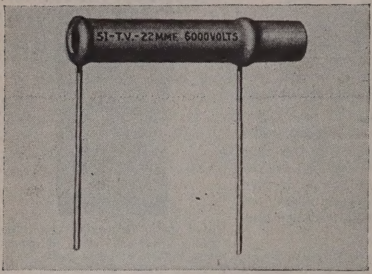
Type	Cap. Mfd.	Size
VBC-2	.001	$\frac{7}{16}$ x 1½
VBC-3	.002	$\frac{7}{16}$ x 1½
VBC-4	.0022	$\frac{7}{16}$ x 1½
VBC-5	.003	$\frac{7}{16}$ x 1½
VBC-6	.0033	$\frac{7}{16}$ x 1½
VBC-7	.004	$\frac{7}{16}$ x 1½
VBC-8	.0047	½ x 1½
VBC-9	.005	½ x 1½
VBC-22	.006	½ x 1½
VBC-23	.0068	½ x 1½
VBC-24	.007	½ x 1½
VBC-25	.0075	$\frac{9}{16}$ x 1½
VBC-26	.008	$\frac{9}{16}$ x 1½
VBC-27	.01	$\frac{9}{16}$ x 1½
VBC-28	.015	$\frac{9}{16}$ x 1¾
VBC-29	.02	$\frac{9}{16}$ x 2
VBC-32	.025	⅝ x 2
VBC-33	.03	$\frac{11}{16}$ x 2
VBC-34	.05	$\frac{13}{16}$ x 2
VBC-35	.015-.015	¾ x 2

VIBRATOR "HASH" CAPACITOR — VMC36
.5 Mfd. 100 Volts WVDC

(See Pages P-47 to P-50 for AEROVOX Prices)

AEROVOX corporation

Latest Aerovox Items

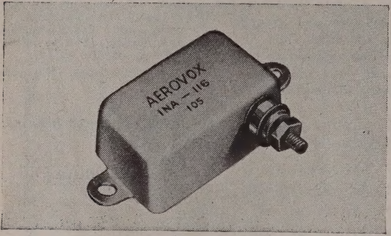


SI-TV HIGH VOLTAGE CERAMIC CAPACITORS

A new addition to the already complete line of Aerovox Hi-Q Ceramic capacitors is the SI-TV High-Voltage Tubular Ceramic Capacitor. Especially adapted to television applications this capacitor is available in two sizes. For capacities from 4.7 mmf. to 30. mmf. the size is .312 x 1.125. For 47. mmf. the case size is .385 x 1.850. All units referred to here are 6000 Volts.

6000 VOLTS

CAPACITY MMF.	CAPACITY MMF.
4.7	22.
8.2	24.
12.	27.
15.	30.
8.	47.
20.	



AEROVOX R-F NOISE CAPACITIVE SUPPRESSORS

Type INA-116 Type INA-117

Type INA-118

These radio-noise suppression capacitors have been especially designed for use in military or commercial, aircraft and vehicular applications. Primary application is as an r-f bypass capacitor from line to ground in low voltage dc supply lines. Units are especially treated to assure extremely long, noise-free life.

Operating temperature range is minus 55 degrees C to plus 95 degrees C. For full 150 volt rating the operating temperature range is minus 55 degrees C to plus 50 degrees C. Units may be used at operating voltages up to 120 vdc over a temperature range of minus 55 degrees C to plus 71 degrees C; and 60 vdc over a range of minus 55 degrees C to plus 95 degrees C.

Aerovox Type	Voltage	Maximum Impedance at 150 Kc (Ohms)	Nominal Capacitance Rating (Mfd.)	Case Size	Mounting Centers
INA-117	150 VDC	.6	2.	1¾ x 1 x ¾	2⅛
INA-116	150 VDC	.3	4.	1¾ x 1 x ⅞	2⅛
INA-118	150 VDC	.12	10.	2 x 2 x ⅞	2⅜

AEROVOX INTERFERENCE FILTERS

These latest filter units provide maximum attenuation from 150 KC well up into the UHF range. And they are extra-rugged, extra-compact, extra-efficient, by any comparison with previous filters.

Primary applications are in r.f. noise suppression work in military or commercial aircraft and for vehicular low-voltage d.c. applications. Also, for special applications such as battery or low-voltage d.c. filters, for shield room applications, and for critical equipment.

Available in seven standard types meeting a wide variety of applications. For extraordinary requirements, special filters can be developed and built to your order.

Aerovox Type	Amps.	VDC	Size (l. x w. x h.)
IN 148	2.0	150	1¾"x1"x⅞"
IN 150	3.0	150	1 13/16"x1"x1"
IN 151	5.0	150	1 13/16"x1¼"x1"
IN 152	10.0	150	2 1/16"x1¼"x1"
IN 153	25.0	150	2"x2"x1 3/16"
IN 156	40.0	150	5 1/16"x1 13/32"x1 1/16"
IN 154	100.0	150	3 1/16"x2⅛"x2⅞"

AEROVOX RESONANT CAPACITORS RC SERIES

Again the radio-electronic art imposes still more critical capacitor requirements. This time it's adequate bypassing of IF circuits in order to keep IF frequencies from entering such circuits and causing troublesome squeals and howls. And Aerovox comes up with the new AEROVOX RESONANT CAPACITORS.

AEROVOX RESONANT CAPACITORS, Series RC-, are now available in conventional paper tubular design, wax impregnated and wax sealed as follows:

CAT. NO.	MFD.	WVDC	O. D.
RC2	.05	400	½ d. x 1⅛
RC3	.1	400	½ d. x 1⅝
RC4	.2	400	9/16 d. x 1⅞

AEROVOX
RESONANT
CAPACITOR

(See Pages P-47 to P-50 for AEROVOX Prices)

Mica Capacitors

AEROVOX corporation

"POSTAGE-STAMP" MOLDED-IN-BAKELITE MICA CAPACITORS

Wide choice of designs, sizes, mountings, terminals offer the correct Aerovox unit for every application, as listed. Units built of selected mica and foil; molded bakelite casing impervious to moisture, heat, mechanical damage. Micrometer test for mica thickness maintains capacity values for long life. Capacity values indicated on units.

TYPE 1441W

Compact, with wire leads.

500 V.D.C.W.	1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.
.0005	.003
.00075	.004*
.001	.005*
.0015	.006*
.002	.007*
.0025	.008*

TYPE 1441WX

300 V.D.C.W.	600 V.D.C.T.
.004	.008*
.005	.009*
.006	.01*
.007*	

Size: 1″ x ⅝″ x $\frac{3}{16}$″. Std. Tolerance ±20%. *Thickness $\frac{5}{16}$″.

TYPE 1467

Compact, with wire leads.

500 V.D.C.W.	1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.
.0005	.004
.00075	.005
.001	.006
.0015	.007*
.002	.008*
.0025	.009*
.003	.01 6

TYPE 1467X

300 V.D.C.W.	600 V.D.C.T.
Cap. Mfd.	Cap. Mfd.
.007	.013*
.008	.014*
.01	.015*
.012*	

Std. Size: $\frac{53}{64}$″ x $\frac{53}{64}$″ x $\frac{9}{32}$″ Std. Tolerance ±20%.
*Thickness $\frac{21}{64}$″.

TYPE 1460

Popular type molded-in-bakelite mica capacitor. Size: 1⅝″ x ⅝″. Two soldering lug terminals. 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	Cap. Mfd.
.0001	.00075
.00015	.001
.0002	.0015
.00025	.002
.0003	.0025
.00035	.003
.0004	.004*
.0005	.005*

*600 v. D.C. Test—300 v. D.C. Working; $\frac{9}{32}$″ thick, all others $\frac{17}{64}$″.

TYPE 1468

Midget size with wire leads.

500 V.D.C.W.		1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.000001	.000075	.00035
.000005	.0001	.0004
.00001	.00015	.0005
.000025	.0002	.00075
.00004	.00025	.001
.00005	.0003	

Size: $\frac{45}{64}$″ x $\frac{29}{64}$″ x $\frac{3}{16}$″.
Std. Tolerance ±20%.

TYPE 1478

500 V.D.C.W.	1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.
.0005	.0015
.00075	.002
.001	

Size: 1$\frac{1}{16}$″ x $\frac{7}{16}$″ x $\frac{3}{16}$″.
Std. Tolerance ±20%.

HI-VOLTAGE MICAS TYPES 1445-6-7

Designed with insulated mounting holes 1$\frac{5}{16}$″ apart independent of soldering lugs. Used to shunt meter windings, large or small meter-mounting brackets available. Specify by suffix (A) for large or (E) for small brackets.

Type 1445

600 V.D.C.W.		1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00005	.0005	.006
.0001	.001	.008
.00015	.0015	.01
.0002	.002	.015*
.00025	.0025	.02*
.0003	.003	.025*
.00035	.004	.03*
.0004	.005	.04*

Type 1446

1200 V.D.C.W.		2500 V.D.C.T
.00005	.0004	.004*
.0001	.0005	.005*
.00015	.001	.006*
.0002	.0015	.008*
.00025	.002	.01*
.0003	.0025	.015*
.00035	.003	

Type 1447

2500 V.D.C.W.		5000 V.D.C.T.
.00005	.0003	.002*
.000075	.00035	.0025
.0001	.0004	.003*
.00015	.0005	.004*
.0002	.001	.005*
.00025	.0015	

Size: 1⅛″ x 1⅝″ x $\frac{11}{32}$″.
*Thickness $\frac{7}{16}$″.
Std. Tolerance ±10%.

HIGH-VOLTAGE MOLDED-IN-BAKELITE MICA CAPACITORS

TYPE 1450

For critical service in low-powered transmitting circuits, bufler stages, power amplifiers, laboratory equipment, etc. Non-magnetic parts are used to reduce r.f. losses to minimum. Heavy terminals for minimum r.f. and contact resistance. Intended for point-to-point wiring, supported entirely by soldered connections.

600 V.D.C.W.		1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00025	.002	.01
.0003	.0025	.015*
.00035	.003	.02*
.0004	.004	.025*
.0005	.005	.03*†
.001	.006	.04*†
.0015	.008	.05*†

*300 V.D.C.W. 600 V.D.C.T.
Size: 1¼″ x 1¼″ x $\frac{5}{16}$″
Std. Tolerance ±10%.
†Thickness ¾″.

TYPES 1455-6-7

Same as Types 1445-47 except for sizes and capacitance ranges. Distance between mounting holes is 1½″.

Type 1455

600 V.D.C.W.		1000 V.D.C.T.
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00005	.0005	.006
.0001	.001	.008
.00015	.0015	.01
.0002	.002	.015
.00025	.0025	.02
.0003	.003	.025
.00035	.004	.03
.0004	.005	

Type 1456

1200 V.D.C.W.		2500 V.D.C.T.
.00005	.0004	.004
.0001	.0005	.005
.00015	.001	.006
.0002	.0015	.008
.00025	.002	.01
.0003	.0025	
.00035	.003	

Type 1457

2500 V.D.C.W.		5000 V.D.C.T.
.00005	.0025	.001
.000075	.0003	.0015
.0001	.00035	.002
.00015	.0004	.0025
.0002	.0005	.003

Size: 1¼″ x 1$\frac{25}{32}$″ x $\frac{11}{32}$″.
Std. Tolerance ±10%.

TYPES 1650-1-2-3-4

Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Threaded mounting holes for roundhead screw terminals or plain holes available. Add suffix A for plain holes. Types 1650, 1651 and 1652 are supplied in brown or low-loss bakelite. Types 1653L and 1654L in low-loss bakelite only.

Type 1650

600 V.D.C.W. 350 V.A.C.W.	1000 V.D.C.T. 700 V.A.C.T.
Cap. Mfd.	Cap. Mfd.
.00005	.004
.0001	.005
.00025	.006
.0003	.008
.00035	.01
.0004	.015
.0005	.02
.001	.025
.0015	.03
.002	.04*
.0025	.05*
.003	.06*

Type 1651

1200 V.D.C.W. 875 V.A.C.W.	2500 V.D.C.T. 1750 V.A.C.T.
.0005	.003
.0001	.004
.00025	.005
.0003	.006
.00035	.008
.0004	.01
.0005	.015
.001	.02*
.0015	.025*
.002	.03*
.0025	

Type 1652

2500 V.D.C.W. 1750 V.A.C.W.	5000 V.D.C.T. 3500 V.A.C.T
.00005	.001
.000075	.0015
.0001	.002
.00015	.0025
.0002	.003
.00025	.004
.0003	.005
.00035	.006
.0004	.008*
.0005	.01*

Type 1653L

3750 V.D.C.W. 2625 V.A.C.W.	7500 V.D.C.T. 5250 V.A.C.T.
.00005	.0004
.000075	.0005
.0001	.001
.00015	.0015
.0002	.002
.00025	.0025
.0003	.003*
.00035	

Type 1654L

5000 V.D.C.W. 3500 V.A.C.W.	10,000 V.D.C.T. 7000 V.A.C.T.
.00005	.0003
.000075	.00035
.0001	.0004
.00015	.0005
.0002	.001*
.00025	

Size: 1¾″ x 1$\frac{5}{16}$″ x $\frac{7}{16}$″.
*Thickness ¾″.
Std. Tolerance ±10%.

AEROVOX corporation

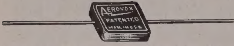
Mica Capacitors

For most critical applications where precise capacity values must be attained and maintained, AEROVOX silvered mica units are generally available. Encased in red molded XM bakelite. Similar in external appearance to standard bakelite molded mica units.

Unique construction. Only plus .0022 per degree F.—a remarkably low temperature coefficient. Excellent retrace characteristics. Practically no capacity drift with time. Exceptionally high "Q". Mechanically protected against physical damage and changes in electrical characteristics due to varying atmospheric conditions. Wax impregnated externally. Ideal for use in circuits where inductance and capacity product must remain constant under all operating conditions. Specifically designed for use in push-button tuning, oscillator padding circuits, fixed tuned circuits, and as capacitance standards, etc., where accuracy and stability are of prime importance.

Standard tolerance ±5%. For ±20% deduct 10% from price. For ±10% deduct 5%. For ±3% add 10%. For ±2% add 15%. For ±1% add 25%.

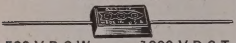
TYPE 1464



500 V.D.C.W. **1000 V.D.C.T.**

Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00075	.0015	.004*
.0008	.002	.005*
.0009	.0025	.006*
.001	.003	

TYPE 1469



500 V.D.C.W. **1000 V.D.C.T.**

Cap. Mfd.	Max. Char.	Cap. Mfd.	Max. Char.
.000005	B	.00015	F
.00001	B	.0002	F
.000025	C	.00025	F
.00004	D	.0003	F
.00005	F	.00035	F
.00007	F	.0004	F
.000075	F	.0005	F
.0001	F		

Size: $\frac{45}{64}$" x $\frac{29}{64}$" x $\frac{3}{16}$" provided with wire leads.

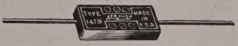
TYPE 1464X

300 V.D.C.W. **600 V.D.C.T.**

Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.004	.006	.008*
.005	.007*	.01*

Size: $\frac{25}{32}$" x $\frac{25}{32}$" x $\frac{9}{32}$" or $\frac{53}{64}$" x $\frac{53}{64}$" x $\frac{21}{64}$" for units marked *. Provided with wire leads. Standard Tolerance ±5%.

TYPE 1479

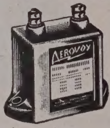


500 V.D.C.W. **1000 V.D.C.T.**

Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.0001	.00035	.0008
.00015	.0004	.0009
.0002	.0005	.001
.00025	.0007	
.0003	.00075	

Size: $1\frac{1}{16}$" x $\frac{7}{16}$" x $\frac{3}{16}$" provided with wire leads. Maximum characteristic available F.

PORCELAIN-CASED MICA CAPACITORS
TYPES 1991-2-3-4-5-6



Ideal for high-frequency application. Glazed porcelain case, high temperature wax sealed. Heavy duty power terminals. Minimum power loss due to dielectric absorption. No heating at full load.

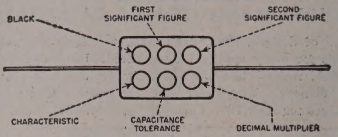
Size: 4" overall by 3" high; 3½" between.

Cap.	DC Voltage Rating	Type	Max. Current Capacity — Amps 15 mc	7.5 mc	3750 kc	1875 kc
.00005	12,500	1996	3	2.5	1.5	1
.0001	12,500	1996	5	4	3	2
.00025	12,500	1996	7	8	6	4
.0005	12,500	1996	8	9	8	7
	7,000	1994	7	8	6	4
.001	12,500	1996	9	10	11	12
	7,000	1994	8	9	10	8
	3,500	1992	8	9	8	5
.0015	12,500	1996	9	10	11	12
	7,000	1994	9	9	10	8
	5,000	1993	8	9	9	7
	3,500	1992	8	9	8	5
	2,000	1991	7	8	8	5
.002	12,500	1996	9	12	13	15
	7,000	1994	9	9	10	10
	5,000	1993	8	9	9	8
	3,500	1992	8	8	9	7
	2,000	1991	7	8	8	7
	2,000	1991	7	8	8	6
.003	12,500	1996	9	12	13	15
	7,000	1994	9	10	10	10
	5,000	1993	8	9	9	9
	3,500	1992	8	9	9	8
	2,000	1991	7	8	8	7
.005	10,000	1995	10	13	14	15
	7,000	1994	9	11	12	11
	5,000	1993	9	11	12	10
	3,500	1992	9	10	11	9
	2,000	1991	8	9	10	8
.01	7,000	1994	10	13	15	15
	5,000	1993	10	13	15	15
	3,500	1992	10	13	14	14
	2,000	1991	10	13	14	14
.02	3,500	1992	10	14	16	17
	2,000	1991	10	13	15	15
.05	3,500	1992	10	14	17	18
	2,000	1991	10	14	16	17
.1	2,000	1991	10	14	17	18

SEE PAGE P-52
FOR LISTING OF HIGH-VOLTAGE
MICA CAPACITORS
FOR TELEVISION APPLICATIONS

MICA CAPACITOR COLOR CODES

JAN-C-5 COLOR CODE

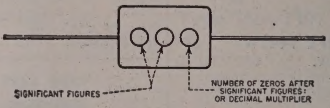


Color	Figure or Multiplier	Characteristic Letter	Tolerance	Color	Figure or Multiplier	Characteristic Letter	Tolerance
Black	0	A	20% (M)	Blue	6	G	....
Brown	1	B	....	Violet	7	..	....
Red	2	C	2% (G)	Gray	8	..	....
Orange	3	D	....	White	9	..	....
Yellow	4	E	....	Gold	.1	..	....
Green	5	F	....	Silver	.01	..	10% (K)

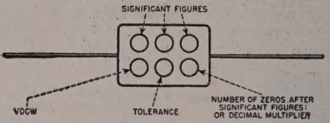
RMA COLOR CODE

THREE DOT RMA COLOR CODE

— USED FOR 500 VDCW CAPACITORS WHOSE TOLERANCE IS GREATER THAN 10%.

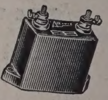

SIGNIFICANT FIGURES
NUMBER OF ZEROS AFTER SIGNIFICANT FIGURES: OR DECIMAL MULTIPLIER

SIX DOT RMA COLOR CODE

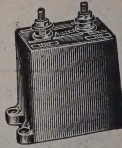

SIGNIFICANT FIGURES
VDCW
TOLERANCE
NUMBER OF ZEROS AFTER SIGNIFICANT FIGURES: OR DECIMAL MULTIPLIER

Color	Significant Figure, or No. of Zeros, or Decimal Multiplier	VDCW	Tolerance	Color	Significant Figure, or No. of Zeros, or Decimal Multiplier	VDCW	Tolerance
Black	0	....	....	Violet	7	700	7%
Brown	1	100	1%	Gray	8	800	8%
Red	2	200	2%	White	9	900	9%
Orange	3	300	3%	Gold	.1	1000	5%
Yellow	4	400	4%	Silver	.01	2000	10%
Green	5	500	5%	None	..	500	20%
Blue	6	600	6%				

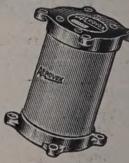
Commercial Grade
MICA TRANSMITTING CAPACITORS



Extra-heavy-duty Capacitors for
- **Commercial Communication Companies**
- **Broadcasters**
- **Builders of Quality Radio and Electronic Equipment**
- **Amateurs, Experimenters**



With these capacitors Aerovox is contributing its share towards narrowing still more the small remaining gap between professional and amateur radio practices.



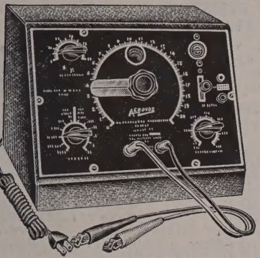
Due to the normally limited demand for these extra-heavy-duty mica capacitors, as well as the considerable number of capacitance and voltage ratings in which they are made, this line is made to special order. However, your Authorized Aerovox Jobber is now able to order these commercial-grade capacitors for you.

Consult your Aerovox Jobber for specifications and quotations.

(See Pages P-47 to P-50 for AEROVOX Prices)

AEROVOX corporation

Test Instruments



AEROVOX CAPACITANCE AND RESISTANCE BRIDGE

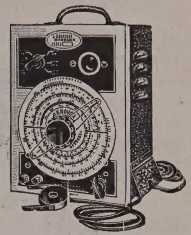
AEROVOX MODEL 76 Resistance Capacitance Bridge is the new postwar general-utility instrument combining simplicity of operation, remarkable degree of accuracy, and modest price. Extreme ruggedness makes it equally suitable out on the job, in the shop, or in the laboratory.

Sloping panel 10″ x 6″. Aluminum, etched and anodized. Steel cabinet, black crackle finish. All readings taken from main 4″ dial. Same calibrated scale eliminates trouble and chances for errors in reading. Linear scale, also an exclusive feature, means no crowding at high end to make readings difficult and inaccurate. Both the resistance and the capacitance readings are covered by six overlapping ranges, as against two or three in usual service instruments, for maximum sensitivity and accuracy. Positive "magic eye" indicator.

Here is what Model 76 bridge does: (1) Measures capacitance from 100 mmf. to 200 mfd. in six ranges. (2) Measures resistance from 10 ohms to 20 megohms in six ranges. (3) Measures power factor from 0 to 50%. (4) Provides D.C. polarizing potential for leakage measurements, from 0 to 600 V. D.C., continuously variable and calibrated in volts. (5) Checks leakage or insulation resistance.

Instrument is provided with shockproof, color-coded test leads fitted with banana plugs for panel jacks, and with clips. Instructions. Measures 10″ x 7¾″ x 8¼″. Weight 8 lbs. 3 oz.

AEROVOX L-C CHECKER



★ This exclusive Aerovox development has no counterpart, much less an equal. Basically, it determines the effectiveness of any capacitance or inductance while actually connected in its circuit. Testing efficiency is greatly increased. Components may be tested singly or in combinations whereby to determine resonant frequency and effectiveness of given circuits. Circuit or systems may be adjusted by this checking means for proper operating efficiency. Certainly a "must" instrument for the radio worker.

HERE'S A PARTIAL LISTING OF WHAT THE AEROVOX L-C CHECKER DOES:

It checks capacitance of capacitors at radio frequencies **without removing them** from circuit. • It checks alignment of r.f. circuits; also tracking of super-het. oscillator. • It checks alignment or broad or narrow band i.f. amplifiers. • It checks the tuning of wave traps and of image-rejection circuits; frequency ranges of receivers; frequency ranges of signal generators; calibration of wave meters. • Identifies harmonics of frequency standard in precision frequency calibration of radio equipment. • It checks natural resonant points of r.f. chokes making sure they are beyond operating range. • It traces resonant absorption trouble in "all-wave" receiver circuits—locating dead spots, etc. • It locates resonant points in shorted windings (unused coils) in multi-range oscillators, etc. • Locates resonant frequency of r.f. coupling chokes, making certain of placement to secure enough gain balance over tuning range of r.f. stage. • It checks natural period of antennae and transmission lines in order to have resonant peaks at certain frequencies. • It checks quartz crystals for frequency, false frequency, operation at harmonics, and for activity. • Checks FM i.f. transformers. • Checks alignment of FM i.f. channels. • Checks leakage of paper capacitors. And it checks many other functions when used with auxiliary equipment. This checker operates from AC or from DC 120 volts source. It has a frequency range from 100 KC to 44MC as follows:

Range:

A — 75 — 225 KC
B — 200 — 600 KC
C — 550 — 1650 KC
D — 1.5 — 5 MC
E — 4.5 — 14.5 MC
F — 13 — 44 MC

Capacitance Range: .0002 mfds. — 2 mfd.

Inductance Range: 0 — 500 MH

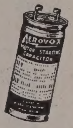
Tube Complement: 6C4, 25Z6, 6E5, VR150

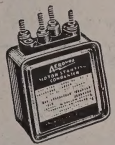
Accuracy: Capacitance and Inductance ± 10%

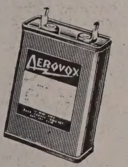
Frequency Ranges A, B, C: ±2%
D, E, F: ±5%

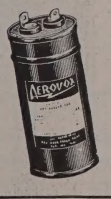
Dimensions: 10½ x 7½ x 5½

Weight: (shipping) 6 lbs.





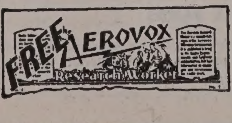




A TYPE FOR EVERY APPLICATION

AEROVOX Motor-Starting CAPACITORS

Aerovox motor capacitors are vailable in two general categories: (1) **Exact-Duplicate Replacements,** precisely matching the mechanical and electrical features of the original equipment; and (2) **Universal Replacements,** for a minimum stock of numbers taking care of the maximum range of motor applications. Exact-Duplicate Replacements do the "same-as-new" service job insisted upon by critical customers. Universal Replacements mean maximum convenience with minimum investment. And of course Aerovox also supplies the hardware — housings, caps, mountings.



A snappy, informative, practical engineering paper, issued monthly, the AEROVOX RESEARCH WORKER is free to servicemen, engineers, hams, and other interested radio workers. Ask your AEROVOX jobber how you may subscribe, or write direct.

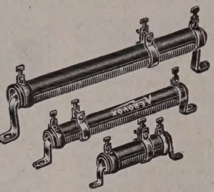
*Trade Mark.

(See Pages P-47 to P-50 for AEROVOX Prices)

Resistors

AEROVOX corporation

SLIDEOHM* Wire-Wound Vitreous-Enameled ADJUSTABLE RESISTORS



TYPES 952-3-4-5 -6-7-8

Adjustable resistors combining adjustment to any resistance value within unit's range, with positive, permanent, non-fluctuating qualities of wire-wound resistor. Each Slideohm Resistor is provided with horizontal mounting brackets and one adjustable contact slider.

CURRENT RATINGS — MILLIAMPERES

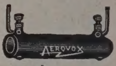
Resis. Ohms	Type 952 25 Watts 2" x ⅝"	Type 954 50 Watts 4½" x ¾"	Type 956 80 Watts 6½"x¾"	Type 957 100 Watts 6½"x1⅛"	Type 958 200 Watts 10½"x1⅛"
1	5,000	7,070	8,660	10,000	14,140
2	3,535	5,000	6,120	7,070	10,000
3	2,890	4,080	5,000	5,770	8,160
4		3,535	4,330	5,000	7,070
5	2,230	3,160	3,870	4,470	6,320
7	1,825				
10	1,580	2,235	2,740	3,160	4,470
15	1,290		2,235		
20	1,115				
25	1,000	1,415	1,730	2,000	2,825
50	710	1,000	1,220	1,410	2,000
75	580	815	1,000		
100	500	707	866	1,000	1,414
150	410	575			
200	354	500	612	707	
250	315	445	550	630	900
300	289	408	500		
400	250	353	433	500	
500	224	316	387	447	632
750	182	258	315	365	
800	177	250	305		
850	170				
1,000	158	224	274	316	447
1,250	140	200	245		
1,500	129	180	224	260	365
2,000	112	160	195	225	315
2,250	105	150	183		
2,500	100	141	173	200	282
3,000	90	130	158	180	260
3,500	85	120	146		240
4,000	80	110	137	160	225
4,500	74	105	129	150	210
5,000	70	100	122	141	200
6,000	65	91	111	130	
7,000	57	85	103		
7,200	56	83	102		
7,500	53	82	100	115	163
8,000	50	79	97		
8,500	47				
9,000	44	75	91		
10,000	40	71	87	100	141
12,000	33	64			
15,000	27	58	71	80	115
20,000	20	48	61	70	100
25,000	16	40	55	60	90
30,000		33	50	50	82
35,000			43		
40,000		25	37	37	62
45,000			33		
50,000		20	30	30	50
60,000		17	25	25	42
70,000			21		
75,000		13		20	33
80,000		12	19		
100,000		10	15	15	25
125,000					20
150,000					16

ADJUSTABLE BANDS

One screw-driver type adjustable band terminal is supplied with each "Slideohm" resistor. Order additional bands, screw-driver or knob type as illustrated by resistor type number for which band is to be used.

*Trade Mark.

PYROHM JUNIOR* Wire-Wound Vitreous-Enameled FIXED RESISTORS TYPES 931 and 933



Compact genuine wire-wound, vitreous-enamel. Correctly designed, highest quality materials used throughout. Note these features:

1. Crack-proof refractory tubing for the support. Adequate heat dissipation.
2. Quality resistance wire precisely spaced, tension wound.
3. Copper terminal band clamped to tubing. Wire ends wrapped and brazed around raised ear.
4. Heavy vitreous-enamel coating for permanent seal against moisture, oxidation and mechanical damage.
5. Pig-tail of stiff wire 2 in. long soldered to terminal band for positive, non-breakable connection.

Ohms	10 Watts Type 931 Current M.A.	20 Watts Type 933 Current M.A.
1	3,160	4,480
1.5	2,580	
2	2,235	
3	1,825	2,580
4	1,580	
5	1,415	2,000
7.5	1,155	
10	1,000	1,410
12	913	
15	815	1,150
20	707	
25	630	900
30	577	
35	534	
40	500	
50	450	630
75	365	510
100	316	450
125	283	
150	258	365
175		340
200	224	320
225	211	
250	200	285
300	182	258
350	169	240
400	158	220
450	149	
500	142	200
600	129	
650		175
700	120	169
750	115	160
800	110	155
850		153
900	105	
1,000	100	141
1,100	95	
1,200	91	130
1,250	89	125
1,500	81	115
1,750	75	107
1,850		104

* Operated at Low Temp., Rated at 5 Watts.

Ohms	10 Watts Type 931 Current M.A.	20 Watts Type 933 Current M.A.
2,000	70	100
2,250	66	94
2,400		91
2,500	63	90
2,750		85
3,000	58	80
3,500	53	76
4,000	50	70
4,500	47	67
5,000	45	63
6,000	41	55
7,000	38	53
7,500	36	51
8,000	35	50
8,500	34	
9,000	33	
10,000	30	40
11,000	27	
12,000	25	
12,500	24	32
13,500	22	
14,300	21	
15,000	20	27
16,000	19	
17,500	17	
18,000	16	
20,000	15	20
22,500	13	
25,000	12	16
30,000	*13	13
35,000	*12	11
40,000	*11	10
45,000	*10.5	9
50,000	*10	8
55,000		7
60,000		†10.8
65,000		†10.5
70,000		†10.0
75,000		† 9.5
80,000		† 9.3
85,000		† 9.1
90,000		† 8.8
95,000		† 8.6
100,000		† 8.4

† Operated at Low Temp., Rated at 7 Watts.

INSULATED MOLDED CARBON RESISTORS TYPES 1097 and 1098

Small, noiseless, vibration-proof. Crack-proof molded casing around molded carbon resistance element. Tinned copper pig-tail leads 2 in. long. Resists humidity effects. Ideal for AVC circuits, high-gain amplifiers. RMA color-coded; stamped with resistance value. Precision tested. Standard Tolerance ±10%.

Type 1097 ½ Watt-Size: 5/32" x ⅜" lg.

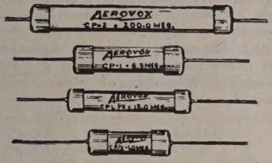
Type 1098 1 Watt-Size: ¼" x ¾" lg.

JOBBERS' STOCK IN PREFERRED RMA RANGES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
0.47	2.2	10	47	220	1,000	4,700	22,000
0.51	2.4	11	51	240	1,100	5,100	24,000
0.56	2.7	12	56	270	1,200	5,600	27,000
0.62	3.0	13	62	300	1,300	6,200	30,000
0.68	3.3	15	68	330	1,500	6,800	33,000
0.75	3.6	16	75	360	1,600	7,500	36,000
0.82	3.9	18	82	390	1,800	8,200	39,000
0.91	4.3	20	91	430	2,000	9,100	43,000
1.0	4.7	22	100	470	2,200	10,000	47,000
1.1	5.1	24	110	510	2,400	11,000	51,000
1.2	5.6	27	120	560	2,700	12,000	56,000
1.3	6.2	30	130	620	3,000	13,000	62,000
1.5	6.8	33	150	680	3,300	15,000	68,000
1.6	7.5	36	160	750	3,600	16,000	75,000
1.8	8.2	39	180	820	3,900	18,000	82,000
2.0	9.1	43	200	910	4,300	20,000	91,000

Megs	Megs	Megs	Megs	Megs	Megs
0.1	0.62	3.9	0.27	1.6	10.0
0.11	0.68	4.3	0.30	1.8	11.0
0.12	0.75	4.7	0.33	2.0	12.0
0.13	0.82	5.1	0.36	2.2	13.0
0.15	0.91	5.6	0.39	2.4	15.0
0.16	1.0	6.2	0.43	2.7	16.0
0.18	1.1	6.8	0.47	3.0	18.0
0.20	1.2	7.5	0.51	3.3	20.0
0.22	1.3	8.2	0.56	3.6	22.0
0.24	1.5	9.1			

Aerovox *Carbofilm* Resistors



Precision Resistors Made With Matchless Accuracy

Made under licensed agreement with Western Electric, these precision resistors are the result of years of intensive research in developing components with extreme accuracy and stability. Carbofilm resistors are intended for circuits calling for the accuracy and stability of wire-wound resistors with the marked economy of carbon resistors. They serve a real need in test equipment and laboratory instruments. All in all, Carbofilm resistors meet the requirements of accuracy, stability and economy.

The Carbofilm resistors are a carbon deposit type and are available in the following standard or jobber stock size with the resistance value shown in the listing.

SIZES

CP ½ watt 0.230D x 11/16L
CPL 1 watt 0.230D x 15/16L
CP 1 watt 0.293D x 7/8L
CP 2 watt 0.293D x 2"

	CP ½ ½ Watt ± 1%	CP 1 1 Watt ± 1%	CP 2 2 Watt ± 1%
OHMS	**LIST**	**LIST**	**LIST**
100	$1.00	$1.25	$1.50
120	1.00	1.25	1.50
130	1.00	1.25	1.50
150	1.00	1.25	1.50
175	1.00	1.25	1.50
200	1.00	1.25	1.50
225	1.00	1.25	1.50
250	1.00	1.25	1.50
300	1.00	1.25	1.50
350	1.00	1.25	1.50
400	1.00	1.25	1.50
450	1.00	1.25	1.50
500	1.00	1.25	1.50
550	1.00	1.25	1.50
600	1.00	1.25	1.50
650	1.00	1.25	1.50
750	1.00	1.25	1.50
800	1.00	1.25	1.50
850	1.00	1.25	1.50
900	1.00	1.25	1.50
1000	1.00	1.25	1.50
1200	1.00	1.25	1.50
1250	1.00	1.25	1.50
*1450	1.00	1.25	1.50
1500	1.00	1.25	1.50
1750	1.00	1.25	1.50
2000	1.00	1.25	1.50
2250	1.00	1.25	1.50
2500	1.00	1.25	1.50
*2950	1.00	1.25	1.50
3000	1.00	1.25	1.50
3500	1.00	1.25	1.50
4000	1.00	1.25	1.50
*4450	1.00	1.25	1.50
4500	1.00	1.25	1.50
5000	1.00	1.25	1.50
5500	1.00	1.25	1.50
*5950	1.00	1.25	1.50
6000	1.00	1.25	1.50
6500	1.00	1.25	1.50
7000	1.00	1.25	1.50
*7450	1.00	1.25	1.50
7500	1.00	1.25	1.50

	CP ½ ½ Watt ± 1%	CP 1 1 Watt ± 1%	CP 2 2 Watt ± 1%
OHMS	**LIST**	**LIST**	**LIST**
8000	$1.00	$1.25	$1.50
8500	1.00	1.25	1.50
*8950	1.00	1.25	1.50
9000	1.00	1.25	1.50
*9950	1.00	1.25	1.50
10,000	1.00	1.25	1.50
12,000	1.00	1.25	1.50
12,500	1.00	1.25	1.50
*13,500	1.00	1.25	1.50
15,000	1.00	1.25	1.50
17,500	1.00	1.25	1.50
20,000	1.00	1.25	1.50
22,500	1.00	1.25	1.50
25,000	1.00	1.25	1.50
30,000	1.00	1.25	1.50
40,000	1.00	1.25	1.50
45,000	1.00	1.25	1.50
50,000	1.00	1.25	1.50
55,000	1.00	1.25	1.50
60,000	1.00	1.25	1.50
65,000	1.00	1.25	1.50
70,000	1.00	1.25	1.50
75,000	1.00	1.25	1.50
80,000	1.00	1.25	1.50
85,000	1.00	1.25	1.50
90,000	1.00	1.25	1.50
MEGOHMS			
0.10	$1.00	$1.25	$1.50
0.125	1.00	1.25	1.50
0.150	1.00	1.25	1.50
0.175	.00	1.25	1.50
0.200	1.00	1.25	1.50
0.225	1.00	1.25	1.50
0.250	1.00	1.25	1.50
0.300	1.00	1.25	1.50
0.350	1.00	1.25	1.50
0.400	1.00	1.25	1.50
0.450	1.00	1.25	1.50
0.500	1.00	1.25	1.50
0.550	1.00	1.25	1.50
0.600	1.00	1.25	1.50
0.650	1.00	1.25	1.50

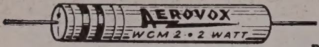
	CP ½ ½ Watt ± 1%	CP 1 1 Watt ± 1%	CP 2 2 Watt ± 1%
MEGOHMS	**LIST**	**LIST**	**LIST**
0.700	$1.00	$1.25	$1.50
0.750	1.00	1.25	1.50
0.800	1.00	1.25	1.50
0.850	1.00	1.25	1.50
0.900	1.00	1.25	1.50
1.0	1.00	1.25	1.50
1.2	1.00	1.25	1.50
1.25	1.00	1.25	1.50
1.5	1.00	1.25	1.50
2.0	1.00	1.25	1.50
2.225	1.00	1.25	1.50
2.5	1.00	1.25	1.50
3.0	1.00	1.25	1.50
3.5	1.00	1.25	1.50
4.0	1.00	1.25	1.50
4.5	1.00	1.25	1.50
5.0	1.00	1.50	1.50

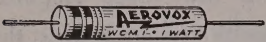
	CP ½ ½ Watt ± 1%	CP 1 1 Watt ± 1%	CP 2 2 Watt ± 1%
MEGOHMS	**LIST**	**LIST**	**LIST**
5.5	$1.00	$1.50	$1.50
6.0	1.00	1.50	1.50
6.5	1.00	1.50	1.50
7.0	1.00	1.50	1.50
7.5	1.00	1.50	1.50
8.0	1.00	1.50	1.50
8.5	1.00	1.50	1.50
9.0	1.00	1.50	1.50
10.0	1.00	1.50	1.50
12.5		1.50	1.50
15.		1.50	1.50
20.		1.50	1.50
25.		2.15	1.95
50.		3.50	2.30
100.			5.80
150.			12.00
200.			15.00

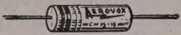
***Meter multiplyer resistance values — other odd values can be ordered as specials. STANDARD PACKAGE—10**

Aerovox *Corohm* Resistors

COROHM WIRE-WOUND MOLDED RESISTORS





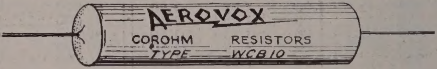


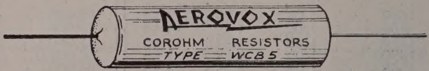
Corohms are miniature wire-wound molded resistors. They are thoroughly protected in molded plastic, and completely insulated. Especially intended for use in circuits requiring accurate and stable resistance values, particularly electrical and electronic instruments, TV receivers, laboratory setups, etc. Corohms are now generally available in any quantities through Aerovox distributors. The standard and stocked items come in the ½, 1 and 2 watt sizes, and in popular resistance values. Standard tolerance of plus/minus 10%. For 5% tolerance, add 100% to prices.

	WCMS ½ ½ Watt	WCM 1 1 Watt	WCM 2 2 Watt
OHMS	LIST	LIST	LIST
0.24	$ .17	$ .25	$ .33
0.27	.17	.25	.33
0.33	.17	.25	.33
0.39	.17	.25	.33
0.47	.17	.25	.33
0.56	.17	.25	.33
0.68	.17	.25	.33
0.82	.17	.25	.33
1.0	.17	.25	.33
1.2	.17	.25	.33
1.5	.17	.25	.33
1.8	.17	.25	.33
2.2	.17	.25	.33
2.7	.17	.25	.33
3.3	.17	.25	.33
3.9	.17	.25	.33
4.7	.17	.25	.33
5.6	.17	.25	.33
6.8	.17	.25	.33
8.2	.17	.25	.33
10	.17	.25	.33
11	.17	.25	.33
12	.17	.25	.33
13	.17	.25	.33
15	.17	.25	.33
16	.17	.25	.33
18	.17	.25	.33
20	.17	.25	.33
22	.17	.25	.33
24	.17	.25	.33
27	.17	.25	.33
30	$ .17	$ .25	$ .33
33	.17	.25	.33
36	.17	.25	.33
39	.17	.25	.33
43	.17	.25	.33
47	.17	.25	.33
51	.17	.25	.33
56	.17	.25	.33
62	.17	.25	.33
68	.17	.25	.33
75	.17	.25	.33
82	.17	.25	.33
91	.17	.25	.33
100	.17	.25	.33
110	.17	.25	.33
120	.17	.25	.33
130	.17	.25	.33
150	.17	.25	.33
160	.17	.25	.33
180	.17	.25	.33
200	.17	.25	.33
220	.17	.25	.33
240	.17	.25	.33
270	.17	.25	.33
300	.17	.25	.33
330	.17	.25	.33
360	.17	.25	.33
390	.17	.25	.33
430	.17	.25	.33
470	.17	.25	.33
510	.17	.25	.33
560	$.17	$ .25	$ .33
620	.17	.25	.33
680	.17	.25	.33
750	.17	.25	.33
820	.17	.25	.33
910	.17	.25	.33
1000	.17	.25	.33
1100		.25	.33
1200		.25	.33
1300		.25	.33
1500		.25	.33
1600		.25	.33
1800		.25	.33
2000		.25	.33
2200		.25	.33
2400		.25	.33
2700		.25	.33
3000		.25	.33
3300		.25	.33
3600			.33
3900			.33
4300			.33
4700			.33
5100			.33
5600			.33
6200			.33
6800			.33
7500			.33
8200			.33

SIZES: WCMS ½ — 0.125 D. x 7/16 L. WCM 1 — 0.281 D. x 1¼ L. WCM 2 — 0.328 D. x 1 ¾ L.

AEROVOX COROHM WIRE-WOUND RESISTORS





Corohms are ceramic-case wire-wound resistors combining exceptional resistance accuracy and stability with ample wattage rating to handle real loads and overloads.

The ceramic casing means a thoroughly insulated resistor that can be mounted directly against chassis or other metal body without grounding or shorting. Also, there is a minimum danger of accidental shock.

Essentially designed for circuits where a relatively high degree of resistance accuracy is required along with extra ruggedness. Its superior sealing means that it can be used in assemblies subjected to extremes in humidity, heat, salt air and other adverse climatic conditions.

They are available in any quantities through Aerovox distributors. Standard and stocked items are in the 5- and 10-watt sizes only, and in popular resistance values as listed.

Tolerance WCB5— 5 to 20 ohms ± 20% — 25 to 40 ohms ± 10% — 50 to 1,000 ± 5%

Tolerance WCB10 — 5 to 25± 20% — 30 to 50 ohms ± 10% — 75 to 20,000 ± 5%

	WCB5 5 Watt	WCB10 10 Watt
OHMS	LIST	LIST
5	$ .65	$ .75
10	.65	.75
15	.65	.75
20	.65	.75
25	.65	.75
30	.65	.75
40	.65	.75
50	.65	.75
75	.65	.75
100	.65	.75
150	.65	.75
200	.65	.75
250	.65	.75
300	.65	.75
400	.65	.75
500	.65	.75
600	.65	.75
700	.65	.75
800	.65	.75
900	.65	.75
1000	$ .65	$ .75
1250	.65	.75
1500	.65	.75
1750	.65	.75
2000	.65	.75
2500	.65	.75
3000	.65	.75
4000	.65	.75
5000	.70	.80
6000	.70	.80
7000	.70	.80
7500	.70	.80
8000	.70	.80
9000	.70	.80
10,000	.80	.90
12,000		.90
14,000		.90
15,000		.90
17,500		1.10
20,000		1.10

CHICAGO CONDENSER CORPORATION

CHICAGO 47, ILLINOIS

TYPE NO.	CAP. MFD.	LENGTH	DIAMETER
200 VOLTS D.C. OPERATING			
25x2	1.0	2½″	1″
2500	.5	2″	¾″
2250	.25	1¾″	⅝″
2100	.1	1⅝″	½″
2050	.05	1¼″	7/16″
2040	.04	1¼″	7/16″
2030	.03	1¼″	⅜″
2020	.02	1¼″	⅜″
2010	.01	1¼″	⅜″
400 VOLTS D.C. OPERATING			
45x2	1.0	2½″	1″
4500	.5	2″	⅞″
4250	.25	2″	11/16″
4100	.1	1⅝″	9/16″
4050	.05	1⅝″	7/16″
4040	.04	1⅝″	7/16″
4030	.03	1⅝″	7/16″
4020	.02	1¼″	7/16″
4010	.01	1¼″	⅜″
600 VOLTS D.C. OPERATING			
6500	.5	2½″	1⅛″
6250	.25	2″	¾″
6100	.1	1⅞″	⅝″
6050	.05	1⅝″	9/16″
6040	.04	1⅝″	9/16″
6030	.03	1⅝″	½″
6020	.02	1⅝″	7/16″
6010	.01	1¼″	⅜″
6006	.006	1¼″	⅜″
6005	.005	1¼″	⅜″
6004	.004	1¼″	⅜″
6003	.003	1¼″	⅜″
6002	.002	1¼″	⅜″
6001	.001	1¼″	⅜″

CHICAGO WAX TUBULAR CAPACITORS

CHICAGO
.1 MFD. 400 V.D.C.
TYPE 4100
GROUND

- ***NON-INDUCTIVELY WOUND***
- ***HIGH VACUUM IMPREGNATION***
- ***PAPER TUBES VACUUM WAXED***
- ***TINNED COPPER WIRE***
- ***END FILLED WITH HI-WAX***
- ***FLASH TESTED AT 3 TIME VOLTAGES***

CHICAGO OIL IMPREGNATED VACUUM FILLED CAPACITORS

TYPE NO.	CAP. MFD.	WIDTH	THICKNESS	HEIGHT	MOUNT.
600 VOLTS D.C.					
9005	.05	1 13/16″	1″	¾″	2⅛″
9010	.1	1 13/16″	1″	¾″	2⅛″
9025	.25	1 13/16″	1″	¾″	2⅛″
9050	.5	1 13/16″	1″	1″	2⅛″
9100	1.0	2″	1¾″	⅞″	2⅜″
9200	2.0	2″	2″	1⅛″	2⅜″
29005	.05-.05	1 13/16″	1″	¾″	2⅛″
29010	.1-.1	1 13/16″	1″	¾″	2⅛″
29025	.25-.25	1 13/16″	1″	⅞″	2⅛″
29050	.5-.5	2″	1¾″	⅞″	2⅜″
29100	1.0-1.0	2″	2″	1⅛″	2⅜″
39010	.1-.1-.1	1 13/16″	1″	⅞″	2⅛″
39025	.25-.25-.25	2″	1¾″	⅞″	2⅜″
39050	.5-.5-.5	2″	2″	1⅛″	2⅜″

BATH TUB TYPE CONDENSER

CHICAGO COND. CORP.
Oil Capacitor #546
.1 MFD-1500 V.D.C.
930-0012-00
CBBC-48197-C20

BATH TUB TYPE RADIO & MOTORS
INTERFERENCE
ELECTRONIC
SPECIAL TIMING
HERMETICALLY SEALED
TESTED AT TWO-TIME VOLTAGE

ALL SINGLE UNITS HAVE 2 TERMINALS—ALL DUAL UNITS HAVE 3 TERMINALS—ALL TRIPLE UNITS HAVE 3 TERMINALS—ONE GROUNDED TO CASE. OTHER UNITS HIGHER OR LOWER VOLTAGES CAN BE SUPPLIED UPON REQUEST.

Jennings RADIO
VACUUM ELECTRONIC COMPONENTS

FIXED and VARIABLE HIGH VOLTAGE VACUUM CAPACITORS & SWITCHES

SPECIFICATIONS

	FIGURES	NICKEL TYPES	COPPER TYPES	CAPACITY MMFD.	PEAK VOLTAGE KILOVOLTS	RMS AMPERES		OVERALL LENGTH	MAXIMUM O. D.	CONTACT DIAMETER	MOUNTING CENTERS
						NICKEL	COPPER				
VACUUM FIXED CAPACITORS	2	VC	VCC	6,12,25,50,75,100,150	20, 25, 30	14	42	6½	2¼	13/16	5⅞
	2	VC	VCC	200, 250	20, 25, 30	14	42	6½	2 11/16	13/16	5⅞
	15	W		6, 12, 25, 50, 100	20	10.5		4 3/16	2¼	⅜	3⅞
	18	X		5, 10, 15, 20, 25	17	7		3¼	1¼	11/32	2⅞
	19	Y		1, 2, 3, 4, 5	17	7		3¼	⅞	11/32	2⅞
	21		JCS-1	25, 50, 75, 100, 150	7.5, 10, 15		28	3⅝	2 1/32	55/64	3
	32		JCS-2	5-10-20-50	10, 15, 20		21	2 11/16	1 7/16	⅜	1 25/32
	31		JCS	250	7.5, 10, 15		42	3⅝	2⅝	55/64	3⅛
	31		JCS	500	7.5, 10		42	3⅝	3⅛	55/64	3⅛
	13		JCS	1000	7.5, 10		42	5¼	3½	2	4⅛
	7		JC-2	25, 50, 100	15, 20, 25		42	3¾	3¼	51/64	3⅛
	34		JC-3	20, 40, 50, 60	35, 40, 50, 60		140	8¼	4	2	6⅝
	4		JC-4	100, 125	35, 40, 50, 60		140	9¼	5	3⅛	7
	27		JC-5	200	35, 40, 50, 60		140	11¼	7	4⅛	8¾
	3	M	MC	500, 750, 1000	10, 15, 20	21	60	8⅜	5	2	6¼
	6	ML	MLC	500, 750, 1000	25, 30	21	60	9¼	5	2	7¼
	3	MH	MHC	200 or less	35, 40, 50	21	60	8½	5	2	6⅜
	33	MM	MMC	1500, 2000	10, 15	21	60	9¼	6⅛	4⅛	6¾
	33	MMH	MMHC	450	35, 40, 45	21	60	9⅜	6⅛	4⅛	6 13/16
	22		MC-1	500-750-1000	10,15		150	4½	4½	3½	3½
	10	K		50	35, 40, 50	14		8½	3	13/16	7¾
VACUUM VARIABLE CAPACITORS	30		TRC-1	1-8, 2-10	15		30	4¼	1⅜	1⅜	2
	11	T		5-25	20	10.5		6¼	2¼	½x⅝	4
	11		TC	5-25	20		21	6¼	2¼	⅝	4
	24	TR		2-8	17	10.5		6½	2¼	11/32x⅝	4
	24		TRCS	2-8	7.5, 10, 15		21	6 3/16	2¼	⅝	4
	23	SS		10-30 per section	25, 30, 35	7		6⅛	3	11/32x⅝	3⅞x2¾
	17		SSC-1	2-10 per section	10		15	6 1/16	2⅝	9/16x⅝	1½x3⅞
	11	AT		10-50	20, 25, 30	10.5		6½	3	½x⅝	4 3/16
	26		UCS	5-200	7.5, 10, 15		42	8 9/32	2⅝	55/64x2	4 5/32
	26		UCS	10-300	7.5, 10, 15		42	8¾	2⅝	55/64x2	4⅝
	26		UCS	25-500	7.5, 10, 15		42	8¾	3	55/64x2	4⅝
	26		UCSX	10-500	7.5, 10		42	6¾	3⅜	55/64x3⅛	5¾
	26		UCSX	25-700	7.5, 10		42	6⅝	3¾	2x3⅛	4 7/16
	26		UCSX	25-1000	7.5, 10		42	6⅞	3¾	2x3⅛	4 11/16
	25	U	UC	50-250	10, 15, 20	21	60	11 7/16	5	2	6½
	25	UH	UHC	10-75	35, 40, 50	21	60	11 7/16	5	2	6½
	25	UH	UHC	75-150	35, 40, 50	21	60	12	5	2	7 1/16
	12	UX	UXC	25-500	10, 15	21	56	14	5	3⅛	7⅞
	12	UXH	UXHC	25-150	35, 40, 50	21	60	14⅝	5	3⅛	8¼
	8		UXC-1	25-500	10, 15		125	9	4½	3½	5⅜
	5	VM	VMC	50-1000	10, 15	21	60	14	7	3⅛	7⅞
	14	VMM	VMMC	100-2000	10, 15	21	85	15¼	6⅛	4⅛	8⅜
	14	VMMH	VMMHC	25-450	35, 40, 45	21	85	15⅜	6⅛	4⅛	8½
TRONAD	16		TAS-4 500 JR	Variable Capacitor in above ranges Tube EIMAC Type 4x500							
	1		TAS-5 2500 JR	Variable Capacitor in above ranges Tube EIMAC Type 3x2500							
		Also available in both air- and water-cooled units from 50 watts to 25 kilowatts. Write for details.									
VACUUM RELAY	30		R-1	Vacuum Relay	50		50	7	3	⅝	5⅛
	30		R-2	Vacuum Relay	65		50	9	3	⅝	7¼
	29		R-4	Vacuum Relay	20		50	5⅛	1 9/16	⅝	3⅛
	29		R-6	Vacuum Relay	15		35	3⅝	1 7/16	11/32	2 3/16
MISC.	28		Feed Thru	Up to 100 MMFD	20		21	6⅜	2⅝	17/32	5½
	29			Vacuum Transformer 2:1 step-up to 40 kv.				5¾	2¼	11/32	

CURRENT RATINGS MAY BE INCREASED BY FORCED COOLING WITH ADEQUATE MOUNTINGS
CORRESPONDENCE INVITED FOR OTHER CAPACITIES AND VOLTAGES

JENNINGS RADIO MANUFACTURING COMPANY • 1098 E. WILLIAM STREET • SAN JOSE 12, CALIFORNIA

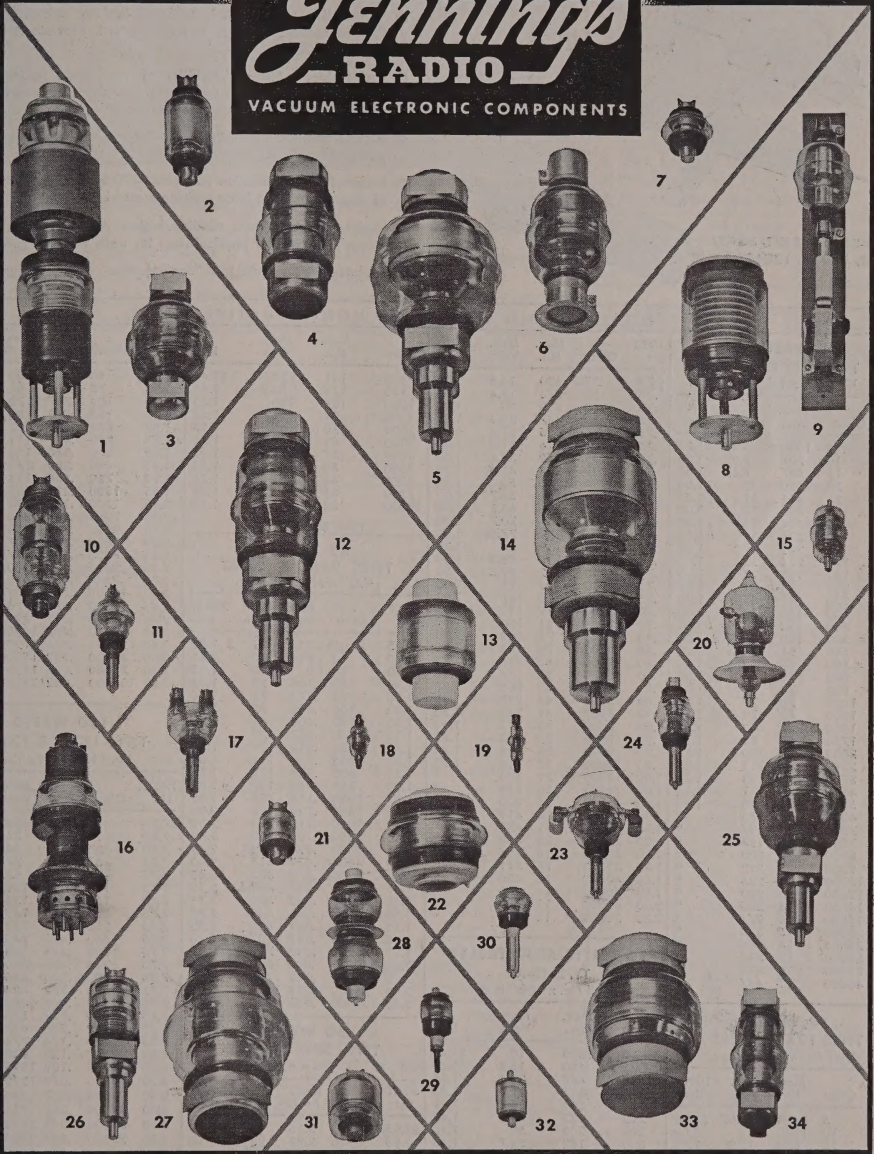
Originators, Exclusive Designers and Producers of JENNINGS

FIXED AND VARIABLE HIGH VOLTAGE VACUUM

CAPACITORS & SWITCHES

Jennings RADIO

VACUUM ELECTRONIC COMPONENTS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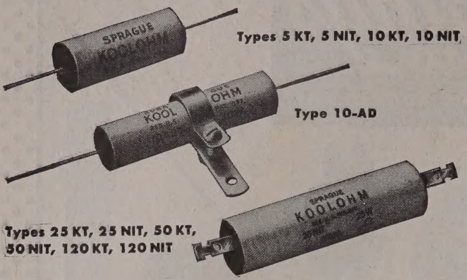
JENNINGS RADIO MANUFACTURING COMPANY • 1098 E. WILLIAM STREET • SAN JOSE 12, CALIFORNIA

SPRAGUE RESISTORS

KOOLOHM® WIRE-WOUND RESISTORS


Types 5 KT, 5 NIT, 10 KT, 10 NIT
Type 10-AD
Types 25 KT, 25 NIT, 50 KT, 50 NIT, 120 KT, 120 NIT

- Wound with wire which is insulated **before winding** with a flexible ceramic coating. This coating is impervious to heat as high as 1000°C.
- Each resistor is "tropicalized" by a glazed ceramic outer coating and new type end seals which offer complete protection against moisture or any other climatic conditions
- May be mounted anywhere—even flat against chassis or grounded parts
- Extremely high insulation resistance—10,000 volts from surface of ceramic jacket to inner resistance elements
- Insulated wire permits winding higher values in layers, which means much smaller physical sizes for each wattage rating
- Insulated wire permits true "non-inductive" wound designs

NOTE: ALL NIT TYPES ARE NON-INDUCTIVE

5 WATTS

TYPES 5 KT & 5 NIT

15/32″ dia. x 1 7/32″ long

5 KT List	Ohms	Max. Ma.	Max. Volts	5 NIT List
$.65	5	1000	5.00	$1.00
.65	10	707	7.07	1.00
.65	15	587	8.67	1.00
.65	20	500	10	1.00
.65	25	446	11	1.00
.65	30	406	12	1.00
.65	40	354	14	1.00
.65	50	316	15	1.00
.65	75	258	19	1.00
.65	100	224	22	1.00
.65	150	183	27	1.00
.65	200	158	31	1.00
.65	250	141	35	1.00
.65	300	129	38	1.00
.65	400	112	44	1.00
.65	500	100	50	1.00
.65	600	91	54	1.00
.65	700	84	59	1.00
.65	800	79	63	1.00
.65	900	74	67	1.00
.65	1000	70	70	1.00
.70	1250	63	79	1.15
.70	1500	57	86	1.15
.70	1750	53	93	1.15
.70	2000	50	100	1.15
.70	2500	44	112	1.25
.70	3000	40	123	1.25
.70	4000	35	141	1.25
.70	5000	31	158	1.30
.80	6000	28	173	*
.80	7000	26	187	*
.80	7500	25	194	*
.80	8000	25	200	*
.80	9000	23	212	*
.80	10000	22	224	*
.90	12500	20	250	*
.90	14000	18	265	*
.95	15000	18	274	*
.95	20000	15	333	*
1.10	25000	14	354	*
1.20	30000	13	387	*
1.40	35000	12	418	*
1.50	40000	11	447	*

10 WATTS

TYPES 10 KT & 10 NIT

15/32″ dia. x 1 27/32″ long

10 KT List	Ohms	Max. Ma.	Max. Volts	10 NIT List
$.75	5	1414	7.07	$1.00
.75	10	1000	10	1.00
.75	15	830	12.3	1.00
.75	20	707	14.1	1.00
$.75	25	630	15.8	1.00
.75	30	575	17.4	1.00
.75	40	500	20	1.00
.75	50	447	22.4	1.00
.75	75	365	27.4	1.00
.75	100	316	31.6	1.00
.75	150	259	38.7	1.00
.75	200	223	44.6	1.00
.75	250	200	50	1.00
.75	300	182	54.7	1.00
.75	400	158	63.3	1.00
.75	500	141	70.7	1.00
.75	600	129	77.6	1.00
.75	700	119	84	1.00
.75	750	115	86.9	1.00
.75	800	112	89.5	1.00
.75	900	105	95	1.00
.75	1000	100	100	1.00
.80	1250	89	112	1.15
.80	1500	81	123	1.15
.80	1750	75	133	1.15
.80	2000	70	143	1.15
.80	2500	63	158	1.25
.80	3000	57	174	1.25
.80	4000	50	200	1.25
.80	5000	44	227	1.30
.90	6000	41	245	1.30
.90	7500	36	275	1.45
.90	8000	35	283	1.45
.90	9000	33	300	1.45
.90	10000	32	316	1.90
1.00	12000	29	346	*
1.00	14000	26	384	*
1.00	15000	25	400	*
1.00	17500	24	419	*
1.10	20000	21	475	*
1.20	25000	20	500	*
1.30	30000	18	555	*
1.50	35000	17	591	*
1.65	40000	16	632	*
1.80	50000	14	700	*
2.00	60000	13	780	*
2.20	70000	12	840	*

10 WATTS ADJUSTABLE†

TYPE 10-AD

15/32″ dia. x 1 29/32″ long

Ohms	Max. Ma.	Max. Volts	List
10	1000	10	$1.45
25	630	15.8	1.45
50	447	22.4	1.45
100	316	31.6	1.45
150	259	38.7	1.45
200	223	44.6	1.45
250	200	50	1.45
300	182	54.7	1.45
400	158	63.3	1.45
500	141	70.7	$1.45
750	115	86.9	1.45
1000	100	100	1.45
1500	81	123	1.55
2000	70	143	1.55
2500	63	158	1.55
3000	57	174	1.55
4000	50	200	1.55
5000	44	227	1.55
7500	36	275	1.65
10000	32	316	1.65

Extra Bands, $ .10

25 WATTS

TYPES 25 KT & 25 NIT

23/32″ dia. x 2 7/8″ long.

25 KT List	Ohms	Max. Amps.	Max. Volts	25 NIT List
$1.45	5	2.23	11	$ 1.85
1.30	10	1.58	15	1.85
1.30	25	1.0	25	1.85
1.30	50	.707	35	1.85
1.30	75	.577	43	1.85
1.30	100	.500	50	1.85
1.30	150	.408	61	1.85
1.30	200	.353	70	1.85
1.30	250	.316	79	1.85
1.30	500	.223	111	1.85
1.35	600	.204	122	1.85
1.35	750	.182	137	1.85
1.35	1000	.158	158	1.85
1.35	1500	.129	193	2.00
1.35	2000	.111	223	2.00
1.35	2500	.100	250	2.00
1.45	3000	.091	273	2.40
1.45	4000	.079	316	2.40
1.45	5000	.070	353	2.40
1.45	7500	.057	432	2.40
1.50	10000	.050	500	2.75
1.55	12000	.046	548	2.75
1.55	15000	.041	612	2.75
1.65	20000	.035	707	3.10
1.80	25000	.032	790	3.40
2.00	40000	.025	1000	*
2.20	50000	.022	1118	*
2.85	75000	.018	1370	*
3.55	100000	.016	1580	*

50 WATTS

TYPES 50 KT & 50 NIT

7/8″ dia. x 4″ long

50 KT List	Ohms	Max. Amps.	Max. Volts	50 NIT List
$1.95	5	3.16	15	$ 3.10
1.95	10	2.23	22	3.10
1.95	25	1.41	35	3.10
$1.95	50	1.00	50	$3.10
1.95	75	.816	61	3.10
1.95	100	.707	70	3.10
1.95	150	.577	86	3.10
1.95	200	.500	100	3.10
1.95	250	.477	111	3.10
1.95	500	.316	158	3.10
1.95	600	.289	173	3.10
1.95	750	.258	193	3.10
1.95	1000	.223	223	3.10
2.10	1500	.182	274	3.10
2.10	2000	.158	316	3.10
2.10	2500	.141	353	3.10
2.30	3000	.129	387	3.10
2.30	4000	.111	447	3.10
2.30	5000	.100	500	3.10
2.40	7500	.081	612	3.10
2.85	10000	.070	707	3.10
2.85	12000	.064	775	3.10
2.85	15000	.057	870	3.10
2.90	20000	.050	1000	3.30
2.90	25000	.044	1120	3.30
3.00	50000	.032	1580	5.75
3.10	75000	.026	1936	*
3.50	100000	.022	2238	*

120 WATTS

TYPES 120 KT & 120 NIT

1 1/16″ Dia. x 8 15/16″ long

120 KT List	Ohms	Max. Amps.	Max. Volts	120 NIT List
$7.75	5	4.9	24.5	$9.40
7.75	10	3.46	34.6	9.40
7.75	25	2.18	54.6	9.40
7.75	50	1.54	77.4	9.40
7.75	75	1.26	94.8	9.40
7.75	100	1.09	109.5	9.40
7.75	150	.884	134	9.40
7.75	200	.775	155	9.40
7.75	250	.692	173	9.40
7.75	500	.490	245	9.40
7.75	600	.446	268	9.40
7.75	750	.400	300	9.40
7.75	1000	.346	346	9.40
7.75	1500	.282	424	9.40
7.75	2000	.245	490	9.40
7.75	2500	.219	548	9.40
7.75	3000	.200	600	9.40
7.75	5000	.154	774	9.40
8.00	7500	.126	948	10.00
8.00	10000	.109	1095	10.00
8.00	15000	.089	1340	10.00
8.00	20000	.077	1550	10.00
8.00	25000	.069	1733	10.00
8.00	50000	.049	2450	10.00
8.00	75000	.040	3000	*
8.00	100000	.034	3460	*

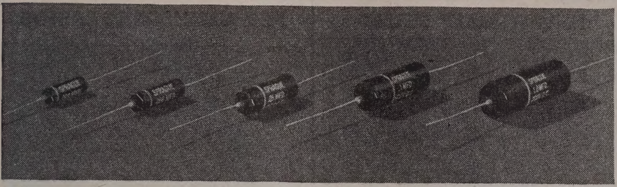
*KT Types only

†Adjustable Resistors are not tropicalized

All prices subject to change without notice.

SPRAGUE CAPACITORS

TELECAP® BLACK BEAUTY★ MOLDED TUBULARS



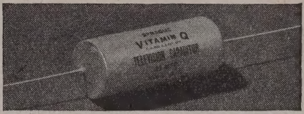
- Premium Quality at No Extra Cost
- Made Under Exclusive "Dry" Process, just like Costly Metal-Encased Oil Units
- Molded in Tough Bakelite Phenolic
- Non-Flammable Case
- Only Telecaps are Oil-impregnated in Ratings from 600 to 12,500 WVDC
- Extremely High Insulation Resistance
- Withstand Severe Heat, Moisture, Shock
- Rated for 85°C Operation

Mfd.	D. x L.	Old Cat. No.	New Cat. No.	List
200 WVDC				
.02	⅜ x 1¼	TM-12-2	2TM-S2	$ .25
.047	⅜ x 1¼		2TM-S47	.30
.05	⅜ x 1¼	TM-15-2	2TM-S5	.30
.1	7⁄16 x 1¼	TM-1-2	2TM-P1	.35
.15	½ x 1½		2TM-P15	.35
.22	⅝ x 1⅞		2TM-P22	.40
.25	⅝ x 1⅞	TM-2-2	2TM-P25	.40
.47	⅝ x 1⅞		2TM-P47	.60
.5	⅝ x 1⅞	TM-5-2	2TM-P5	.60
1.0	¾ x 2¼	TM-10-2	2TM-M1	.90
400 WVDC				
.01	5⁄16 x 1	TM-11-4	4TM-S1	.25
.02	⅜ x 1¼	TM-12-4	4TM-S2	.25
.022	⅜ x 1¼		4TM-S22	.25
.047	7⁄16 x 1¼		4TM-S47	.30
.05	7⁄16 x 1¼	TM-15-4	4TM-S5	.30
.068	½ x 1½		4TM-S68	.35
.1	½ x 1½	TM-1-4	4TM-P1	.35
.15	⅝ x 1⅞		4TM-P15	.35
22	⅝ x 1⅞		4TM-P22	.40
.25	⅝ x 1⅞	TM-2-4	4TM-P25	.40
.5	¾ x 2¼	TM-5-4	4TM-P5	.60
600 WVDC				
.0001	5⁄16 x 1	TM-31	6TM-T1	.25
.00025	5⁄16 x 1	TM-325	6TM-T25	.25
.0004	5⁄16 x 1	TM-34	6TM-T4	.25
.0005	5⁄16 x 1	TM-35	6TM-T5	.25
.001	5⁄16 x 1	TM-21	6TM-D1	.25
.0015	5⁄16 x 1		6TM-D15	.25
.002	5⁄16 x 1	TM-22	6TM-D2	.25
.0022	5⁄16 x 1		6TM-D22	.25
.003	5⁄16 x 1	TM-23	6TM-D3	.25
.004	5⁄16 x 1	TM-24	6TM-D4	.25
.0047	5⁄16 x 1		6TM-D47	.25
.005	⅜ x 1¼	TM-25	6TM-D5	.25
.006	⅜ x 1¼	TM-26	6TM-D6	.25
.0068	⅜ x 1¼		6TM-D68	.30
.01	⅜ x 1¼	TM-11	6TM-S1	.30
.015	⅜ x 1¼		6TM-S15	.30
.02	7⁄16 x 1¼	TM-12	6TM-S2	.30
.022	7⁄16 x 1¼		6TM-S22	.30
.03	7⁄16 x 1¼	TM-13	6TM-S3	.35
.04	½ x 1½	TM-14	6TM-S4	$ .35
.047	½ x 1½		6TM-S47	.40
.05	½ x 1½	TM-15	6TM-S5	.40
.06	⅝ x 1⅞	TM-16	6TM-S6	.40
.1	⅝ x 1⅞	TM-1	6TM-P1	.45
.25	¾ x 2¼	TM-2	6TM-P25	.55
.5	13⁄16 x 2⅛		*TC-5	.80
1.0	1 x 2⅝		*TC-10	1.25
1600 WVDC				
.0005	⅜ x 1¼	MB-35	MB-T5	.60
.001	⅜ x 1¼	MB-21	MB-D1	.60
.0015	⅜ x 1¼		MB-D15	.60
.002	⅜ x 1¼	MB-22	MB-D2	.65
.0022	⅜ x 1¼		MB-D22	.65
.003	⅜ x 1¼	MB-23	MB-D3	.65
.0033	⅜ x 1¼		MB-D33	.65
.004	⅜ x 1¼	MB-24	MB-D4	.65
.0047	7⁄16 x 1¼		MB-D47	.65
.005	7⁄16 x 1¼	MB-25	MB-D5	.65
.006	7⁄16 x 1¼	MB-26	MB-D6	.70
.0068	7⁄16 x 1¼		MB-D68	.70
.007	7⁄16 x 1¼	MB-27	MB-D7	.70
.0075	7⁄16 x 1¼	MB-275	MB-D75	75
.008	½ x 1½	MB-28	MB-D8	.75
.01	½ x 1½	MB-11	MB-S1	.75
.015	½ x 1½	MB-115	MB-S15	.75
.02	⅝ x 1⅞	MB-12	MB-S2	.85
.022	⅝ x 1⅞		MB-S22	.85
.03	⅝ x 1⅞	MB-13	MB-S3	.95
.04	¾ x 2¼	MB-14	MB-S4	1.00
.05	¾ x 2⅛		*TR-15	.70
2 x .015	¾ x 2		*TR-215	.80
6000 WVDC				
.0005	½ x 1½		TVM-356	1.35
.001	½ x 1½		TVM-216	1.35
.005	⅝ x 1⅞		TVM-256	1.35
10,000 WVDC				
.0005	⅝ x 1⅞		TVM-351	1.50
12,500 WVDC				
.00025	⅝ x 1⅞		12TVM-325	1.70

*Supplied in waxed cardboard units pending completion of molds.

★Trade Mark

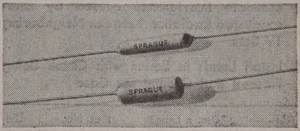
TVQ VITAMIN Q® TUBULARS



- High Voltage Units that are Amazingly Small in Size
- High Insulation Resistance
- Exclusive Internal Humidity Barrier
- Heavy Outer Wax Coating

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.01	6000	13⁄16 x 2	TVQ-116	$1.40
.03	6000	1 x 2⅝	TVQ-136	1.50
.05	6000	1 3⁄16 x 3	TVQ-156	1.60

68P MIDGET® TUBULARS



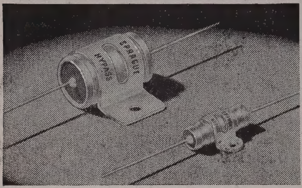
- Smallest Reliable Paper Tubular
- Fit Tight Spots in Pocket and Auto Radios
- Outstanding Humidity Performance
- Rated for 85°C Operation

Mfd.	Dia. x Length	Cat. No.	List
100 WVDC			
.25	15⁄32 x 1⅛	68P19	$ .70
.5	⅝ x 1⅛	68P20	.80
200 WVDC			
.005	¼ x 11⁄16	68P11	.35
.006	¼ x 11⁄16	68P12	.35
.01	9⁄32 x 11⁄16	68P14	.40
.02	9⁄32 x 13⁄16	68P15	.45
.05	5⁄16 x 1	68P16	.50
.1	13⁄32 x 1	68P17	.60
.2	15⁄32 x 1⅛	68P18	.65
.25	17⁄32 x 1⅛	68P24	.70
.5	⅝ x 1⅜	68P25	.80
400 WVDC			
.001	¼ x 11⁄16	68P1	.35
.003	¼ x 11⁄16	68P3	.35
.004	¼ x 11⁄16	68P4	.35
.005	¼ x 13⁄16	68P5	.35
.006	¼ x 13⁄16	68P6	.35
.01	5⁄16 x 13⁄16	68P8	.40
.02	5⁄16 x 1	68P9	.45
.05	13⁄32 x 1	68P10	.50
.1	15⁄32 x 1⅛	68P21	.65
.2	⅝ x 1⅛	68P38	.70
.25	⅝ x 1⅜	68P22	.75
.5	⅝ x 2 5⁄16	68P23	.85
600 WVDC			
.001	¼ x 11⁄16	68P26	.35
.002	¼ x 11⁄16	68P27	.35
.003	9⁄32 x 11⁄16	68P28	.35
.004	9⁄32 x 13⁄16	68P29	.35
.005	9⁄32 x 13⁄16	68P30	.40
.006	5⁄16 x 13⁄16	68P31	.40
.008	5⁄16 x 1	68P32	.40
.01	5⁄16 x 1	68P33	.45
.02	11⁄32 x 1	68P34	.50
.05	15⁄32 x 1⅛	68P35	.55
.1	⅝ x 1⅛	68P36	.70
.2	⅝ x 1 11⁄16	68P40	.80
.25	⅝ x 2	68P37	.80

All prices subject to change without notice.

SPRAGUE CAPACITORS

HYPASS® CAPACITORS



- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

Mfd.	Dia. x Length	Cat. No.	List
250 WVAC			
.1	11/16 x 1 13/16	*48P9	$2.60
600 WVDC			
.005	¼ x 1⅝	46P8	2.15
.01	7/16 x 1¼	47P6	2.35
1000 WVDC			
.005	7/16 x 1¼	47P12	2.40
.01	7/16 x 1½	47P13	2.60
2500 WVDC			
.005	1 x 1 9/16	47P14	2.90
.01	1 x 1 9/16	47P15	3.10
5000 WVDC			
.002	1 x 1 9/16	47P16	3.20

*Has female screw terminals

72P RESONANT CAPACITORS

SPRAGUE
MADE IN U.S.A.
RESONANT CAPACITOR

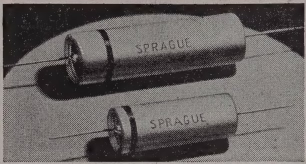
PEP UP OLD RADIO SETS!

- Stabilize Any ac-dc "Squealer" Receiver
- Stop Self-oscillation, Permitting "On-the-nose" alignment
- Very Low Impedance at 465 KC Intermediate Frequency
- By-pass Unwanted I-F Signals
- Improve Set Performance

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.05	400	½ x 1⅛	72P51	$ .50
.1	400	½ x 1⅝	72P52	.65
.2	400	9/16 x 1⅞	72P53	.70

PX METAL TUBULARS

HERMETICALLY SEALED

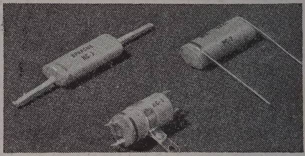


- Non-inductively Wound
- Oil-filled
- Oil-impregnated
- Insulating Cardboard Sleeve

Mfd.	Dia. x Length	Cat. No.	List
600 WVDC			
.0001	½ x 1¼	PX-316	$ .95
.00025	½ x 1¼	PX-3256	.95
.0005	½ x 1¼	PX-356	.95
.001	½ x 1¼	PX-216	.95
.002	½ x 1¼	PX-226	.95
.003	½ x 1¼	PX-236	.95
.004	½ x 1¼	PX-246	.95
.005	½ x 1¼	PX-256	.95
.006	½ x 1¼	PX-266	.95
.007	½ x 1¼	PX-276	.95
.008	½ x 1¼	PX-286	.95
.009	½ x 1¼	PX-296	.95
.01	½ x 1¼	PX-116	.95
.02	½ x 1¾	PX-126	1.05
.03	⅝ x 1⅝	PX-136	1.10
.04	⅝ x 1⅝	PX-146	1.10
.05	⅝ x 1⅝	PX-156	1.10
.06	11/16 x 1⅝	PX-166	1.20
.08	11/16 x 1⅞	PX-186	1.20
.1	11/16 x 1⅞	PX-16	1.25
.25	13/16 x 2 13/16	PX-26	1.70
.5	1 1/16 x 2 13/16	PX-56	2.20
1.0	1 1/16 x 3 11/16	PX-106	3.00
1000 WVDC			
.0001	11/16 x 1¼	PX-311	1.10
.00025	11/16 x 1¼	PX-3251	1.10
.0005	11/16 x 1¼	PX-351	1.10
.001	11/16 x 1¼	PX-211	1.10
.002	11/16 x 1¼	PX-221	1.10
.003	11/16 x 1¼	PX-231	1.10
.004	11/16 x 1¼	PX-241	1.10
.005	11/16 x 1¼	PX-251	1.10
.006	11/16 x 1¼	PX-261	1.10
.007	11/16 x 1¼	PX-271	1.10
.008	11/16 x 1¼	PX-281	1.10
.009	11/16 x 1¼	PX-291	1.10
.01	11/16 x 1¼	PX-111	1.10
.02	⅝ x 1⅝	PX-121	1.20
.03	11/16 x 1¾	PX-131	1.20
.04	11/16 x 1¾	PX-141	1.20
.05	11/16 x 1¾	PX-151	1.30
.06	1 1/16 x 2	PX-161	1.35
.08	1 1/16 x 2	PX-181	1.40
.1	1 1/16 x 2	PX-11	1.50
.25	1 1/16 x 2 13/16	PX-21	2.00
.5	1 1/16 x 3 11/16	PX-51	2.85
1500 WVDC			
.002	⅝ x 1¼	PX-2215	1.20
.005	⅝ x 1¼	PX-2515	1.20
.01	11/16 x 1⅝	PX-1115	1.20
.02	11/16 x 1⅝	PX-1215	1.30
2000 WVDC			
.0005	13/16 x 1⅜	PX-352	1.25
.001	13/16 x 1⅜	PX-212	1.25
.005	13/16 x 1¾	PX-252	1.25
.006	13/16 x 1¾	PX-262	1.25
.0075	13/16 x 1¾	PX-2752	1.25
.01	13/16 x 1¾	PX-112	1.25
.02	13/16 x 2⅛	PX-122	1.35
.03	13/16 x 2⅛	PX-132	1.40
.04	13/16 x 2½	PX-142	1.40
.05	13/16 x 2½	PX-152	1.45

HC HASH CAPACITORS

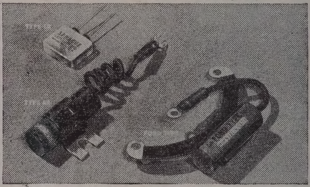
FOR AUTOMOBILE RADIOS



- HC-1—Braided leads for Low R-F Resistance
- HC-2—Radial Side Leads
- HC-3—Flat Strap Leads for Minimum R-F Impedance

Mfd.	WVDC	Size	Cat. No.	List
.5	120	7/16 x ¾ x 2 (oval tube)	HC-1	$ .90
.5	120	5/16 x ¾ x 2 (oval tube)	HC-2	.90
.5	120	¾ x 1⅜ (round tube)	HC-3	1.10

AR & LR AUTO GENERATOR AND VIBRATOR TYPES



AR LR FORD

- Exceptionally Sturdy Design
- Withstand Bouncing and Vibration
- Oil-impregnated, Metal Encased
- Resist Heat and Humidity

Mfd.	WVDC	Size	Cat. No.	List
AR (GENERATOR TYPES)				
1.0		1 x 2 3/16	AR-1	$1.75
.5		11/16 x 1⅛	AR-2	.90
.5+.5		1 x 2 3/16	AR-25	3.25
.5		11/16 x 1⅞	AR-Ford	1.45
LR (VIBRATOR TYPES)				
.01	1600	¼ x ⅞ x 1 1/16	LR-11	$2.00
.02	1600	¼ x ⅞ x 1 1/16	LR-12	2.90
.007	1600	¼ x ⅞ x 1 1/16	LR-27	2.65

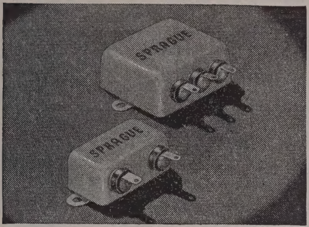
SPECIAL AUTO TYPES

Cat. No.	Mfd.	WVDC	D. X L.	List
DL-1 Dome Light Filter	.2	200	1 x 2 3/16	$4.20
GG-5 Gas Gauge Filter	.05	200	7/16 x 1 7/32	1.20
OG-50 Oil Gauge Filter	.25	200	11/16 x 1⅞	1.40
P-2077 Ford Replacement	.5	200	11/16 x 1⅞	1.25
P-3402 Ammeter Capacitor	.5	200	11/16 x 2	.90
P-2153 Motorola Replacement	.0008+.0008	1000	¾ x 1⅜	.80

All prices subject to change without notice.

SPRAGUE CAPACITORS

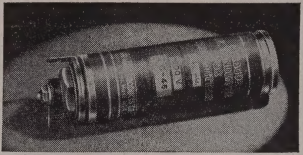
BP BATHTUB UNITS



- Hermetically Sealed
- Drawn Can
- Oil-impregnated
- Oil-filled

Mfd.	L. x W. x H.	Cat. No.	List
400 WVDC			
.1	1 13/16 x 1 x ¾	BP-1	$3.20
.25	1 13/16 x 1 x ¾	BP-25	3.35
.5	1 13/16 x 1 x ⅞	BP-50	3.65
1.0	2 x 1¾ x ⅞	BP-10	4.20
.1 + .1	1 13/16 x 1 x ¾	BP-21	4.25
.25 + .25	1 13/16 x 1 x ⅞	BP-225	4.50
.5 + .5	2 x 1¾ x ⅞	BP-250	4.90
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-31	5.10
600 WVDC			
.05	1 13/16 x 1 x ¾	BP-56	3.20
.1	1 13/16 x 1 x ¾	BP-16	3.35
.25	1 13/16 x 1 x ¾	BP-256	3.40
.5	1 13/16 x 1 x ⅞	BP-506	3.70
1.0	2 x 1¾ x ⅞	BP-106	4.25
2.0	2 x 2 x 1⅛	BP-206	5.65
.05 + .05	1 13/16 x 1 x ¾	BP-2056	4.25
.1 + .1	1 13/16 x 1 x ¾	BP-216	4.40
.25 + .25	1 13/16 x 1 x ⅞	BP-2256	4.65
.5 + .5	2 x 1¾ x ⅞	BP-2506	5.00
1.0 + 1.0	2 x 2 x 1⅛	BP-116	6.10
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-316	5.10
.25 +.25 +.25	2 x 1¾ x ⅞	BP-3256	5.65
.5 + .5 + .5	2 x 2 x 1⅛	BP-356	6.75
1000 WVDC			
.05	1 13/16 x 1 x ¾	BP-51	3.35
.1	1 13/16 x 1 x ¾	BP-11	3.50
.25	1 13/16 x 1 x ¾	BP-251	3.60
.5	2 x 1¾ x ⅞	BP-501	3.80
1.0	2 x 2 x 1⅛	BP-101	5.25
.05 + .05	1 13/16 x 1 x ¾	BP-2051	4.45
.1 + .1	1 13/16 x 1 x ¾	BP-211	4.55
.25 + .25	2 x 1¾ x ⅞	BP-2251	4.80
.5 + .5	2 x 2 x 1⅛	BP-2501	6.30
.1 +.1 +.1	1 13/16 x 1 x ⅞	BP-311	5.60
.25+.25+.25	2 x 2 x 1⅛	PB-3251	7.00

PC TRANSMITTING TYPES



- Oil-impregnated
- Oil-filled
- Screwbase Can
- Fit Tight Spaces
- "Lifeguard" Protective Caps

Mfd.	Dia. x Length	Cat. No.	List
600 WVDC			
2.0	1½ x 2⅞	PC-26	$5.75
3.0	1½ x 3½	PC-36	6.60
4.0	1½ x 4½	PC-46	7.50
1000 WVDC			
1.0	1½ x 2⅞	PC-11	5.75
2.0	1½ x 4½	PC-21	6.70
1500 WVDC			
0.5	1½ x 2⅜	PC-515	7.20
1.0	1½ x 3⅞	PC-115	7.85

OT TRANSMITTING TYPES

- Oil-impregnated and Filled
- Hermetically Sealed
- Ceramic Terminals
- "Lifeguard" Protective Caps

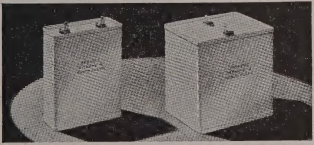
Mfd.	Dia. x Length	Cat. No.	List
600 WVDC			
2	2 x 2 15/32	OT-26	$6.70
1000 WVDC			
1	2 x 2 15/32	OT-11	6.00
2	2 x 3 3/32	OT-21	7.60
4	2 x 5 3/32	OT-41	10.00
1500 WVDC			
0.5	2 x 2 15/32	OT-515	6.00
1	2 x 2 21/32	OT-115	7.00
2	2 x 4 15/32	OT-215	9.00
2000 WVDC			
1	2 x 4 3/32	OT-12	10.00
2	2½ x 4 15/32	OT-22	12.00
3000 WVDC			
1	2½ x 4 23/32	OT-13	21.00

CR TRANSMITTING TYPES

- Oil-Filled
- Hermetically Sealed
- High Insulation Resistance
- Universal Mounting
- "Lifeguard" Protective Caps

Mfd.	T. x W. x L.	Cat. No.	List
600 WVDC			
.5	1 1/16 x 1 13/16 x 2¼	CR-056	$5.50
1.0	1 1/16 x 1 13/16 x 2¼	CR-16	6.15
2.0	1 1/16 x 1 31/16 x 2⅞	CR-26	7.45
3.0	1 1/16 x 1 13/16 x 3¼	CR-36	8.80
4.0	1 3/16 x 2½ x 3½	CR-46	10.15
6.0	1 3/16 x 2½ x 4¾	CR-66	12.00
8.0	1¼ x 3¾ x 3⅞	CR-86	14.75
10.0	1¼ x 3¾ x 4¾	CR-106	15.85
1000 WVDC			
.1	1 1/16 x 1 13/16 x 1⅝	CR-011	5.95
.25	1 1/16 x 1 13/16 x 2¼	CR-0251	6.25
.5	1 1/16 x 1 13/16 x 2¼	CR-051	6.40
1.0	1 1/16 x 1 13/16 x 2¼	CR-11	6.70
2.0	1 1/16 x 1 13/16 x 3⅞	CR-21	8.50
4.0	1 3/16 x 2½ x 4¾	CR-41	11.50
8.0	1¼ x 3¾ x 4¾	CR-81	16.60
10.0	1¾ x 3¾ x 4¾	CR-101	19.10
12.0	2¼ x 3¾ x 4½	CR-121	21.50
15.0	2½ x 3¾ x 4¾	CR-151	25.40
1500 WVDC			
.5	1 1/16 x 1 13/16 x 2⅞	CR-0515	6.90
1.0	1 1/16 x 1 13/16 x 3⅞	CR-115	8.00
2.0	1 3/16 x 2½ x 4¼	CR-215	10.20
4.0	1¼ x 3¾ x 4¾	CR-415	14.85
5.0	1¼ x 3¾ x 4¾	CR-515	15.80
8.0	2½ x 3¾ x 4¾	CR-815	23.75
10.0	3 3/16 x 3¾ x 4¾	CR-1015	27.45
2000 WVDC			
.1	1 3/16 x 2½ x 2½	CR-012	8.75
.25	1 3/16 x 2½ x 2½	CR-0252	9.00
.5	1 3/16 x 2½ x 2⅞	CR-052	9.80
1.0	1 3/16 x 2½ x 3½	CR-12	11.00
2.0	1¼ x 3¾ x 4¼	CR-22	13.60
3.0	1¼ x 3¾ x 4¾	CR-32	16.70
4.0	2¼ x 3¾ x 3⅞	CR-42	18.90
6.0	3 3/16 x 3¾ x 4½	CR-62	24.20
10.0	4 9/16 x 3¾ x 4¾	CR-102	33.00
2500 WVDC			
.1	1 3/16 x 2½ x 2½	CR-0125	10.25
.5	1¼ x 3¾ x 3¼	CR-0525	13.70
1.0	1¾ x 3¾ x 3¼	CR-125	16.20
2.0	1¾ x 3¾ x 4¾	CR-225	21.80
4.0	4 9/16 x 3¾ x 4⅜	CR-425	32.00
3000 WVDC			
.1	1 3/16 x 2½ x 2½	CR-013	17.45
.25	1 3/16 x 2½ x 2⅞	CR-0253	18.70
.5	1 3/16 x 2½ x 4¼	CR-053	20.35
1.0	2¼ x 3¾ x 3⅞	CR-13	24.00
2.0	3 3/16 x 3¾ x 4½	CR-23	31.30
4.0	4 9/16 x 3¾ x 4¾	CR-43	44.00
4000 WVDC			
.1	2¼ x 3¾ x 2¾	CR-014	18.00
.25	2¼ x 3¾ x 2¾	CR-0254	20.00
.5	2¼ x 3¾ x 3⅞	CR-054	23.00
1.0	2¼ x 3¾ x 5⅛	CR-14	29.00
2.0	4 9/16 x 3¾ x 5⅛	CR-24	39.00
5000 WVDC			
.2	1¾ x 3¾ x 3⅞	CR-025	20.00
.5	2¼ x 3¾ x 4½	CR-055	25.00
1.0	4 9/16 x 3¾ x 4⅜	CR-15	34.00
2.0	4 9/16 x 3¾ x 6	CR-25	52.00
6000 WVDC			
.1	2¼ x 3¾ x 3⅜	CR-0160	27.00
.2	1¾ x 3¾ x 4¼	CR-0260	30.00
1.0	4 9/16 x 3¾ x 7½	CR-160	49.00
7000 WVDC			
.1	2¼ x 3¾ x 3⅞	CR-0175	29.00
.2	1¾ x 3¾ x 4¾	CR-0275	33.00

PQ PHOTOFLASH CAPACITORS



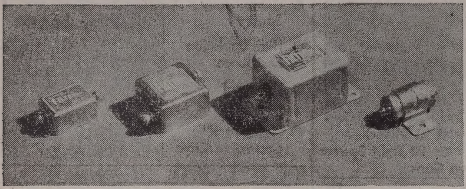
- Smallest Possible Construction with Maximum Dependability
- Oil-impregnated and Filled
- High Insulation Resistance
- Hermetically Sealed
- Uniform Storage of Energy for Long Periods

Mfd.	DC Peak* Photoflash Volts	Watt/Sec. Total	Dimensions T. x W. x H.	Weight lbs.	Cat. No.	List Price
10	2500	31	2¼ x 3¾ x 4½	1¾	PQ-2510	$17.00
15	2500	47	3 3/16 x 3¾ x 4⅝	2½	PQ-2515	20.00
25	2500	78	4 9/16 x 3¾ x 5¼	4¼	PQ-2525	26.50
35	2500	109	4 9/16 x 3¾ x 7	6	PQ-2535	32.50
15	3000	67	3 3/16 x 3¾ x 4⅞	3	PQ-315	24.50
25	4000	200	4 9/16 x 3¾ x 9¼	7¼	PQ-425	42.50

*Do not exceed Peak Voltage Rating under highest line voltage condition

SPRAGUE FILTERS

FILTEROL® TYPES



Filterol 1 Filterol 2 Filterol 3 Filterol 4

- Suppress Man-made Radio and TV Interference
- Small, Completely Self-contained
- Quickly, Easily Installed

Filterol Types 1, 2, and 3—Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4—A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	List
Filterol 1	1	115	⅞ x 1¼ x 1¾	$13.50
Filterol 2	10	115	1⅛ x 2 x 2	14.80
Filterol 3	35	115	1⅞ x 2⅞ x 3⅛	27.40
Filterol 4	20	220	1″ dia. x 1¹³⁄₁₆″ long	3.05

IF TYPES

IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15—TRIPLE-SECTION FILTER for all small motor-operated devices such as food and drink mixers, vacuum cleaners, fans, drills, etc. Especially designed to prevent accidental shocks from discharge of filter capacitors.

IF-11—DUAL HIGH-CAPACITY FILTER with completely enclosed safety construction. Designed for use on motors over 1 horsepower and up to 220 volts AC or DC. Also used on high-current arcing or sparking devices.

IF-21—COMPACT DUAL FILTER for use across brushes of fractional horsepower motors with the can grounded to motor frame. May also be used across line terminals of motors.

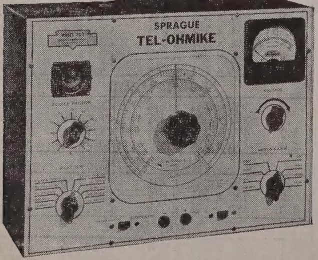
IF-S1—SINGLE SECTION 2-LEAD FILTER with can completely insulated. For use across make-and-break contacts, such as thermostats, circuit breakers, door-bells, buzzers, relays, etc.

IF-37—3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Only one IF-37 required for each offending fixture. Also effective on make-and-break governor-type motors. Underwriters' Laboratories approved.

Cat. No.	Volts AC or DC	Dia. x Length	List
IF-15	220	1 x 2³⁄₁₆	$2.60
IF-11	220	1⅜ x 3½	7.80
IF-21	220	1 x 2³⁄₁₆	1.75
IF-S1	220	¾ x 2¹⁄₁₆	1.15
IF-37	220	1 x 2⁷⁄₁₆	2.25

SPRAGUE TO-3 DELUXE TEL-OHMIKE®

UNIVERSAL CAPACITOR and RESISTOR ANALYZER with BUILT-IN D-C VOLT-MILLIAMMETER



$73.50
net

The most comprehensive capacitor analyzer available . . . A sturdy, reliable instrument designed to simplify electronic servicing . . . Exclusive "Speedy-check" design locates most open, intermittent, or shorted capacitors WITHOUT REMOVING THEM FROM CIRCUIT . . . A boon to the busy service technician! Also measures insulation resistance of motors, transformers, etc.

SPECIFICATIONS

Capacity: .00001-2,000 Mfd. in 4 ranges.

Power Factor: 0-50% at 60 cycles.

Insulation Resistance: 0-2500 Megohms (Direct reading on the meter).

Electrolytic Leakage: Measured in Ma. at rated D-C voltage. Capacity and power factor of electrolytic condensers measured with rated polarizing voltage applied.

Resistance: 2.5 Ohms-25 Megs. in 3 ranges.

D.C. Meter Range: 0-15, 150, 750 volts—0-1.5, 15, 75 Milliamperes.

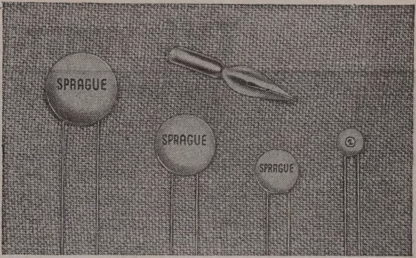
Size: 13¼″ wide, 10⅛″ high,—5″ deep.

Power: 35 watts at 115 volts—60 cycles.

Shipping Weight: 15 lbs.

SPRAGUE CAPACITORS

Cera-mite® DISC CERAMICS



- Tiny, Tough, Dependable in Every Application
- Low Self-inductance of Silvered Flat-plate Design means Very High By-pass Efficiency in All V-H-F Circuits
- Moisture-resistant Insulating Coating
- Ceramite Disc Ceramics Easily Fit into Tight Spaces
- Rated at 500 WVDC, 1000 VDC Test under 85°C Continuous Operation

G-A TYPES

- Ideal Where Temperature Coefficient is Not Important, such as By-pass and Coupling Uses
- Alternates for Foil-micas and Tubular Ceramics

MMF	Dia. x Thick.	Old Cat. No.	New Cat. No.	List
10	3/8 x 5/32	19C19	5GA-Q1	$ .25
15	3/8 x 5/32	19C22	5GA-Q15	.25
22	3/8 x 5/32	19C23	5GA-Q22	.25
25	3/8 x 5/32	19C27	5GA-Q25	.25
33	3/8 x 5/32	19C24	5GA-Q33	.25
47	3/8 x 5/32	19C25	5GA-Q47	.25
50	3/8 x 5/32	19C28	5GA-Q5	.25
68	3/8 x 5/32	19C10	5GA-Q68	.25
100	3/8 x 5/32	19C11	5GA-T1	.25
120	3/8 x 5/32	19C29	5GA-T12	.25
150	3/8 x 5/32	19C12	5GA-T15	.25
200	3/8 x 5/32	19C30	5GA-T2	.25
220	3/8 x 5/32	19C13	5GA-T22	.25
270	3/8 x 5/32	19C31	5GA-T27	.25
330	3/8 x 5/32	19C14	5GA-T33	.25
470	3/8 x 5/32	19C15	5GA-T47	.25
500	3/8 x 5/32	19C32	5GA-T5	.25
680	3/8 x 5/32	19C17	5GA-T68	.25
.001 MF	19/32 x 5/32	29C21	5GA-D1	.25
.0015	19/32 x 5/32	29C8	5GA-D15	.25
.002	3/4 x 5/32	36C17	5GA-D2	.25
.0022	3/4 x 5/32	36C13	5GA-D22	.25
.0033	3/4 x 5/32	36C12	5GA-D33	.25
.0047	29/32 x 5/32	41C1	5GA-D47	.30
.005	29/32 x 5/32	41C2	5GA-D5	.30

HIGH-K TYPES

- Designed Specifically for Minimum Capacitance Requirements
- Intended for By-pass and Coupling Applications where Additional Capacitance is Not Important

MF	Diam. x Thick.	Old Cat. No.	New Cat. No.	List
SINGLE UNITS				
.001	3/8 x 5/32	19C1	5HK-D1	$ .25
.0015	3/8 x 5/32	19C20	5HK-D15	.25
.002	19/32 x 5/32	29C2	5HK-D2	.25
.0022	19/32 x 5/32	29C28	5HK-D22	.25
.0033	19/32 x 5/32	29C19	5HK-D33	.25
.0047	19/32 x 5/32	29C20	5HK-D47	.25
.005	19/32 x 5/32	29C1	5HK-D5	.25
.0068	3/4 x 5/32	36C14	5HK-D68	.25
.01	3/4 x 5/32	36C1	5HK-S1	.30
.015	29/32 x 5/32	41C6	5HK-S15	.40
DUAL UNITS				
2 x .001	19/32 x 5/32	29C7	5HK-2D1	.40
2 x .0015	19/32 x 5/32	29C6	5HK-2D15	.40
2 x .002	19/32 x 5/32	29C5	5HK-2D2	.40
2 x .0022	19/32 x 5/32	29C27	5HK-2D22	.40
2 x .004	3/4 x 5/32	36C2	5HK-2D4	.45
2 x .0047	3/4 x 5/32	36C21	5HK-2D47	.45

NPO TYPES

- Zero Temperature-coefficient Capacitors
- Used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q", and Insulation Resistance

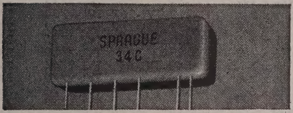
MMF	Diam. x Thick.	Old Cat. No.	New Cat. No.	List
10	3/8 x 5/32	19C3	5TCC-Q1	$ .50
15	3/8 x 5/32	19C5	5TCC-Q15	.50
22	19/32 x 5/32	29C12	5TCC-Q22	.50
25	19/32 x 5/32	29C18	5TCC-Q25	.50
33	19/32 x 5/32	29C13	5TCC-Q33	.50
47	19/32 x 5/32	29C14	5TCC-Q47	.55
68	3/4 x 5/32	36C9	5TCC-Q68	.55
100	3/4 x 5/32	36C10	5TCC-T1	.55
150	29/32 x 5/32	41C4	5TCC-T15	.60

N750 TYPES

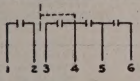
- Negative Temperature Compensation is 750 ppm/°C

MMF	Diam. x Thick.	Old Cat. No.	New Cat. No.	List
10	3/8 x 5/32	19C4	5TCU-Q1	.50
15	3/8 x 5/32	19C6	5TCU-Q15	.50
22	3/8 x 5/32	19C7	5TCU-Q22	.50
25	3/8 x 5/32	19C26	5TCU-Q25	.50
33	3/8 x 5/32	19C8	5TCU-Q33	.50
47	3/8 x 5/32	19C9	5TCU-Q47	.50
68	19/32 x 5/32	29C15	5TCU-Q68	.50
100	19/32 x 5/32	29C16	5TCU-T1	.50
150	19/32 x 5/32	29C17	5TCU-T15	.50
200	3/4 x 5/32	36C16	5TCU-T2	.50
220	3/4 x 5/32	36C11	5TCU-T22	.50
330	29/32 x 5/32	41C5	5TCU-T33	.50

BULPLATE® MULTIPLE CERAMICS

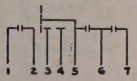


- These Rugged Units Combine in One Compact Assembly All the Capacitors Used in One or More Stages of a Radio Circuit
- Fit Tight Spaces in Miniature Sets
- Rated at 500 WVDC, 1000 VDC Test



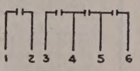
	MFD.
1&2	$.002\ ^{+100}_{-25}\%$
3&4	.00022 ±50%
4&5	.00022 ±50%
5&6	$.005\ ^{+100}_{-25}\%$

Cat. No.	L. x W. x T.	List
34C3	1 1/8 x 5/8 x 5/32	$ .75



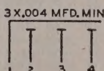
	MFD.
1&2	$.002\ ^{+100}_{-25}\%$
3&5	$.00015\ ^{+100}_{-0}\%$
4&5	.005 MIN.
5&6	$.0001\ ^{+75}_{-25}\%$
6&7	$.005\ ^{+100}_{-25}\%$

Cat. No.	L. x W. x T.	List
34C4	1 1/8 x 5/8 x 5/32	$ .90



	MFD.
1&2	$.002\ ^{+100}_{-25}\%$
3&4	.005MIN.
4&5	$.0001\ ^{+75}_{-25}\%$
5&6	$.005\ ^{+100}_{-25}\%$

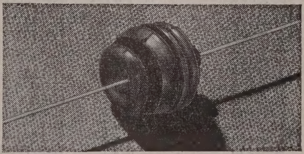
Cat. No.	L. x W. x T.	List
34C5	1 1/8 x 5/8 x 5/32	$ .75



MFD.
3 x .004

Cat. No.	L. x W. x T.	List
34C6	1 1/8 x 5/8 x 5/32	$ .65

"DOORKNOB" CERAMIC
HIGH-VOLTAGE (15 KV)



- New, Improved Design Consists of Ceramic Slug Encased in Molded Rubber Jacket
- Special Rubber will Withstand Corona Atmosphere Without Deterioration
- Will Withstand 22,500 Volt Dielectric Test
- Self-grommet Permits Easy Mounting in Chassis

MMF	WVDC	Dia. x Length	Cat. No.	List
500	15,000	1 x 1 3/32	510C1	$2.00

SPRAGUE CAPACITORS

TVL TWIST-LOK★ ELECTROLYTICS

SPRAGUE
600 LINE
DRY ELECTROLYTIC CAPACITOR

- Especially Designed for Tough TV Replacement Applications
- Hermetically Sealed in Aluminum Cans for Long Life
- The Most Dependable Electrolytic in Such Compact Size
- Stand Up Under Extremely High Temperatures, High Ripple Currents, High Surge Voltages
- Easy to Mount—A Twist of the Tabs Locks Unit in Place
- Complete with Bakelite and Metal Washers, They're ideal for Above-chassis Mounting
- Designed for 85°C Operation, Up to 450 WVDC

★ Trademark

Mfd.@WVDC	Dia. x Length	Old Cat. No.	New Cat. No.	List
SINGLE UNITS				
.5 ohm@15.75 KC@3 N.P.	1 x 2	TVL-41	TVL-1010	$2.10
1 ohm@60 CPS@3 N.P.	1⅜ x 2½	TVL-42	TVL-1015	3.20
2000@6	1⅜ x 2	TVL-43	TVL-1115	2.55
3000@10	1⅜ x 2½	EL-13	TVL-1140	2.90
1000@15	1 x 2½	EL-111	TVL-1165	2.55
2000@15	1⅜ x 2	EL-121	TVL-1168	3.45
40@25	¾ x 2	EL-142	TVL-1210	1.35
100@25	¾ x 2	EL-112	TVL-1215	1.60
500@25	1 x 2	EL-152	TVL-1220	2.55
1000@25	1⅜ x 2	EL-122/TVL-105	TVL-1230	3.55
150@50	¾ x 2½	EL-50	TVL-1320	1.80
500@50	1⅜ x 2½	EL-55	TVL-1330	2.65
20@150	1 x 2	TVL-102	TVL-1405	1.45
30@150	1 x 2	EL-31	TVL-1408	1.55
40@150	1 x 2	ELS-1/TVL-110	TVL-1412	1.60
50@150	1 x 2	EL-51	TVL-1415	1.65
80@150	1 x 2½	ELS-2/TVL-1	TVL-1420	1.85
80@150	1⅜ x 2	TVL-61	TVL-1421	1.85
140@150	1⅜ x 3	TVL-103	TVL-1428	2.15
150@150	1⅜ x 3	ELS-3	TVL-1430	2.15
200@150	1⅜ x 4		TVL-1431	2.45
300@150	1⅜ x 3½		TVL-1434	2.80
40@200	1 x 2	EL-14	TVL-1460	1.70
15@250	1 x 2	TVL-70	TVL-1505	1.55
20@250	1 x 2	EL-12	TVL-1509	1.60
30@250	1 x 2	EL-30/TVL-63	TVL-1516	1.70
40@250	1 x 2	EL-42	TVL-1519	1.80
50@250	1 x 2½	TVL-3	TVL-1522	1.95
60@250	1 x 3	EL-6	TVL-1525	2.05
80@250	1 x 3½	TVL-62	TVL-1530	2.15
150@250	1⅜ x 3	TVL-44	TVL-1540	3.10
15@300	1 x 2	EL-203	TVL-1560	1.60
30@300	1 x 2	EL-33/TVL-108	TVL-1563	1.75
50@300	1 x 2½	EL-53	TVL-1567	2.05
60@300	1 x 3	ELS-4	TVL-1570	2.10
80@300	1 x 3½	ELS-5/TVL-107	TVL-1573	2.55
100@300	1 x 4	TVL-4	TVL-1578	2.90
125@300	1⅜ x 3½	EL-123	TVL-1580	3.50
150@300	1⅜ x 3½	TVL-101	TVL-1584	3.50
50@350	1 x 3	EL-5	TVL-1622	2.10
80@350	1⅜ x 3	TVL-5	TVL-1630	2.85
125@350	1⅜ x 3½	EL-125	TVL-1638	3.95
10@400	1 x 2	EL-10	TVL-1655	1.50
20@400	1 x 2	EL-20	TVL-1660	1.75
80@400	1⅜ x 3	EL-80	TVL-1675	2.95
10@450	1 x 2	EL-1	TVL-1705	1.55
15@450	1 x 2	EL-15	TVL-1709	1.70
20@450	1 x 2	EL-2/TVL-106	TVL-1714	1.80
30@450	1 x 2½	EL-3	TVL-1720	1.95
40@450	1 x 3	EL-4/TVL-45	TVL-1725	2.05
125@450	1⅜ x 4	TVL-6	TVL-1760	3.85
30@475	1 x 3	TVL-7	TVL-1810	2.00
40@475	1⅜ x 2	TVL-8	TVL-1820	2.50
90@475	1⅜ x 3½	TVL-9	TVL-1850	3.50
10@525	1 x 2	EL-115	TVL-1940	1.70
DUAL UNITS				
.5 ohm@15.75 KC/ 2.5 ohm@60 CPS	1⅜ x 2	TVL-224	TVL-2010	3.60
1000+500@6 N.P	1⅜ x 2	TVL-10	TVL-2120	3.90
250@10/1000@6	1⅜ x 2	TVL-66	TVL-2140	2.85
1000+1000@15	1 x 3½	TVL-13	TVL-2160	4.40
40+40@25	1 x 2	EL-242/TVL-223	TVL-2210	1.60
150+50@25	1 x 2	TVL-216	TVL-2230	1.90
50+50@50	1 x 2	EL-250	TVL-2320	1.70
20+20@150	1 x 2	EL-221/ELS-6	TVL-2415	1.70
30+15@150	1 x 2	EL-231	TVL-2418	1.75
30+30@150	1 x 2	EL-230	TVL-2422	$1.85
40+20@150	1 x 2	EL-24	TVL-2425	1.85
40+40@150	1 x 2½	ELS-7	TVL-2428	1.90
50+30@150	1 x 2½	EL-35	TVL-2432	2.00
50+50@150	1 x 2½	EL-25/TVL-215	TVL-2435	2.15
60+60@150	1 x 3½	EL-26	TVL-2438	2.35
80+40@150	1⅜ x 2½	ELS-8/TVL-212	TVL-2442	2.30
200+125@150	1⅜ x 3½	TVL-202	TVL-2445	3.75
200+200@150	1⅜ x 4	TVL-217	TVL-2447	4.00
40+40@200	1 x 3	ELS-9	TVL-2460	2.30
40@250/25@25	1 x 2½	TVL-204	TVL-2505	2.00
10+10@250	1 x 2	EL-101	TVL-2510	1.70
20+20@250	1 x 2	EL-120	TVL-2515	1.90
40+40@250	1 x 3½	EL-245/TVL-205	TVL-2520	2.50
150+150@250	1⅜ x 4	TVL-210	TVL-2535	5.15
20@300/20@25	1 x 2	EL-22	TVL-2555	1.85
10+10@300	1 x 2	EL-21	TVL-2565	1.75
15+15@300	1 x 2	EL-253	TVL-2568	1.90
40+40@300	1⅜ x 2½	ELS-10	TVL-2575	3.00
60+60@300	1⅜ x 2½	ELS-11	TVL-2579	3.40
80+40@300	1⅜ x 2½	ELS-12	TVL-2582	3.55
80+80@300	1⅜ x 3½	TVL-14	TVL-2585	4.05
120+20@300	1⅜ x 3½	TVL-46	TVL-2588	4.00
20@350/30@250	1 x 3	TVL-213	TVL-2615	2.30
60@350/80@250	1⅜ x 3½	TVL-220	TVL-2618	3.45
30@350/30@300	1 x 3½	EL-23	TVL-2621	2.65
30+20@350	1 x 3½	EL-32	TVL-2627	2.60
80+80@350	1⅜ x 4	TVL-219	TVL-2635	4.70
15+15@400	1 x 2½	EL-254/TVL-222	TVL-2660	2.25
30+10@400	1 x 3	TVL-15	TVL-2663	2.35
60+60@400	1⅜ x 4	TVL-208	TVL-2668	4.40
80+10@400	1⅜ x 3½	EL-214	TVL-2672	3.40
80+40@400	1⅜ x 4	TVL-201	TVL-2675	4.10
80@450/10@25	1⅜ x 3	TVL-17	TVL-2705	3.40
80@450/50@50	1⅜ x 3	TVL-18	TVL-2710	3.50
20@450/80@350	1⅜ x 3½	TVL-16	TVL-2730	3.65
40@450/10@350	1⅜ x 2½	TVL-69	TVL-2735	2.60
10+10@450	1 x 2	EL-210/TVL-207	TVL-2750	1.90
15+10@450	1 x 2½	EL-151/TVL-209	TVL-2752	2.25
20+20@450	1 x 3	EL-220/TVL-214	TVL-2755	2.55
30+30@450	1⅜ x 2½	TVL-218	TVL-2759	3.05
40+40@450	1⅜ x 3	EL-240/TVL-64	TVL-2764	3.45
60+40@450	1⅜ x 3½	TVL-221	TVL-2770	3.95
80+10@450	1⅜ x 3	TVL-47	TVL-2776	3.60
80+30@450	1⅜ x 4		TVL-2777	4.20
20@475/100@300	1⅜ x 3½	TVL-19	TVL-2810	3.95
40+40@475	1⅜ x 3	TVL-20	TVL-2830	4.30
40@500/50@200	1⅜ x 3	TVL-203	TVL-2920	3.35
TRIPLE UNITS				
20+20+20@25	1 x 2	EL-325	TVL-3210	1.95
40+40+40@25	1 x 2	TVL-327	TVL-3230	2.15
30+30+30@50	1 x 2	EL-335	TVL-3320	2.15
20@150/250+100@15	1⅜ x 2	TVL-49	TVL-3403	2.90
100@150/50@50/25@25	1 x 3	TVL-48	TVL-3407	3.00
30+20@150/100@6	1 x 2	EL-321	TVL-3412	2.40
20+20@150/20@25	1 x 2	EL-222/ELS-14	TVL-3415	2.20
30+20@150/20@25	1 x 2	EL-324	TVL-3417	2.25
30+30@150/20@25	1 x 2	EL-332	TVL-3419	2.30
40+20@150/20@25	1 x 2½	ELS-15	TVL-3422	2.30
40+30@150/20@25	1 x 2	EL-343	TVL-3424	2.35
40+30@150/25@25	1 x 2½	EL-43	TVL-3425	2.35
50+30@150/100@25	1 x 3	EL-351	TVL-3427	2.70
50+50@150/20@25	1 x 3	EL-352	TVL-3430	2.65
20+20+20@150	1 x 2½	EL-320/ELS-13	TVL-3433	2.30
30+30+10@150	1 x 2	EL-313	TVL-3435	2.35
40+20+20@150	1 x 2½	EL-224/TVL-325	TVL-3437	2.40
40+40+40@150	1 x 3½	EL-340	TVL-3440	2.60
50+50+50@150	1 x 3	TVL-305	TVL-3442	3.00

All prices subject to change without notice.

SPRAGUE CAPACITORS

Mfd.@WVDC	Dia. x Length	Old Cat. No.	New Cat. No.	List
80+80+80@150	1⅜ x 3	TVL-333	TVL-3446	$3.75
120+80+40@150	1⅜ x 3½	TVL-330	TVL-3448	3.80
70+70@250/20@50	1⅜ x 3	TVL-50	TVL-3470	3.90
100+10@200/40@50	1⅜ x 2	TVL-21	TVL-3475	3.15
15+15@250/20@25	1 x 2	EL-331	TVL-3510	2.35
30+30@250/20@25	1 x 3	EL-334	TVL-3513	2.80
40+20@250/10@150	1⅜ x 2	TVL-323	TVL-3517	2.75
80+80@250/60@200	1⅜ x 3½	TVL-22	TVL-3525	4.50
15+15+10@250	1 x 2	EL-355	TVL-3530	2.45
30+15+10@250	1 x 2½	EL-315	TVL-3534	2.70
40+20+20@250	1 x 3½	EL-354	TVL-3540	2.90
100@300/60@150/20@25	1⅜ x 3	TVL-51	TVL-3560	4.20
100@300/60+20@250	1⅜ x 4		TVL-3562	4.90
200@300/60+20@250	1⅜ x 4		TVL-3563	5.50
20+20@300/20@25	1 x 2½	EL-333	TVL-3565	2.75
40+15@300/20@25	1 x 3	EL-341	TVL-3570	2.95
40+20@300/20@25	1⅜ x 2	ELS-16	TVL-3573	3.10
10+10@300/15@250	1 x 2		TVL-3578	2.45
10+10+10@300	1 x 2	EL-316	TVL-3580	2.40
120+50+50@300	1⅜ x 4		TVL-3585	5.85
10@350/50@150/100@50	1 x 3½	TVL-302	TVL-3608	2.85
20@350/30@250/20@25	1 x 3	TVL-320	TVL-3612	2.80
30@350/20+10@250	1 x 3½	EL-314	TVL-3615	3.00
20@350/40@300/10@150	1 x 3½		TVL-3619	3.15
30@350/30@300/20@25	1 x 3	TVL-332	TVL-3620	3.15
40@350/20@300/10@200	1⅜ x 2	TVL-23	TVL-3623	3.30
10+10@350/20@25	1 x 2	EL-102	TVL-3628	3.25
15+10@350/20@25	1 x 2½	EL-153	TVL-3630	2.50
15+15@350/20@25	1 x 2½	EL-326	TVL-3632	2.70
20+10@350/20@25	1 x 2½	EL-212	TVL-3634	2.55
30+20@350/20@25	1 x 3½	EL-323/TVL-313	TVL-3636	3.10
10+5@350/150@50	1 x 3		TVL-3638	2.70
60+40+20@350	1⅜ x 4	TVL-322	TVL-3640	4.25
80+60+60@350	1⅜ x 4		TVL-3642	5.55
10@400/40@300/10@150	1⅜ x 2	TVL-301	TVL-3665	2.90
10@400/50@350/30@25	1 x 3½	TVL-331	TVL-3670	3.10
15+15@400/40@25	1 x 3	EL-342	TVL-3675	2.80
20+20@400/20@25	1 x 3	EL-322	TVL-3678	2.85
80+40@400/150@50	1⅜ x 4	TVL-24	TVL-3684	5.25
10+10+10@400	1 x 2½	EL-311/TVL-328	TVL-3690	2.40
30@450/100+25@25	1⅜ x 2	TVL-26	TVL-3703	2.95
40@450/40@150/130@50	1⅜ x 3	TVL-57	TVL-3706	3.70
40@450/90+50@150	1⅜ x 3	TVL-27	TVL-3708	4.00
20@450/80@200/50@50	1⅜ x 2½		TVL-3709	3.40
20@450/60@250/100@25	1⅜ x 2½	TVL-309	TVL-3711	3.65
10@450/80+80@250	1⅜ x 4		TVL-3712	4.15
20@450/40+10@250	1⅜ x 2	TVL-321	TVL-3713	3.15
20@450/15+10@300	1 x 3½	EL-362	TVL-3716	2.85
10@450/10@350/20@25	1 x 2½	EL-363	TVL-3719	2.30
10@450/10@350/50@25	1 x 3	TVL-28	TVL-3721	2.40
20@450/80@350/100@50	1⅜ x 3½		TVL-3722	4.50
15@450/20@350/20@250	1⅜ x 2	EL-364	TVL-3724	2.95
10@450/30@400/30@300	1⅜ x 2½	TVL-56	TVL-3726	3.35
10+10@450/10@25	1 x 2½	EL-345	TVL-3729	2.40
10+10@450/20@25	1 x 2½	EL-202	TVL-3731	2.40
15+15@450/20@25	1 x 3	EL-353	TVL-3733	2.70
20+10@450/20@25	1 x 3	EL-312	TVL-3735	2.70
20+15@450/20@25	1 x 3½	EL-205	TVL-3737	2.90
20+20@450/20@25	1 x 3½	EL-350/TVL-319	TVL-3739	3.05
30+30@450/20@25	1⅜ x 2½	EL-330/TVL-316	TVL-3741	3.55
80+40@450/100@25	1⅜ x 4	TVL-326	TVL-3746	5.05
10+10@450/40@50	1 x 2½	TVL-52	TVL-3749	2.50
20+10@450/50@50	1 x 3	TVL-67	TVL-3751	2.85
40+10@450/40@50	1⅜ x 2½	TVL-29	TVL-3754	3.25
40+40@450/40@150	1⅜ x 3½	TVL-54	TVL-3758	4.15
40+10@450/80@200	1⅜ x 3	TVL-25	TVL-3761	3.90
40+10@450/100@200	1⅜ x 3½	TVL-315	TVL-3762	4.15
40+40@450/100@200	1⅜ x 4	TVL-308	TVL-3764	4.95
15+10@450/120@300	1⅜ x 3½		TVL-3765	4.70
15+15@450/10@300	1 x 3½	EL-360	TVL-3766	2.85
15+5@450/15@350	1 x 3	EL-215	TVL-3768	2.85
20+20@450/60@350	1⅜ x 3½	TVL-65	TVL-3770	5.05
40+10@450/10@350	1⅜ x 3	TVL-53	TVL-3772	3.30
10+10+10@450	1 x 3	EL-310/TVL-324	TVL-3776	2.60
15+15+10@450	1 x 3½	EL-344	TVL-3778	2.95
20+20+20@450	1⅜ x 2½	EL-300/TVL-334	TVL-3780	3.60
30+30+30@450	1⅜ x 3½	TVL-314	TVL-3782	4.35
40+40+10@450	1⅜ x 3½	TVL-30	TVL-3785	4.15
40+40+40@450	1⅜ x 3½	TVL-304	TVL-3787	4.90
60+30+10@450	1⅜ x 3	TVL-317	TVL-3790	4.50
10@475/100@200/40@50	1⅜ x 2½		TVL-3800	3.35
20@475/20@300/40@25	1⅜ x 2	TVL-31	TVL-3805	3.10
40@475/40@400/25@50	1⅜ x 3	TVL-32	TVL-3813	4.30
20+20@475/60@400	1⅜ x 3½	TVL-306	TVL-3820	4.80
10+10+10@475	1 x 3	TVL-33	TVL-3835	2.70
30+30+20@475	1⅜ x 3	TVL-55	TVL-3840	4.45

Mfd.@WVDC	Dia. x Length	Old Cat. No.	New Cat. No.	List
QUADRUPLE UNITS				
30+30+30@150/40@25	1⅜ x 2	EL-434	TVL-4415	$3.10
40+40+30@150/20@25	1⅜ x 2	EL-443	TVL-4420	3.10
50+50+50@150/20@25	1⅜ x 2	EL-452	TVL-4425	3.55
40+20+10@200/20@25	1⅜ x 2	EL-422	TVL-4470	3.20
100+40+10@250/100@50	1⅜ x 3½	TVL-414	TVL-4516	5.15
80+60+40@250/20@150	1⅜ x 4	TVL-405	TVL-4524	5.10
100@300/40@50/80+20@25	1⅜ x 3	TVL-402	TVL-4555	4.55
120@300/20@250/20@25/100@30	1⅜ x 3½		TVL-4562	5.25
10+10+10@300/20@25	1⅜ x 2	EL-412	TVL-4565	2.95
60+40+20@300/50@25	1⅜ x 3½	TVL-60	TVL-4570	4.70
40+40+40@300/20@150	1⅜ x 3	TVL-420	TVL-4575	4.90
40+40+20+10@300	1⅜ x 3½	TVL-423	TVL-4579	4.55
40@350/40+20@300/20@25	1⅜ x 3½	EL-432	TVL-4605	4.50
10+10@350/10+10@300	1⅜ x 2	TVL-34	TVL-4612	3.10
20+10+5@350/10@25	1⅜ x 2	EL-415	TVL-4620	3.10
40+40+40@350/150@50	1⅜ x 4	TVL-409	TVL-4628	5.65
80@400/40+20+10@300	1⅜ x 3½		TVL-4641	5.55
40@400/10@350/80+10@250	1⅜ x 4	TVL-35	TVL-4657	4.65
10+10@400/25@25	1⅜ x 2	TVL-425	TVL-4662	2.80
20+20+20@400/20@25	1⅜ x 2½	EL-442/TVL-426	TVL-4667	3.85
80+10+10+10@400	1⅜ x 3½	TVL-410	TVL-4675	4.70
80+25+10+10@400	1⅜ x 4	TVL-401	TVL-4680	5.25
20@450/80+20@200/50@50	1⅜ x 3		TVL-4701	4.10
10@450/10@300/60@200/100@50	1⅜ x 2½	TVL-404	TVL-4705	3.80
10@450/100+10@350/20@25	1⅜ x 3		TVL-4706	5.20
10@450/60+40@350/25@25	1⅜ x 4		TVL-4707	4.60
20@450/15+15@350/20@25	1⅜ x 2½	EL-421	TVL-4708	3.80
80@450/10@400/30@300/40@150	1⅜ x 4		TVL-4710	5.25
20+15@450/20+20@25	1⅜ x 2	EL-423	TVL-4712	3.45
20+20@450/30+30@300	1⅜ x 3½	EL-425	TVL-4715	4.50
40+10@450/35+10@350	1⅜ x 3½	TVL-59	TVL-4718	4.60
40+40@450/30+30@350	1⅜ x 4		TVL-4720	5.90
10+10+10@450/20@25	1⅜ x 2	EL-431	TVL-4723	3.15
40+10+10@450/250@25	1⅜ x 3	TVL-422	TVL-4726	4.70
40+15+10@450/20@25	1⅜ x 3	TVL-421	TVL-4729	4.10
40+20+20@450/40@25	1⅜ x 3	TVL-413	TVL-4732	4.65
40+30+10@450/20@25	1⅜ x 3½	EL-424	TVL-4734	4.50
40+40+10@450/20@25	1⅜ x 3½	TVL-415	TVL-4736	4.70
40+40+40@450/40@25	1⅜ x 4	TVL-424	TVL-4739	5.50
30+30+15@450/30@50	1⅜ x 3	TVL-417	TVL-4742	4.55
40+40+10@450/25@50	1⅜ x 3½	TVL-408	TVL-4745	4.70
40+40+10@450/100@100	1⅜ x 3½	TVL-406	TVL-4747	5.55
10+10+10@450/10@150	1⅜ x 2	TVL-36	TVL-4750	3.15
60+10+10@450/20@150	1⅜ x 3	TVL-68	TVL-4753	4.55
10+10+10+10@450	1⅜ x 2	EL-410/TVL-419	TVL-4760	3.35
20+20+20+20@450	1⅜ x 3	EL-420	TVL-4763	4.70
30+15+15+15@450	1⅜ x 3	TVL-418	TVL-4766	4.45
30+30+15+10@450	1⅜ x 3½	TVL-58	TVL-4769	4.70
20@475/40@300/100@50/80@25	1⅜ x 3		TVL-4800	4.45
10@475/10@450/80@200/50@60	1⅜ x 3	TVL-37	TVL-4806	3.85
25@475/20@450/20@300/100@50	1⅜ x 3	TVL-412	TVL-4809	4.60
10@475/60@450/30@400/125@50	1⅜ x 4		TVL-4811	5.55
15+15@475/80@300/40@50	1⅜ x 3	TVL-411	TVL-4815	4.80
10+5@475/80@450/40@50	1⅜ x 3½		TVL-4819	4.90
40+20+10@475/10@25	1⅜ x 3	TVL-38	TVL-4822	4.85
20+20+10@475/10@300	1⅜ x 2½	TVL-403	TVL-4826	4.30
10+10+10+10@475	1⅜ x 2	TVL-39	TVL-4830	3.50
40+20+10+10@475	1⅜ x 3	TVL-40	TVL-4840	5.10

INSULATING TUBES

These closed-top black insulating sleeves are made of tightly fitting Kraftboard. Order with capacitors as required.

Cat. No.	Description	Cat. No.	Description
HKT-1	For 1″ x 2″ can	HKT-6	For 1⅜″ x 2½″ can
HKT-2	For 1″ x 2½″ can	HKT-7	For 1⅜″ x 3″ can
HKT-3	For 1″ x 3″ can	HKT-8	For 1⅜″ x 3½″ can
HKT-4	For 1″ x 4″ can	HKT-9	For 1⅜″ x 4″ can
HKT-5	For 1⅜″ x 2″ can		

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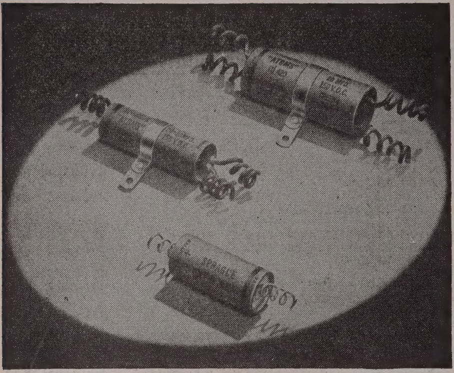
SPRAGUE CAPACITORS



ATOM® ELECTROLYTICS

- The Smallest Dependable Dry Electrolytic
- Practically Every Needed Capacity, Voltage, or Combination—Will Answer 90% of Service Requirements for Dry Electrolytic Replacements.
- Guaranteed to Have Low Leakage and Long Shelf Life
- Will Withstand Extremely High Temperatures, High Ripple Currents, High Surge Voltages
- Easy to Mount—Will Fit Anywhere
- Suitable for 85°C Operation, Up to 450 WVDC

SINGLE UNITS

Mfd. @ WVDC	Dia. x Length	Old Cat. Nos.	New Cat. No.	List
50@6	3/8 x 1 1/8	TVA-30	TVA-1100	$ .95
100@6	1/2 x 1 1/8	UHC-106/TVA-31	TVA-1101	1.20
250@6	5/8 x 1 7/16	UHC-206/TVA-26	TVA-1102	1.35
500@6	5/8 x 2 3/16	UHC-506/TVA-27	TVA-1103	1.55
1000@6	11/16 x 2 3/16	UHC-1000/TVA-1	TVA-1104	1.90
1500@6	13/16 x 2 11/16	UHC-1500/TVA-28	TVA-1105	2.10
2000@6	13/16 x 2 15/16	TVA-2	TVA-1106	2.30
100@12	9/16 x 1 3/16	UHC-112/TVA-35	TVA-1130	1.20
250@12	5/8 x 1 11/16	UHC-212/TVA-3	TVA-1131	1.45
500@12	3/4 x 1 11/16	UHC-512/TVA-4	TVA-1132	1.70
1000@12	13/16 x 2 3/16	UHC-1012/TVA-38	TVA-1133	2.25
100@15	5/8 x 1 3/16	UHC-115/TVA-42	TVA-1160	1.25
250@15	5/8 x 1 11/16	UHC-215/TVA-43	TVA-1161	1.55
500@15	11/16 x 2 3/16	UHC-515/TVA-44	TVA-1162	1.75
1000@15	7/8 x 2 3/16	UHC-1015/TVA-45	TVA-1163	2.30
2@25	3/8 x 1 1/8	TVA-49	TVA-1201	.90
5@25	3/8 x 1 1/8	TA-5/TVA-50	TVA-1203	1.00
10@25	3/8 x 1 1/8	TA-10/TVA-5	TVA-1204	1.00
25@25	3/8 x 1 1/8	TA-25/TVA-6	TVA-1205	1.00
50@25	9/16 x 1 3/16	TA-50/TVA-7	TVA-1206	1.10
100@25	9/16 x 1 11/16	UHC-102/TVA-8	TVA-1207	1.35
250@25	3/4 x 1 11/16	UHC-202/TVA-9	TVA-1208	1.70
500@25	7/8 x 2 3/16	UHC-502/TVA-10	TVA-1209	2.30
1@50	3/8 x 1 1/8	TVA-11	TVA-1300	.90
2@50	3/8 x 1 1/8	TVA-12	TVA-1301	.90
5@50	3/8 x 1 1/8	TA-55/TVA-13	TVA-1303	1.00
10@50	3/8 x 1 1/8	TA-510/TVA-14	TVA-1304	1.00
25@50	7/16 x 1 7/16	TA-525/TVA-15	TVA-1306	1.05
50@50	9/16 x 1 11/16	TA-550/TVA-16	TVA-1308	1.20
100@50	5/8 x 1 11/16	UHC-105/TVA-17	TVA-1310	1.40
150@50	3/4 x 1 11/16	TVA-56	TVA-1311	1.55
250@50	15/16 x 1 11/16		TVA-1312	1.75
4@150	3/8 x 1 1/8	UT-41/TVA-60	TVA-1402	1.00
8@150	3/8 x 1 5/8	UT-81/TVA-61	TVA-1405	1.05
10@150	3/8 x 1 5/8	UT-101/TVA-62	TVA-1406	1.05
12@150	3/8 x 1 5/8	UT-121/TVA-63	TVA-1407	1.10
16@150	9/16 x 1 11/16	UT-161/TVA-64	TVA-1409	1.15
20@150	9/16 x 1 11/16	UT-201/TVA-65	TVA-1410	1.20
30@150	5/8 x 1 11/16	UT-301/TVA-18	TVA-1412	1.30
40@150	3/4 x 1 1/16	UT-401/TVA-66	TVA-1413	1.35
50@150	13/16 x 1 11/16	UT-501/TVA-67	TVA-1414	1.40
80@150	7/8 x 1 15/16	TVA-19	TVA-1418	1.60
100@150	7/8 x 2 3/16	TVA-68	TVA-1420	1.75
150@150	1 x 2 3/16	TVA-29	TVA-1422	1.90
4@250	7/16 x 1 5/8	UT-42/TVA-75	TVA-1501	1.00
8@250	1/2 x 1 5/8	UT-82/TVA-76	TVA-1503	1.15
10@250	9/16 x 1 11/16	TVA-77	TVA-1504	1.20
12@250	9/16 x 1 11/16	UT-122/TVA-78	TVA-1505	1.25
16@250	5/8 x 11/16	UT-162/TVA-79	TVA-1507	1.30
20@250	11/16 x 1 11/16	UT-202/TVA-80	TVA-1508	1.35
30@250	11/16 x 2 3/16	TVA-81	TVA-1510	1.45
40@250	3/4 x 2 3/16	UT-402/TVA-82	TVA-1511	1.55
4@350	1/2 x 1 5/8	UT-43/TVA-87	TVA-1601	1.05
8@350	5/8 x 1 11/16	UT-83/TVA-88	TVA-1603	1.20
10@350	11/16 x 1 11/16	TVA-89	TVA-1604	$1.25
12@350	11/16 x 1 11/16	UT-123/TVA-90	TVA-1605	1.30
16@350	3/4 x 1 11/16	UT-163/TVA-91	TVA-1607	1.40
20@350	13/16 x 1 11/16	UT-203/TVA-92	TVA-1608	1.45
30@350	13/16 x 2 3/16	TVA-93	TVA-1610	1.65
40@350	7/8 x 2 7/16	TVA-94	TVA-1611	1.75
60@350	1 x 2 7/16	TVA-101	TVA-1613	1.95
2@450	7/16 x 1 5/8	TVA-103	TVA-1701	1.10
4@450	9/16 x 1 11/16	UT-4/TVA-104	TVA-1702	1.15
8@450	11/16 x 1 11/16	UT-8/TVA-106	TVA-1704	1.25
10@450	11/16 x 1 11/16	UT-10/TVA-21	TVA-1705	1.30
12@450	3/4 x 1 11/16	UT-12/TVA-108	TVA-1706	1.35
16@450	3/4 x 2 3/16	UT-16/TVA-110	TVA-1708	1.40
20@450	3/4 x 2 3/16	UT-20/TVA-22	TVA-1709	1.55
30@450	7/8 x 2 3/16	UT-30/TVA-23	TVA-1711	1.70
40@450	7/8 x 2 11/16	UT-40/TVA-24	TVA-1712	1.80
50@450	7/8 x 3 3/16	TVA-114	TVA-1713	2.10
80@450	1 x 3 11/16	TVA-116	TVA-1716	2.80
10@475	3/4 x 1 15/16	TVA-120	TVA-1802	1.35
20@475	7/8 x 2 7/16	TVA-121	TVA-1804	1.60
8@500	7/8 x 1 11/16	UT-85/TVA-130	TVA-1902	1.30
16@500	15/16 x 2 3/16	UT-165/TVA-133	TVA-1905	1.50
20@500	1 x 2 3/16	UT-205/TVA-134	TVA-1906	1.60

DUAL UNITS

COMMON NEGATIVE—3 LEADS

Mfd. @ WVDC	Dia. x Length	Old Cat. Nos.	New Cat. No.	List
10+10@25	7/8 x 1 7/16	TA-110/TVA-200	TVA-2210	1.40
10+10@50	7/8 x 1 7/16	TA-100/TVA-205	TVA-2315	1.40
8+8@150	7/8 x 1 7/16	TA-88/TVA-210	TVA-2415	1.50
16+16@150	7/8 x 1 7/16	TA-116/TVA-212	TVA-2420	1.80
20+12@150	7/8 x 1 7/16	TA-122/TVA-214	TVA-2425	1.60
20+20@150	7/8 x 1 7/16	TA-220/TVA-20	TVA-2428	1.65
30+20@150	7/8 x 1 11/16	TA-230/TVA-215	TVA-2421	1.70
30+30@150	7/8 x 1 11/16	TA-330/TVA-216	TVA-2434	1.80
40+20@150	7/8 x 1 11/16	TA-240/TVA-218	TVA-2438	1.75
40+30@150	7/8 x 1 15/16	TA-430/TVA-319	TVA-2442	1.80
40+40@150	7/8 x 1 15/16	TA-440/TVA-220	TVA-2445	1.85
50+30@150	7/8 x 1 15/16	TA-530/TVA-224	TVA-2450	1.95
50+50@150	7/8 x 2 7/16	TA-505/TVA-226	TVA-2453	2.10
80+30@150	7/8 x 2 7/16	TA-830/TVA-230	TVA-2460	2.20
12+12@200	13/16 x 2 3/8		TA-212	1.60
16+ 8@200	3/4 x 2 3/8		TA-816	1.65
16+16@200	13/16 x 2 3/8		TA-216	1.70
16+ 8@250	13/16 x 2 3/8		AT-816	1.70
16+16@250	15/16 x 2 3/8		AT-261	1.70
20+20@250	7/8 x 1 15/16	TVA-240	TVA-2515	1.85
40+10@250	7/8 x 2 3/16	TA-412/TVA-245	TVA-2520	2.05
80+10@250	15/16 x 3 3/16	TA-812/TVA-250	TVA-2525	2.55
8+ 8@450	7/8 x 1 11/16	UT-88/TVA-260	TVA-2720	1.70
10+10@450	7/8 x 1 15/16	TVA-25	TVA-2722	1.85
16+ 8@450	7/8 x 2 3/16	UT-816/TVA-262	TVA-2725	2.00
20+20@450	7/8 x 2 15/16	UT-220/TVA-264	TVA-2730	2.50
30+30@450	1 x 3 3/16	TVA-266	TVA-2735	3.00
40+40@450	1 x 3 15/16	TVA-268	TVA-2740	3.40

All prices subject to change without notice.

SPRAGUE CAPACITORS

Mfd. @ WVDC	Dia. x Length	Old Cat. Nos.	New Cat. No.	List
SEPARATE SECTIONS—4 LEADS				
20+20@150	1 x 2⅜		TU-220	$2.05
40+20@150	1¹⁄₁₆ x 2⅝		TU-420	2.20
16+ 8@250	1 x 2⅜		TU-816	2.10
16+16@250	1 x 2⅞		TU-216	2.20
8+ 8@450	1¹⁄₁₆ x 3⅜		TU-88	2.15
16@16+450	1⅜ x 3⅛		TU-1616	2.80
TRIPLE UNITS				
20+20@150/20@25	⅞ x 2⅜	TA-301/TVA-301	TVA-3415	2.05
30+30@150/100@12	⅞ x 2⅞	TA-311/TVA-311	TVA-3419	2.30

Mfd. @ WVDC	Dia. x Length	Old Cat. Nos.	New Cat. No.	List
40+30@150/20@25	⅞ x 2⅞	TA-305/TVA-305	TVA-3423	$2.20
40+40@150/100@25	¹⁵⁄₁₆ x 3⅜	TA-306/TVA-306	TVA-3427	2.45
50+30@150/20@25	¹⁵⁄₁₆ x 2⅞	TA-307/TVA-307	TVA-3430	2.35
50+30@150/200@25	1 x 3⅜	TA-308/TVA-308	TVA-3433	2.75
50+50@150/20@25	1 x 2⅞	TA-309/TVA-309	TVA-3436	2.50
20+20+20@150	¹⁵⁄₁₆ x 2⅜	TA-302/TVA-302	TVA-3440	2.20
30+30+30@150	1 x 2⅞	TA-303/TVA-303	TVA-3444	2.35
40+30+20@150	1 x 2⅝	TA-304/TVA-304	TVA-3448	2.35
40+40+40@150	⅞ x 3⅞	TA-314/TVA-314	TVA-3451	2.45
80+40+20@150	1 x 3⅞	TA-315/TVA-315	TVA-3455	2.75
12+12@450/20@25	1 x 2⅞	TA-313/TVA-313	TVA-3716	2.30

SCREWBASE ELECTROLYTICS

Type PLS—Will replace larger, old-style electrolytics . . . Capacitor sections have separate positive leads and common negative lead

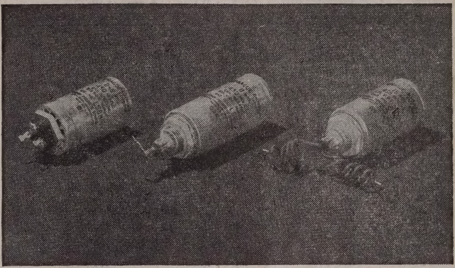
Type LS—For replacing larger, older can types . . . Positive terminal is lug connection, can is negative terminal

Type SC—For "Extra Tough" applications where high peaks may occur . . . Lug connection is positive, can is negative terminal

Type CL—Same as Type SC, but with can insulated from Sections . . . Separate positive and negative leads

Type WR—Designed to replace wet electrolytics . . . Will withstand A-C ripples that may break down ordinary drys . . . Has insulated wire leads for both terminals

Type AP—For high voltage applications . . . Sections are connected in series for long, trouble-free performance . . . Insulated wire leads for both terminals



Mfd.	Dia. x Length	Cat. No.	List
TYPE PLS—450 WVDC, 525 V Surge			
4	1⅜ x 2⁷⁄₁₆	PLS-4	$2.00
8	1⅜ x 2⁷⁄₁₆	PLS-8	2.20
12	1⅜ x 2⁷⁄₁₆	PLS-12	2.40
16	1⅜ x 2⁷⁄₁₆	PLS-16	2.45
20	1⅜ x 2⁷⁄₁₆	PLS-20	2.70
25	1⅜ x 3⁷⁄₁₆	PLS-25	2.90
30	1⅜ x 3⁷⁄₁₆	PLS-30	3.00
40	1⅜ x 3¹⁵⁄₁₆	PLS-40	3.15
4+8	1⅜ x 2¹⁵⁄₁₆	PLS-48	2.95
8+8	1½ x 2¹⁵⁄₁₆	PLS-88	3.00
8+16	1½ x 2¹⁵⁄₁₆	PLS-816	3.30
16+16	1½ x 3¹⁵⁄₁₆	PLS-216	3.55
8+8+8	1½ x 2¹⁵⁄₁₆	PLS-888	5.00

Mfd.	Dia. x Length	Cat. No.	List
TYPE LS—450 WVDC, 525 V Surge			
8	1⅜ x 2¹⁵⁄₁₆	LS-8	$2.20
12	1⅜ x 2¹⁵⁄₁₆	LS-12	2.40
16	1⅜ x 2¹⁵⁄₁₆	LS-16	2.45
20	1⅜ x 2¹⁵⁄₁₆	LS-20	2.70
25	1⅜ x 3⁷⁄₁₆	LS-25	2.90
30	1⅜ x 3⁷⁄₁₆	LS-30	3.00
40	1⅜ x 3¹⁵⁄₁₆	LS-40	3.15
8+8	1⅜ x 2¼	LS-88	3.00
TYPE SC—475 WVDC, 600 V Surge			
4	1 x 3⁷⁄₁₆	SC-4	2.55
8	1⅜ x 4⁷⁄₁₆	SC-8	2.75
12	1⅜ x 4⁷⁄₁₆	SC-12	2.95
16	1½ x 4⁷⁄₁₆	SC-16	3.15
8+8	1⅜ x 4¼	SC-88	4.10

Mfd.	Dia. x Length	Cat. No.	List
TYPE CL—475 WVDC, 600 V Surge			
8	1⅜ x 4⁷⁄₁₆	CL-8	$2.75
16	1½ x 7⁷⁄₁₆	CL-16	3.15
8+8	1½ x 4¹⁵⁄₁₆	CL-88	4.10
TYPE WR—500 WVDC, 600 V Surge			
8	1⅜ x 3¹⁵⁄₁₆	WR-8	2.85
16	1⅜ x 4⁷⁄₁₆	WR-16	3.30
25	1½ x 5⁷⁄₁₆	WR-25	3.75
TYPE AP—600 WVDC, 800 V Surge			
4	1 x 4⁷⁄₁₆	AP-46	2.95
8	1⅜ x 4⁷⁄₁₆	AP-86	3.15
16	1½ x 4⁷⁄₁₆	AP-16	3.75

- ● Especially Designed for Filter Circuits—Eliminates All Hum
- ● Compact Construction, Aluminum Can, Outer Insulating Tube

HLV LOW-VOLTAGE 'LYTICS

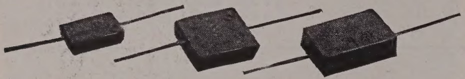
Mfd.	—Voltage DC— Working	Surge	Dia. x Length	Cat. No.	List
500	6	10	1 x 2⅛	HLV-506	$3.05
1000	6	10	1⅜ x 2¼	HLV-106	3.40
1500	6	10	1⅜ x 2¾	HLV-156	3.60
2000	6	10	1⅜ x 3¼	HLV-206	3.80
500	12	15	1⅜ x 2¼	HLV-5012	3.20
1000	12	15	1⅜ x 2¼	HLV-1012	3.75
1500	12	15	1⅜ x 2¾	HLV-1512	3.95
2000	12	15	1⅜ x 3¼	HLV-2012	4.15
500	15	20	1⅜ x 2¼	HLV-5015	3.25
1000	15	20	1⅜ x 2¼	HLV-1015	3.80
1500	15	20	1⅜ x 3¼	HLV-1515	4.00
2000	15	20	1½ x 3¾	HLV-2015	4.70
500	25	40	1⅜ x 2¼	HLV-525	3.80
1000	25	40	1⅜ x 3¼	HLV-1025	4.80
2000	25	40	1¾ x 4¼	HLV-2025	5.75

SPRAGUE CAPACITORS

MICA TYPES

- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

TYPES MS & 1FM



TYPE MS—SILVERED MICA

(Standard Capacity Tolerance ± 5%)

Mfd.	Cat. No	List
500 WVDC, 1000 V TEST		
.000005	MS-55	$ .45
.00001	MS-41	.40
.000015	MS-415	.40
.00002	MS-42	.40
.000025	MS-425	.40
.00003	MS-43	.40
.00004	MS-44	.40
.00005	MS-45	.40
.00006	MS-46	.40
.00007	MS-47	.40
.0001	MS-31	.40
.0002	MS-32	.45
.0003	MS-33	.55
.0004	MS-34	.65
.0005	MS-35	.70
.0006	MS-36	.80
.0007	MS-37	.85
.0008	MS-38	.95
.0009	MS-39	1.00
.001	MS-21	1.10
.002	MS-22	1.35
.003	MS-23	2.05
.004	MS-24	2.15
.005	MS-25	2.25
.006	MS-26	2.40
300 WVDC, 600 V TEST		
.007	MS-27	2.60
.008	MS-28	2.80
.009	MS-29	3.10
.01	MS-11	3.40

Catalog Nos.	L x W x T
MS-55 through MS-35	21/32 x 13/32 x 7/32
MS-36 through MS-23	25/32 x 25/32 x 9/32
MS-24 through MS-28	25/32 x 25/32 x 11/32
MS-29 through MS-11	1 x 5/8 x 5/16

TYPE 1FM

(Standard Capacity Tolerance ± 20%)

Mfd.	Cat. No.	List
500 WVDC, 1000 V TEST		
.00001	1FM-41	$ .25
.00002	1FM-42	.25
.00004	1FM-44	.25
.00005	1FM-45	.20
.000075	1FM-475	.20
.0001	1FM-31	.20
.00015	1FM-315	.20
.0002	1FM-32	.20
.00025	1FM-325	.25
.00035	1FM-335	.25
.0004	1FM-34	25
.0005	1FM-35	.25
.0007	1FM-37	.25
.001	1FM-21	.30
.0015	1FM-215	.30
.002	1FM-22	.40
.003	1FM-23	.50
.004	1FM-24	.55
.005	1FM-25	.60
.006	1FM-26	.65
300 WVDC, 600 V TEST		
.007	1FM-27	$ .85
.008	1FM-28	1.00
.009	1FM-29	1.00
.01	1FM-11	1.20

Catalog Nos.	L x W x T
1 FM-44 through 1 FM-35	51/64 x 15/32 x 7/32
1 FM-37 through 1 FM-23	53/64 x 53/64 x 9/32
1 FM-24 through 1 FM-28	53/64 x 53/64 x 11/32
1 FM-29 through 1 FM-11	1 x 5/8 x 5/16

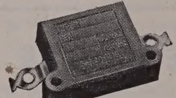
TYPES 3AFM, 3BFM, & 3CFM

(Standard Capacity Tolerance ± 10%)

Mfd.	Cat. No.	List
3AFM—300 WVDC, 600 V TEST		
.005	3AFM-25	$ .65
.006	3AFM-26	.70
.007	3AFM-27	.95
.008	3AFM-28	1.10
.01	3AFM-11	1.30
.015	3AFM-115	1.35
3BFM—500 WVDC, 1000 V TEST		
.0001	3BFM-31	.30
.0002	3BFM-32	.30
.00025	3BFM-325	.30
.0003	3BFM-33	.30
.0004	3BFM-34	.30
.0005	3BFM-35	.30
.001	3BFM-21	.35
.0015	3BFM-215	.35
.002	3BFM-22	$ .45
.0025	3BFM-225	.50
.003	3BFM-23	.55
.004	3BFM-24	.60
.005	3BFM-25	.65
.006	3BFM-26	.75
.007	3BFM-27	1.00
.008	3BFM-28	1.15
3CFM—1000 WVDC, 2000 V TEST		
.00005	3CFM-45	1.00
.0001	3CFM-31	1.00
.0002	3CFM-32	1.00
.00025	3CFM-325	1.00
.0003	3CFM-33	1.00
.0004	3CFM-34	1.00
.0005	3CFM-35	1.00
.001	3CFM-21	1.25
.0015	3CFM-215	1.50
.002	3CFM-22	1.50
.0025	3CFM-225	1.50

Catalog Nos.	L x W x T
3AFM Types	1 x 5/8 x 5/16
3BFM Types	1 x 5/8 x 5/16
3CFM Types	1 x 5/8 x 5/16

TYPES XFM, YFM & ZFM



(Standard Capacity Tolerance ±10%)

Mfd.	Cat. No.	List
XFM—600 WVDC, 1200 V TEST		
.00005	XFM-45	$1.20
.0001	XFM-31	1.20
.0002	XFM-32	1.20
.00025	XFM-325	1.20
.0003	XFM-33	1.20
.0004	XFM-34	1.20
.0005	XFM-35	1.20
.001	XFM-21	1.20
.0015	XFM-215	1.20
.002	XFM-22	1.30
.0025	XFM-225	1.30
.003	XFM-23	1.45
.004	XFM-24	1.50
.005	XFM-25	1.55
.006	XFM-26	1.80
.007	XFM-27	1.85
.008	XFM-28	1.90
.01	XFM-11	2.15
.02	XFM-12	3.05
.03	XFM-13	4.45

Catalog Nos.	L x W x T
XFM-45 thru XFM-11	1 5/8 x 1 1/8 x 11/32
XFM-12 thru XFM-13	1 5/8 x 1 1/8 x 7/16

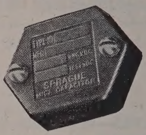
Mfd.	Cat. No.	List
YFM—1200 WVDC, 2500 V TEST		
.00005	YFM-45	1.60
.0001	YFM-31	1.60
.0002	YFM-32	1.60
.00025	YFM-325	1.60
.0003	YFM-33	1.60
.0004	YFM-34	1.60
.0005	YFM-35	1.60
.001	YFM-21	1.80
.0015	YFM-215	2.30
.002	YFM-22	2.40
.0025	YFM-225	2.80
.003	YFM-23	3.05
.004	YFM-24	3.05
.005	YFM-25	3.30
.006	YFM-26	3.30
.007	YFM-27	3.45
.008	YFM-28	3.85
.01	YFM-11	5.10

Catalog Nos.	L x W x T
YFM-45 thru YFM-24	1 5/8 x 1 1/8 x 11/32
YFM-25 thru YFM-11	1 5/8 x 1 1/8 x 7/16

Mfd.	Cat. No.	List
ZFM—2500 WVDC, 5000 V TEST		
.00005	ZFM-45	1.90
.0001	ZFM-31	1.90
.0002	ZFM-32	1.90
.00025	ZFM-325	2.20
.0003	ZFM-33	2.25
.0004	ZFM-34	2.30
.0005	ZFM-35	2.40
.001	ZFM-21	2.80
.0015	ZFM-215	3.55
.002	ZFM-22	4.15
.003	ZFM-23	4.90
.004	ZFM-24	5.65
.005	ZFM-25	6.40

Catalog Nos.	L x W x T
ZFM-45 thru ZFM-22	1 5/8 x 1 1/8 x 11/32
ZFM-23 thru ZFM-25	1 5/8 x 1 1/8 x 7/16

TYPES 7FM, 8FM & 9FM



(Standard Capacity Tolerance ±10%)

Mfd.	Cat. No.	List
7FM—600 WVDC, 1200 V TEST		
.00005	7FM-45	$1.45
.0001	7FM-31	1.45
.00015	7FM-315	1.45
.0002	7FM-32	1.45
.00025	7FM-325	1.45
.0005	7FM-35	1.45
.001	7FM-21	1.45
.002	7FM-22	1.65
.0025	7FM-225	1.70
.003	7FM-23	1.85
.004	7FM-24	2.00
.005	7FM-25	2.10
.006	7FM-26	2.20
.008	7FM-28	2.45
.01	7FM-11	2.80
.015	7FM-115	3.05
.02	7FM-12	3.55
.03	7FM-13	4.55
.04	7FM-14	5.85
.05	7FM-15	7.10
.06	7FM-16	8.05

Catalog Nos.	L x W x T
7FM-45 thru 7FM-13	1 3/4 x 1 5/16 x 7/16
7FM-14 thru 7FM-16	1 3/4 x 1 5/16 x 3/4

Mfd.	Cat. No.	List
8FM—1200 WVDC, 2500 V TEST		
.00005	8FM-45	1.60
.0001	8FM-31	1.60
.00015	8FM-315	1.60
.0002	8FM-32	1.60
.00025	8FM-325	1.60
.0005	8FM-35	1.60
.001	8FM-21	1.90
.002	8FM-22	2.50
.0025	8FM-225	2.80
.003	8FM-23	2.95
.004	8FM-24	3.10
.005	8FM-25	3.30
.006	8FM-26	3.45
.008	8FM-28	4.10
.01	8FM-11	4.70
.015	8FM-115	5.80
.02	8FM-12	7.05
.025	8FM-125	7.90
.03	8FM-13	8.10

Catalog Nos.	L x W x T
8FM-45 thru 8FM-115	1 3/4 x 1 5/16 x 7/16
8FM-12 thru 8FM-13	1 3/4 x 1 5/16 x 3/4

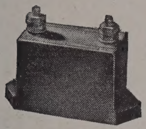
Mfd.	Cat. No.	List
9FM—2500 WVDC, 5000 V TEST		
.00005	9FM-45	1.90
.0001	9FM-31	1.90
.00025	9FM-325	2.15
.0005	9FM-35	2.55
.001	9FM-21	2.90
.002	9FM-22	4.25
.0025	9FM-225	4.60
.003	9FM-23	5.10
.004	9FM-24	5.65
.005	9FM-25	6.20
.006	9FM-26	6.35
.008	9FM-28	6.85
.01	9FM-11	7.30
.015	9FM-115	8.05

Catalog Nos.	L x W x T
9FM-45 thru 9FM-26	1 3/4 x 1 5/16 x 7/16
9FM-28 thru 9FM-115	1 3/4 x 1 5/16 x 3/4

All prices subject to change without notice.

SPRAGUE CAPACITORS

TYPES 1MC & 2MC



(Standard Capacity Tolerance ±5%)

TYPE 1MC

Mfd.	VAC Peak	Cat. No.	List
.00005	3000	1MC-45	$12.60
.0001	3000	1MC-31	12.60
.00015	3000	1MC-315	12.60
.0002	3000	1MC-32	12.60
.00025	3000	1MC-325	12.60
.0003	3000	1MC-33	12.60
.0004	3000	1MC-34	12.60
.0005	3000	1MC-35	12.60
.0006	3000	1MC-36	12.60
.0007	3000	1MC-37	12.60
.0008	3000	1MC-38	12.60
.001	3000	1MC-21	12.60
.0015	3000	1MC-215	12.60
.002	3000	1MC-22	12.60
.003	2000	1MC-23	12.60
.004	2000	1MC-24	12.60
.005	2000	1MC-25	12.60
.006	2000	1MC-26	12.60
.007	2000	1MC-27	12.60
.008	1500	1MC-28	12.60
.01	1000	1MC-11	12.60
.015	1000	1MC-115	12.60
.02	1000	1MC-12	14.30
.03	500	1MC-13	14.30
.04	500	1MC-14	14.30
.05	250	1MC-15	14.30
.1	250	1MC-1	15.10

	L x W x H
1MC Dimensions	2 x 15/16 x 1 19/32

TYPE 2MC

Mfd.	VAC Peak	Cat. No.	List
.00005	5000	2MC-45	17.30
.0001	5000	2MC-31	17.30
.00015	5000	2MC-315	17.30
.0002	5000	2MC-32	17.30
.00025	5000	2MC-325	17.30
.0003	5000	2MC-33	17.30
.0004	5000	2MC-34	17.30
.0005	5000	2MC-35	17.30
.0006	5000	2MC-36	17.30
.0007	5000	2MC-37	17.30
.0008	5000	2MC-38	17.30
.001	5000	2MC-21	17.30
.0015	5000	2MC-215	17.30
.002	5000	2MC-22	17.30
.003	3000	2MC-23	17.30
.004	3000	2MC-24	17.30
.005	3000	2MC-25	17.30
.006	3000	2MC-26	17.30
.007	3000	2MC-27	17.30
.008	2000	2MC-28	17.30
.01	2000	2MC-11	17.30
.015	2000	2MC-115	17.30
.02	2000	2MC-12	17.30
.03	1500	2MC-13	17.30
.04	1500	2MC-14	17.30
.05	1500	2MC-15	17.30
.06	1000	2MC-16	18.60
.07	1000	2MC-17	18.60
.08	500	2MC-18	19.20
.1	500	2MC-1	19.20

	L x W x H
2MC Dimensions	2¼ x 1¼ x 1 13/16

TYPES 1CC, 2CC, 3CC & 4CC

(Standard Capacity Tolerance ±5%)

TYPE 1CC

Mfd.	Cat. No.	List
6000 VAC Peak		
.00005	1CC-45	$38.20
.000075	1CC-475	40.00
.0001	1CC-31	40.60
.00015	1CC-315	40.60
.0002	1CC-32	40.60
.00025	1CC-325	40.60
.0003	1CC-33	44.35
.0004	1CC-34	44.35
.0005	1CC-35	46.65
.0006	1CC-36	46.65
.0007	1CC-37	46.65
.0008	1CC-38	46.65
.001	1CC-21	46.65
.0015	1CC-215	48.90
.002	1CC-22	48.90
.003	1CC-23	50.60
.004	1CC-24	50.60
4000 VAC Peak		
.005	1CC-25	50.60
.006	1CC-26	51.45
.007	1CC-27	51.45
.008	1CC-28	51.45
.01	1CC-11	51.45
3000 VAC Peak		
.015	1CC-115	51.45
2000 VAC Peak		
.02	1CC-12	51.45
.025	1CC-125	51.80
1500 VAC Peak		
.03	1CC-13	55.75
.04	1CC-14	58.50
.05	1CC-15	60.75
.06	1CC-16	62.80
1000 VAC Peak		
.07	1CC-17	64.25
.08	1CC-18	65.75
.1	1CC-1	68.50

	Dia. x Height
1CC Dimensions	2 13/16 x 2½

TYPE 2CC

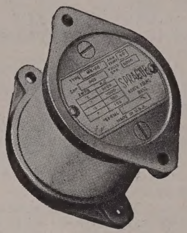
Mfd.	Cat. No.	List
10,000 VAC Peak		
.00005	2CC-45	65.55
.000075	2CC-475	65.55
.0001	2CC-31	65.55
.00015	2CC-315	65.55
.0002	2CC-32	65.55
.0003	2CC-33	65.55
.0004	2CC-34	65.55
.0005	2CC-35	65.55
.0006	2CC-36	65.55
.0007	2CC-37	65.55
.0008	2CC-38	65.55
.001	2CC-21	65.55
.0015	2CC-215	65.55
.002	2CC-22	65.55
8000 VAC Peak		
.003	2CC-23	65.55
.004	2CC-24	65.55
6000 VAC Peak		
.005	2CC-25	65.55
5000 VAC Peak		
.006	2CC-26	69.15
.007	2CC-27	69.15
.008	2CC-28	69.15
.01	2CC-11	69.15
4000 VAC Peak		
.015	2CC-115	$ 69.15
3000 VAC Peak		
.02	2CC-12	69.15
.025	2CC-125	72.00
2000 VAC Peak		
.03	2CC-13	73.50
.04	2CC-14	77.80
.05	2CC-15	80.75
.06	2CC-16	83.00
1500 VAC Peak		
.07	2CC-17	85.00
.08	2CC-18	86.50
.1	2CC-1	90.00

	Dia. x Height
2CC Dimensions	3½ x 3

TYPE 3CC

Mfd.	Cat. No.	List.
20,000 VAC Peak		
.00005	3CC-45	110.90
.000075	3CC-475	121.00
.0001	3CC-31	121.00
.00015	3CC-315	131.10
.0002	3CC-32	131.10
.0003	3CC-33	131.10
.0004	3CC-34	137.15
.0005	3CC-35	137.15
.0006	3CC-36	137.15
.0007	3CC-37	137.15
.0008	3CC-38	137.15
.001	3CC-21	141.15
15,000 VAC Peak		
.0015	3CC-215	143.20
.002	3CC-22	143.20
12,000 VAC Peak		
.003	3CC-23	151.25
.004	3CC-24	151.25
10,000 VAC Peak		
.005	3CC-25	151.25
.006	3CC-26	151.25
.007	3CC-27	151.25
.008	3CC-28	151.25
8000 VAC Peak		
.01	3CC-11	151.25
5000 VAC Peak		
.015	3CC-115	151.25
.02	3CC-12	151.25
3000 VAC Peak		
.025	3CC-125	151.25
.03	3CC-13	151.25
.04	3CC-14	151.25
.05	3CC-15	151.25
.06	3CC-16	158.50
2000 VAC Peak		
.07	3CC-17	164.00
.08	3CC-18	172.00
.1	3CC-1	182.00

	Dia. x Height
3CC Dimensions	5 x 4



(Standard Capacity Tolerance ± 5%)

TYPE 4CC

Mfd.	Cat. No.	List
30,000 VAC Peak		
.0001	4CC-31	$210.30
.00015	4CC-315	210.30
.0002	4CC-32	221.16
.0003	4CC-33	221.16
.0004	4CC-34	221.16
.0005	4CC-35	221.16
.0006	4CC-36	221.16
.0007	4CC-37	221.16
.0008	4CC-38	221.16
.001	4CC-21	229.10
25,000 VAC Peak		
.0015	4CC-215	229.10
20,000 VAC Peak		
.002	4CC-22	229.10
.003	4CC-23	229.10
15,000 VAC Peak		
.004	4CC-24	234.35
.005	4CC-25	242.00
.006	4CC-26	252.25
.007	4CC-27	260.00
12,000 VAC Peak		
.008	4CC-28	260.00
.009	4CC-29	260.00
10,000 VAC Peak		
.01	4CC-11	272.44
8000 VAC Peak		
.015	4CC-115	272.44
6000 VAC Peak		
.02	4CC-12	272.44
.03	4CC-13	272.44
5000 VAC Peak		
.04	4CC-14	272.44
.05	4CC-15	272.44
.06	4CC-16	290.00
4000 VAC Peak		
.07	4CC-17	300.00
3000 VAC Peak		
.08	4CC-18	308.00
.1	4CC-1	326.00

	Dia. x Height
4CC Dimensions	5 x 5¾

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

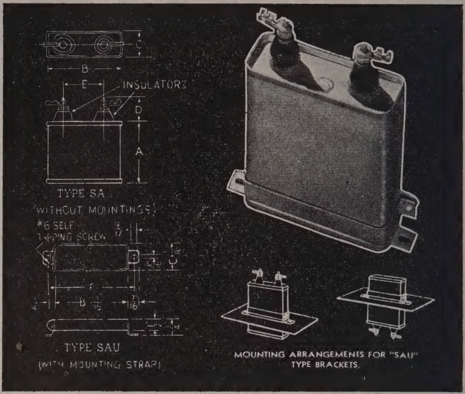
TYPE "SA" OIL FILLED

1. INCCO OIL "A" IMPREGNATED AND FILLED—permitting efficient operation over widest range of temperatures.
2. HERMETICALLY SEALED CASE—is unaffected by time, humidity, or operating temperatures.
3. Use of HIGHEST GRADE CONDENSER TISSUES insures a long uninterrupted life.
4. HIGH-GLAZE PORCELAIN INSULATORS—insure low moisture absorption and high terminal to case flash over.
5. CONSERVATIVELY RATED—SAFE FOR CONTINUOUS OPERATION AT 10 PER CENT OVERLOAD.
6. Use of "SPACE SAVER" UNIVERSAL MOUNTING BRACKET provides adjustable capacitor heights.
7. LEAD COATED STEEL CASE—IS NON-CORROSIVE and lacquer finished.
8. TESTED FOUR TIMES BEFORE SHIPMENT—guarantees a 100 per cent perfect product electrically and mechanically.

If riveted terminal construction is wanted in place of porcelain stand-off insulators add "R" to catalog number. For example, 6SA50 changes to 6SAR50. Submersion proof terminal construction to meet Army and Navy Specifications is optional; specify on order. Standard capacity tolerance plus or minus 10 per cent. Mounting brackets supplied in accordance with following catalog designations: **TYPE SA**—No mounting brackets. **TYPE SAU**—"Space Saver" universal bracket. **TYPE SAJ**—Soldered vertical mounting bracket. **Type SAL**—Reversible mounting foot bracket. **TYPE SAH**—Reversible spade bolt bracket.

For example: The 8mfd. 600V. type with "Space Saver" bracket has catalog number 6SAU800.

NOTE: To facilitate delivery we have standardized on container heights. In many cases units can be supplied in shorter containers if required.



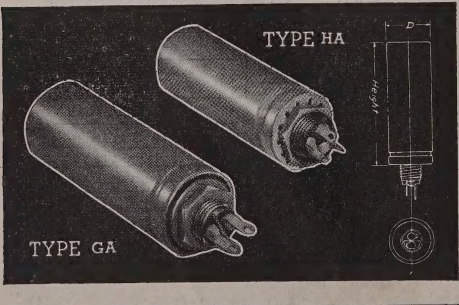
Cat. No.	Cap. Mfd.	A	B	C	D	E	F	*G	H	List Price
600 V.D.C. WORKING										
6SA50	.5	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	$4.55
6SA100	1.0	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	5.85
6SA200	2.0	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	7.10
6SA400	4.0	4⅛	2½	1$\frac{3}{16}$	⅞	1⅛	3		3	9.20
6SA600	6.0	4¾	2½	1$\frac{3}{16}$	⅞	1⅛	3		3	11.30
6SA800	8.0	4	3¾	1¼	⅞	2	4⅜		4⅜	13.35
6SA1000	10.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	15.00
1000 V.D.C. WORKING										
10SA10	.1	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	4.20
10SA25	.25	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	4.55
10SA50	.5	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	5.00
10SA100	1.0	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	6.25
10SA200	2.0	4	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	8.35
10SA400	4.0	4¾	2½	1$\frac{3}{16}$	⅞	1⅛	3		3	10.45
10SA600	6.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	14.05
10SA800	8.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	15.00
10SA1000	10.0	4¾	3¾	1¾	⅞	2	4⅜		4⅜	16.70
1500 V.D.C. WORKING										
15SA50	.5	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	6.25
15SA100	1.0	4	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	7.55
15SA200	2.0	4⅛	2½	1$\frac{3}{16}$	⅞	1⅛	3		3	10.45
15SA400	4.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	13.90
15SA600	6.0	4¾	3¾	1¾	⅞	2	4⅜		4⅜	17.05
2000 V.D.C. WORKING										
20SA10	.1	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	6.65
20SA25	.25	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	¾	2¼		2¼	7.10
20SA50	.5	2⅞	1$\frac{13}{16}$	1$\frac{1}{16}$	⅞	1⅛	3		3	$7.55
20SA100	1.0	4⅛	2½	1$\frac{3}{16}$	⅞	2	4⅜		4⅜	9.20
20SA200	2.0	4	3¾	1¼	⅞	2	4⅜		4⅜	10.85
20SA400	4.0	4¼	3¾	2¼	⅞	2	4⅜	2	4⅜	15.00
20SA600	6.0	4¾	3¾	3$\frac{3}{16}$	⅞	¾	2¼		2¼	19.65
2500 V.D.C. WORKING										
25SA50	.5	4	3¾	1¼	1¼	2	4⅜		4⅜	11.70
25SA100	1.0	3¼	3¾	1¾	1¼	2	4⅜		4⅜	13.35
25SA200	2.0	4¾	3¾	1¾	1¼	2	4⅜		4⅜	21.55
25SA400	4.0	4¼	3¾	4$\frac{9}{16}$	1¼	2	4⅜	3⅜	4	29.90
3000 V.D.C. WORKING										
30SA10	.1	2⅝	2½	1$\frac{3}{16}$	1¼	1⅛	3		3	13.90
30SA25	.25	3⅜	2½	1$\frac{3}{16}$	1¼	1⅛	3		3	15.00
30SA50	.5	4⅛	2½	1$\frac{3}{16}$	1¼	1⅛	3		3	16.70
30SA100	1.0	4¼	3¾	2¼	1¼	2	4⅜		4⅜	20.10
30SA200	2.0	4¾	3¾	3$\frac{3}{16}$	1¼	2	4⅜	2	4⅜	25.10
4000 V.D.C. WORKING										
40SA10	.1	2¾	3¾	2¼	1¼	2	4⅜		4⅜	25.10
40SA25	.25	2¾	3¾	2¼	1¼	2	4⅜		4⅜	26.45
40SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	29.90
40SA100	1.0	5	3¾	2¼	1¼	2	4⅜		4⅜	36.75
5000 V.D.C. WORKING										
50SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	33.45
50SA100	1.0	4¼	3¾	4$\frac{9}{16}$	1¼	2	4⅜	3⅜	4⅜	41.80
6000 V.D.C. WORKING										
60SA50	.5	7	3¾	3$\frac{3}{16}$	2$\frac{5}{16}$	1⅞	4⅜	2	4⅜	51.64
60SA100	1.0	6½	3¾	4$\frac{9}{16}$	2$\frac{5}{16}$	2	4⅜	3⅜	4⅜	83.55

* Where G dimension is given, two spade lugs or mountings holes are supplied on each bracket.

TYPES "GA" and "HA" OIL FILLED

These inverted mounting capacitors fill a definite need where chassis space is the prime factor.

Types "GA" and "HA" are INCCO Oil "A" impregnated and filled.



The case is a one-piece metal extrusion with a "locked-in" molded neck. This construction meets and surpasses the Army and Navy requirements for a submersion-proof capacitor.

Type "GA" is available in the seven standard rating listed below, but can also be supplied in other capacities and/or voltages to manufacturers' specifications.

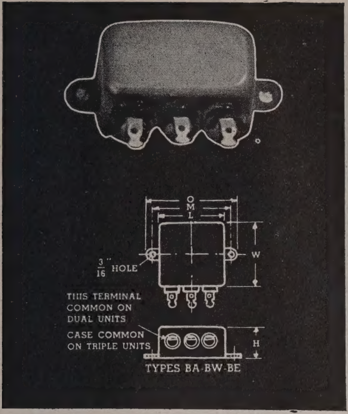
In the standard "GA" and "HA" types the container is insulated. A grounding lug can be supplied for connecting one terminal to the case. Fiber washer for insulating container from chassis, when case is grounded, and insulating cover for insulating the container from adjacent equipment, can also be supplied on special order.

Type "HA" differs from "GA" in container and mounting neck size, and also in the fact that it has three insulated terminals. Primarily, type "HA" is supplied to manufacturers specifications, to meet special requirements of multiple-section and multiple-terminal capacitors, with either insulated or grounded container.

Type	Case Diameter	Size of Mounting Neck
GA — GE — GW	1½"	¾" x 16 thread
HA — HE — HW	1⅜"	⅞" x 16 thread

Cat. No.	Cap. Mfds.	Working Voltage D.C.	Height	List Price
6GA200	2	600	3"	$4.55
6GA300	3	600	4¼"	5.45
6GA400	4	600	4¼"	6.25
10GA100	1	1000	3"	4.20
10GA200	2	1000	4¼"	5.45
15GA50	.5	1500	3"	5.00
15GA100	1	1500	4¼"	5.45

INDUSTRIAL CONDENSER CORPORATION CONDENSER


O
M
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3/16" HOLE
THIS TERMINAL COMMON ON DUAL UNITS
CASE COMMON ON TRIPLE UNITS
H
TYPES BA-BW-BE

DRY ELECTROLYTICS

Type "B" electrolytic capacitor is the first commercially available unit of this type with the reliability of the total submersion type, oil filled capacitors.

Wound with the highest purity aluminum foil and cellulose separators available; impregnated in electrolyte having excellent temperature characteristics, these units will outlive their associated equipment.

Cat. No.	Cap. in Mfds.	Volts	Dimen. in Inches L	W	H	M	List Price
52BE10	10	25	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	$2.70
52BE25	25	25	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2.70
52BE50	50	25	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2.80
05BE10	10	50	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2.75
05BE25	25	50	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2.75
05BE50	50	50	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	3.00

Built to U. S. Signal Corps and Navy Specifications

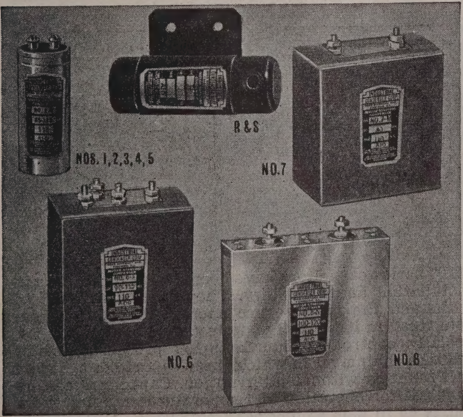
TYPE "BA" OIL FILLED

1. INCCO OIL "A" permits efficient operation of these compact units over the widest range of temperature.
2. The use of the HIGHEST GRADE CONDENSER TISSUE insures greater safety factor and longer life.
3. Specially PROCESSED RIVETED TERMINALS are designed to withstand total submersion in salt water and changes in temperature from 50° below zero Centigrade to 90° above zero Centigrade without loosening or losing their integrity.
4. CONDENSER MOUNTINGS form an integral part of these drawn shell containers insuring permanent and rigid fastenings.
5. All units are NON-INDUCTIVELY WOUND providing efficient operation over the widest range of frequencies.
6. HERMETICALLY SEALED, they are unaffected by time, temperature or humidity.
7. CONSERVATIVELY RATED for safe and continuous uninterrupted operation at 10% above rated voltage for the lifetime of associated equipment.
8. Tested at twice the rated voltage between terminals and twice the rated voltage plus 1000 from each terminal to case.

Cat. No.	Cap. in MFDS.	Dimensions in Inches L	W	H	M	O	List Price
		600 V. D. C. WORKING					
6BA05	.05	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	$2.85
6BA10	.1	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	2.90
6BA25	.25	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.10
6BA50	.5	$1\frac{13}{16}$	1	⅞	2⅛	2½	3.30
6BA100	1.0	2	1¾	⅞	2⅜	2¾	3.75
6BA0505	.05-.05	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.65
6BA11	.1-.1	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.70
6BA22	.25-.25	2	1¾	⅞	2⅜	2¾	3.75
6BA55	.5-.5	2	1¾	⅞	2⅜	2¾	4.30
6BA111	.1-.1-.1	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	4.20
6BA200	2	2	2	1⅛	2⅜	$2\frac{13}{16}$	5.00
		1000 V. D. C. WORKING					
10BA05	.05	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.05
10BA10	.1	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.15
10BA25	.25	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.25
10BA50	.5	2	1¾	⅞	2⅜	2¾	3.50
10BA100	1.0	2	2	1⅛	2⅜	$2\frac{13}{16}$	4.40
10BA0505	.05-.05	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.85
10BA11	.1-.1	$1\frac{13}{16}$	1	$\frac{13}{16}$	2⅛	2½	3.95
10BA22	.25-.25	2	1¾	⅞	2⅜	2¾	4.20

Above units also available in 200 V. D. C., 400 V. D. C. and 1500 V. D. C. on request.

NOTICE—Most units are available with TERMINALS ON TOP, BOTTOM, OR ENDS. When ordering, add "T" for top terminals, "B" for terminals on bottom, or "E" for end terminals, i.e., 6BAT100 for terminals on top. Type "B" also available in WAX FILLED. When ordering, change catalog number A to W, i.e., 6BW100. If terminal position is not designated, side terminals are furnished. STANDARD CAPACITY tolerance of plus 20 per cent minus 10 per cent furnished on oil filled and wax filled units unless otherwise specified when ordering. Can be furnished in plus or minus 1 per cent capacity tolerance on special request.



MOTOR STARTING CONDENSERS

These motor starting condensers are all heavy duty three second start. Built of the finest materials obtainable, these capacitors are engineered to the Nth degree of perfection. They are used by all the leading manufacturers of high quality motors.

The listings shown will take care of 90% of all your replacement requirements.

Number	Size, Inches	Capacity	List Price
MS145	1⅜ Dia. x 3¼	45 - 70	$2.10
MS170	1⅜ Dia. x 3¼	70 - 85	2.30
MS185	1⅜ Dia. x 3¼	85 - 115	2.60
MS1108	1⅜ Dia. x 3¼	108 - 120	2.85
MS1120	1⅜ Dia. x 3¼	120 - 150	2.95
MS1145	1⅜ Dia. x 3¼	145 - 162	3.20
MS1161	1⅜ Dia. x 3¾	161 - 190	3.25
MS1191	1⅜ Dia. x 3¾	191 - 240	4.10
MS285	1½ Dia. x 3¾	85 - 115	2.75
MS2120	1½ Dia. x 3¾	120 - 150	3.00
MS3161	2 Dia. x 4⅛	161 - 190	3.50
MS3191	2 Dia. x 4⅛	191 - 240	3.85
MS3218	2 Dia. x 4⅛	218 - 262	4.05
MS3234	2 Dia. x 4⅛	234 - 286	4.50
MS3245	2 Dia. x 4⅛	245 - 300	4.70
MS3324	2 Dia. x 4⅛	324 - 389	6.00
MS690	3½ x 4 x 2	90 - 115	3.35
MS6124	3½ x 4 x 2	124 - 138	3.80
MS6145	3½ x 4 x 2	145 - 162	4.50
R	Mounting Bracket for 1⅜ x 3¼		.95
S	Mounting Bracket for 2 x 4⅛		1.15

SEND FOR BULLETIN No. 1075 WHICH LISTS OUR OIL FILLED MOTOR RUNNING CAPACITORS

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

CAPACITORS TO 250,000 V.D.C.W.

INCCO OIL "A" IMPREGNATED AND FILLED assures smaller size, low power factor, and widest range of operating temperatures.

ELECTRIC ARC WELDED HEAVY GAUGE HOT TINNED STEEL CASES are non-corrosive—finished in durable lacquer.

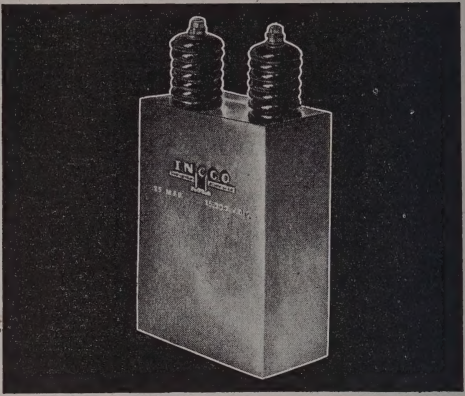
GLAZED WET-PROCESS PORCELAIN INSULATORS—low moisture absorption and high terminal to case flash over.

WOUND WITH HIGHEST GRADE CONDENSER TISSUES—insures a long, uninterrupted life.

CONSERVATIVELY RATED—Safe for continuous operation at 10 per cent overload.

HERMETICALLY SEALED STEEL CASE — unaffected by time, humidity or operating temperatures.

AVAILABLE TO MEET U. S. SIGNAL CORPS AND NAVY SALT WATER SUBMERSION REQUIREMENTS.



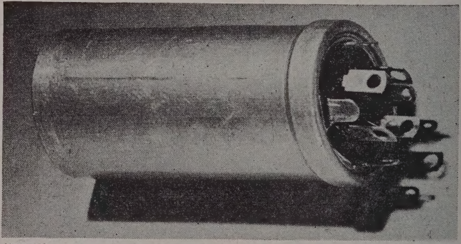
TYPE "WA" — HIGH VOLTAGE OIL FILLED CAPACITORS

Cat. No.	Cap. Mfd.	Case Dimensions in Inches Width	Length	Height	List Price
6,000 V. D. C. WORKING					
60WA200	2.	4	8	11	$140.00
60WA400	4.	4	12	11	172.00
60WA500	5.	4	12	11	195.00
60WA600	6.	4	12	13	218.00
60WA1000	10.	6	12	13	273.00
7,500 V. D. C. WORKING					
75WA50	.5	4	8	11	78.00
75WA100	1.	4	8	11	101.00
75WA200	2.	4	8	11	156.00
75WA400	4.	4	12	13	234.00
75WA600	6.	6	12	13	281.00
10,000 V. D. C. WORKING					
100WA100	1.	4	8	11	203.00
100WA200	2.	4	8	13	257.00
100WA400	4.	6	12	13	312.00
100WA500	5.	6	12	13	343.00
12,500 W. D. C. WORKING					
125WA50	.5	4	8	11	172.00
125WA100	1.	4	12	11	218.00
125WA200	2.	6	12	13	273.00
125WA500	5.	9½	12	15	515.00
15,000 V. D. C. WORKING					
150WA25	.25	4	8	11	$164.00
150WA50	.5	4	12	11	195.00
150WA100	1.	4	12	13	273.00
150WA200	2.	9½	12	15	359.00
150WA300	3.	9½	12	15	491.00
20,000 V. D. C. WORKING					
200WA25	.25	4	8	11	195.00
200WA50	.5	4	12	11	250.00
200WA100	1.	6	12	13	335.00
200WA150	1.5	9½	12	15	452.00
200WA200	2.0	9½	12	15	538.00
25,000 V. D. C. WORKING					
250WA20	.2	4	12	11	203.00
250WA25	.25	4	12	11	273.00
250WA50	.5	6	12	13	296.00
250WA100	1.	9½	12	15	445.00
50,000 V. D. C. WORKING					
500WA25	.25	6	13½	16¾	*
500WA50	.5	7¼	18	20	*
80,000 V. D. C. WORKING					
800WA25	.25	7¼	18	20	*
100,000 V. D. C. WORKING					
1000WA20	.2	7¼	18	20	*

* Prices on application.

Catalog Number	Cap. Mfd.	D.C. Voltage Working	Surge	Dim. in Ins. Diam.	Lg.	List Price
52ET100	100	25	35	1	2	$1.60
15ET30	30	150	225	1	2	1.55
15ET50	50	150	225	1	2	1.65
45ET10	10	450	550	1	2	1.55
45ET15	15	450	550	1	2	1.70
45ET20	20	450	550	1	2½	1.80
45ET30	30	450	550	1	3	1.95
15ET2x20	20-20	150	225	1	2	1.70
15ET2x30	30-30	150	225	1	2	1.85
15ET2x50	50-50	150	225	1	3	2.15
30ET2x15	15-15	300	400	1	2	1.90
35ET3020	30-20	350	450	1	3	2.60
45ET2x10	10-10	450	550	1	2½	1.90
45ET2x20	20-20	450	550	1⅜	2½	2.55
ET100	30-20/20	150/25	225/35	1	2	2.25
ET101	40-30/20	150/25	225/35	1	2½	2.35
15ET3x20	20-20-20	150	225	1	2	2.30
ET102	40-20-20	150	225	1	2½	2.40
15ET3x40	40-40-40	150	225	1	3	2.60
ET103	10-10/25	450/25	550/35	1	3	2.40
45ET3x10	10-10-10	450	550	1	3	2.60

ET SERIES ELECTROLYTIC CAPACITORS

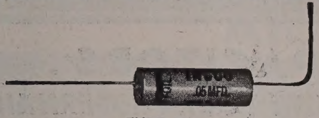


"ET" series capacitors have been designed for ease in installation and reliability. They are constructed to withstand the most severe operating conditions encountered in industrial and electronic equipment. Especially controlled manufacturing processes insure that the equipment in which these capacitors are used will function without interruption. Capacitors can be supplied for operation at temperatures ranging from minus 40 to plus 85 degrees Centigrade. Mounting is effected by inserting the capacitor through the slots in either the chassis or mounting plate, and twisting the mounting prongs 90 degrees.

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

TUBULAR PAPER CONDENSERS


TYPE PT

INDUSTRIAL By-Pass Capacitors are non-inductively wound and designed for maximum efficiency up to the highest frequencies. The units themselves are completely impregnated and sealed with a special non-hygroscopic sealing compound, thus preventing moisture penetration under the most humid conditions.

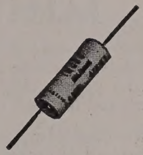
Catalog Number	Capacity Mfd.	Working Volts D.C.	List Price
PT100	.0001	1000	$0.45
PT101	.00025	1000	.45
PT102	.0005	1000	.45
PT103	.001	1000	.45
PT104	.002	1000	.45
PT105	.005	1000	.45
PT106	.006	1000	.45
PT107	.01	1000	.45
PT131	.001	600	.23
PT132	.002	600	.23
PT133	.005	600	.23
PT134	.006	600	.23
PT135	.01	600	.27
PT136	.02	600	.27
PT137	.03	600	.32
PT130	.04	600	.32
PT138	.05	600	.36
PT139	.1	600	.41
PT140	.25	600	.50
PT141	.5	600	.72
PT142	1.0	600	1.13
PT170	.01	400	.23
PT171	.02	400	.23
PT172	.05	400	.27
PT173	.1	400	.32
PT174	.25	400	.41
PT175	.5	400	.54
PT176	1.0	400	1.00
PT200	.02	200	.30
PT201	.05	200	.30
PT202	.1	200	.35
PT203	.25	200	.40
PT204	.5	200	.60
PT205	1.0	200	.90
PT260*	.005	2000	.65
PT261*	.0075	2000	.75
PT262*	.01	2000	.75
PT263*	.02	2000	.85
PT264	.015-.015	1600	.80

*Vibrator Capacitor

MIGHTY MIDGET METAL TUBULAR TYPE "MM"

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
MM406	100	10	15	11/16 x 1 11/16	$1.20
MM407	250	10	15	13/16 x 2 3/16	1.45
MM408	500	10	15	1 1/16 x 2 3/16	2.30
MM409	750	10	15	1 1/16 x 2 11/16	3.00
MM400	5	25	35	11/16 x 1 11/16	1.00
MM401	10	25	35	11/16 x 1 11/16	1.00
MM402	25	25	35	11/16 x 1 11/16	1.00
MT403*†	10-10	25	35	11/16 x 2⅜	1.40
MM410	250	25	35	15/16 x 2 3/16	1.70
MM411	500	25	35	1 1/16 x 2 11/16	2.30
MM404	10	50	75	11/16 x 1 11/16	1.00
MM405	25	50	75	11/16 x 1 11/16	1.05
MM412	100	50	75	13/16 x 2 3/16	1.40
MM413	200	50	75	1 1/16 x 2 3/16	2.00
MM414	300	50	75	1 1/16 x 2 11/16	2.75
MM360	8	150	225	11/16 x 1 11/16	1.05
MM368	12	150	225	11/16 x 1 11/16	1.10
MM361	16	150	225	11/16 x 1 11/16	1.15
MM362	20	150	225	11/16 x 2 3/16	1.20
MM369	30	150	225	13/16 x 2 3/16	1.30
MM363	40	150	225	13/16 x 2 3/16	1.35
MM373	60	150	225	1 1/16 x 2 3/16	1.50
MM374	80	150	225	1 1/16 x 2 3/16	1.60
MM370†	20-20	150	225	15/16 x 2 3/16	1.65
MM375†	30-30	150	225	1 1/16 x 2 3/16	1.80
MM376†	40-40	150	225	1 1/16 x 2 3/16	1.85
MM364	4	475	600	11/16 x 1 11/16	1.15
MM365	8	475	600	13/16 x 2 3/16	1.25
MM371	12	475	600	15/16 x 2 5/16	1.35
MM366	16	475	600	15/16 x 2 3/16	1.40
MM372	20	475	600	1 1/16 x 2 3/16	1.60
MM367†	8-8	475	600	1 1/16 x 2 3/16	1.70

*In cardboard tube with wax filled ends.
†3 leads.


Type MM

An extremely popular type of condenser due to its exceptional high quality and midget size. Hermetically sealed in a small metal case and scientifically vented, to protect against adverse operating conditions of voltage, temperature and humidity. Container is insulated by a high grade tube which is spun over the ends of the can to eliminate shorts when wires are bent close to container. Easily mounted by their rigid wire leads.

"SM" TYPE

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
SM605*	20-20	150	225	15/16 x 2½	$1.40
SM606†	20-20	150	225	1 x 2½	2.15
SM601*	30-30	150	225	15/16 x 3	1.55
SM608*	40-40	150	225	1 x 3	1.75
SM607*	50-30	150	225	1 x 3	1.75
SM609†	30-20-20	150	225	1 x 3	2.05
SM604*	8-8	475	600	1 x 3	2.00
SM610*	40-20	150	225	15/16 x 3	1.55

*SM605, SM601, SM608, SM607, SM610: 3 leads.
†SM606, SM609: 4 leads.

Type SM

Type "SM" units are embedded in a high temperature wax and then sealed in a thoroughly impregnated cardboard tube, affording complete immunity to moisture penetration. New high voltage formation gives complete protection against surges and high peak voltages. The addition of the strap mounting bracket has proved favorable in its use due to its wide application in AC-DC and portable sets in the replacement field. The strap can be moved to the best mounting position and then bolted or soldered. Supplied with color-coded, Underwriters' Approved, rubber covered leads.

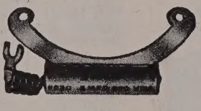
RADIO INTERFERENCE ELIMINATORS

INDUSTRIAL CONDENSER CORP. has made a special study of the suppression of noises caused by fluorescent lighting. No. 7249 capacitor is designed with three leads, two leads to be connected across the 110 volt line and the single lead to be grounded. No. 4219 is housed in a metal container and is self grounding. It is supplied with strap mounting for easy installation. No. 4252 is a flat type unit designed to mount on the ballast support of circline ballasts. The convenient mounting flap grounds the unit when the stem of the lamp is placed through the mounting hole.

Catalog Number	Dimensions in Inches	List Price
7249	21/32 x 1⅜	$1.30
4219	¾ x 2	1.75
4252	2⅛ x ⅝ x 11/32	1.95

AUTO GENERATOR CONDENSER

ALSO AVAILABLE IN HERMETICALLY SEALED SUBMERSION-PROOF CONSTRUCTION


TYPE F

TYPE G

Completely enclosed in a metal container to overcome severe operating conditions of temperature and humidity. Sturdily built to withstand constant vibration.

Cat. No.	Cap. Mfd.	List Price	Cat. No.	Cap. Mfd.	List Price
G325	.25	$0.77	G328	1.0	$1.15
G326	.5	.85	F330	.5	1.06

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

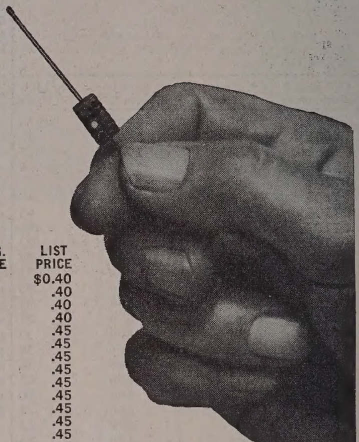
MINIATURE MICA CAPACITORS

SMALLER THAN YOUR FINGERNAIL BUT SKY HIGH IN PERFORMANCE

Known the world over for their reliability under all operating conditions, El-Menco Capacitors are chosen by manufacturers who want successful performance and long life from their products.

El-Menco fixed mica dielectric capacitors are compact, precision made Manufactured in accordance with American military standards to meet Army and Navy JAN-C-5 Specifications. All impregnated and JAN, RMA and RCM color coded. Standard specification limits are shown below.

Moulded in low loss bakelite, tested at double the working voltage. Tests for dielectric strength, insulation resistance, temperature co-efficient and capacitance drift, humidity and life tests according to JAN and RCM STANDARDS. All units are wax dipped for salt water immerison seal.



Actual Size
9/32" x ½" x 3/16".
For Television, Radio and other Electronic Applications.
2 - 420 mmf. cap. at 500v DCA.
2 - 535 mmf. cap. at 300v DCA.
Temperature Co-efficient ±50 parts per million per degree C for most capacity values.
6-dot color coded.

TYPE CM-15

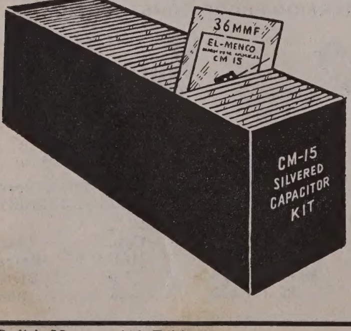
TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE	TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE
CM-15-C-010-M	1	500	$0.50	CM-15-E-750-J	75	500	$0.40
CM-15-C-020-M	2	500	.50	CM-15-E-820-J	82	500	.40
CM-15-C-030-M	3	500	.50	CM-15-E-910-J	91	500	.40
CM-15-C-050-K	5	500	.40	CM-15-E-101-J	100	500	.40
CM-15-C-100-J	10	500	.40	CM-15-E-111-J	110	500	.45
CM-15-C-120-J	12	500	.40	CM-15-E-121-J	120	500	.45
CM-15-C-150-J	15	500	.40	CM-15-E-131-J	130	500	.45
CM-15-C-180-J	18	500	.40	CM-15-E-151-J	150	500	.45
CM-15-C-200-J	20	500	.40	CM-15-E-161-J	160	500	.45
CM-15-C-220-J	22	500	.40	CM-15-E-181-J	180	500	.45
CM-15-E-240-J	24	500	.40	CM-15-E-201-J	200	500	.45
CM-15-E-270-J	27	500	.40	CM-15-E-221-J	220	500	.45
CM-15-E-300-J	30	500	.40	CM-15-E-241-J	240	500	.45
CM-15-E-330-J	33	500	.40	CM-15-E-251-J	250	500	.45
CM-15-E-360-J	36	500	.40	CM-15-E-271-J	270	500	.55
CM-15-E-390-J	39	500	.40	CM-15-E-301-J	300	500	.55
CM-15-E-430-J	43	500	.40	CM-15-E-331-J	330	500	.55
CM-15-E-470-J	47	500	.40	CM-15-E-361-J	360	500	.55
CM-15-E-500-J	50	500	.40	CM-15-E-391-J	390	500	.65
CM-15-E-510-J	51	500	.40	CM-15-E-431-J	430	500	.65
CM-15-E-560-J	56	500	.40	CM-15-E-471-J	470	300	.70
CM-15-E-620-J	62	500	.40	CM-15-E-501-J	500	300	.70
CM-15-E-680-J	68	500	.40	CM-15-E-511-J	510	300	.70

All the above are silver mica only. Temperature Co-efficient: 50 Parts per Million per degree C. (Characteristic "E"). Standard Tolerance: ±5%. Closest Tolerance: ±.5 mmfd.

Special! —HANDY KIT

FOR EXPERIMENTAL WORK

Don't Get Caught Short . . .



THESE MINIATURES FIT INTO THE SMALLEST AREA CAPACITOR SIZE (9/32" x ½" x 3/16")

ALWAYS HAVE THE CORRECT CAPACITY ON HAND

This Handy Kit consists of 46 most commonly used Capacitors . . . five of each capacity packed in moisture-proof transparent cellophane envelope, properly identified for permanent use.

YOUR PRICE ONLY $90⁰⁰

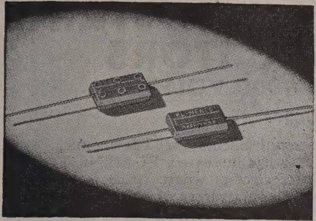
The complete set of capacitors amounts to $106.00 at list prices. You get the entire set during this introductory offer, *for only* $90.00.

COMPARE COST!

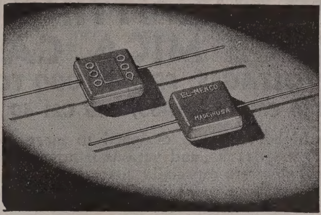
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

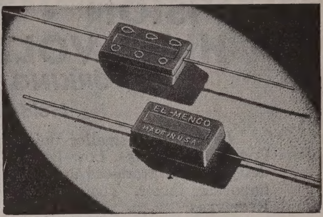
MICA CAPACITORS



CM-19—11/16" x 7/16" x 7/32"
CM-20—25/32" x 7/16" x 7/32"
CM-25— 7/16" x 1-7/64" x 7/32"



CM-30—13/16" x 13/16" x 9/32"
CM-35—13/16" x 13/16" x 11/32"



CM-40—1" x ⅝" x 11/32"

CM-19 & CM-20

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-20-050	5	500	$0.25	$0.40
CM-20-100	10	500	.25	.40
CM-20-120	12	500	.25	.40
CM-20-150	15	500	.25	.40
CM-20-180	18	500	.25	.40
CM-20-200	20	500	.25	.40
CM-20-220	22	500	.25	.40
CM-20-240	24	500	.25	.40
CM-20-270	27	500	.25	.40
CM-20-300	30	500	.25	.40
CM-20-330	33	500	.20	.40
CM-20-360	36	500	.20	.40
CM-20-390	39	500	.20	.40
CM-20-430	43	500	.20	.40
CM-20-470	47	500	.20	.40
CM-20-500	50	500	.20	.40
CM-20-510	51	500	.20	.40
CM-20-560	56	500	.20	.40
CM-20-620	62	500	.20	.40
CM-20-680	68	500	.20	.40
CM-20-750	75	500	.20	.40
CM-20-820	82	500	.20	.40
CM-20-910	91	500	.20	.40
CM-20-101	100	500	.20	.40
CM-20-111	110	500	.20	.45
CM-20-121	120	500	.20	.45
CM-20-131	130	500	.20	.45
CM-20-151	150	500	.20	.45
CM-20-161	160	500	.20	.45
CM-20-181	180	500	.20	.45
CM-20-201	200	500	.20	.45
CM-20-221	220	500	.20	.45
CM-20-241	240	500	.25	.55
CM-20-251	250	500	.25	.55
CM-20-271	270	500	.25	.55
CM-20-301	300	500	.25	.55
CM-20-331	330	500	.25	.55
CM-20-361	360	500	.25	.55
CM-20-391	390	500	.25	.65
CM-20-431	430	500	.25	.65
CM-20-471	470	500	.25	.70
CM-20-501	500	500	.25	.70
CM-20-511	510	500	.25	.70
CM-20-561	560	500	.25	.75
CM-20-621	620	500	.30	.80
CM-20-681	680	500	.30	.85
CM-20-751	750	500	.30	.90
CM-20-821	820	500	.30	.95
CM-20-911	910	500	.35	1.00
CM-20-102	1000	500	.35	1.10
CM-20-112†	1100	500	.45	1.20
CM-20-122†	1200	500	.45	1.30
CM-20-132†	1300	500	.45	1.40
CM-20-152†	1500	500	.50	1.50
CM-20-162†	1600	500	.50	1.60
CM-20-182†	1800	500	.60	1.70
CM-20-202†	2000	500	.65	......

All capacitors above with exception of those indicated by † can be ordered in CM-19 or CM-20 Cases.

CM-25, CM-30, CM-35 & CM-40

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-25-471	470	500	$0.25	$0.70
CM-25-511	510	500	.25	.70
CM-25-561	560	500	.25	.75
CM-25-621	620	500	.30	.80
CM-25-681	680	500	.30	.85
CM-25-751	750	500	.30	.90
CM-25-821	820	500	.30	.95
CM-25-911	910	500	.35	1.00
CM-25-102	1000	500	.35	1.10
CM-25-112	1100	500	.45	1.20
CM-25-122	1200	500	.45	1.30
CM-25-132	1300	500	.45	1.40
CM-25-152	1500	500	.50	1.50
CM-25-162	1600	500	.50	1.60
CM-25-182	1800	500	.60	1.70
CM-25-202	2000	500	.65	1.80
CM-30-621	620	500	.25	.80
CM-30-681	680	500	.25	.85
CM-30-751	750	500	.25	.90
CM-30-821	820	500	.25	.95
CM-30-911	910	500	.25	1.00
CM-30-102	1000	500	.30	1.10
CM-30-112	1100	500	.30	1.10
CM-30-122	1200	500	.30	1.25
CM-30-130	1300	500	.30	1.25
CM-30-152	1500	500	.30	1.35
CM-30-162	1600	500	.40	1.35
CM-30-182	1800	500	.40	1.35
CM-30-202	2000	500	.40	1.50
CM-30-222	2200	500	.40	1.50
CM-30-242	2400	500	.45	1.80
CM-30-252	2500	500	.45	1.80
CM-30-272	2700	500	.45	1.90
CM-30-302	3000	500	.50	2.05
CM-30-332	3300	500	.50	2.05
CM-30-362	3600	500	.50	2.10
CM-30-392	3900	500	.55	2.15
CM-30-432	4300	500	.55	2.15
CM-30-472	4700	500	.55	2.15
CM-30-502	5000	500	.60	2.25
CM-30-512	5100	500	.60	2.25
CM-30-562	5600	500	.60	2.50
CM-35-622*	6200	300	.75	2.75
CM-35-682*	6800	300	.80	3.00
CM-35-752*	7500	300	.90	3.25
CM-35-822*	8200	300	1.00	3.50
CM-35-912*	9100	300	1.00	4.00
CM-35-103*	10000	300	1.20	4.00
CM-40-822*	8200	300	1.00	3.50
CM-40-912*	9100	300	1.00	4.00
CM-40-103*	10000	300	1.20	4.00
CM-40-123	12000	300	1.40	4.50
CM-40-153	15000	300	1.70	5.25

Capacitors marked with * can be supplied in 500 WVDC. Add 10% to above list prices.

ON ALL UNITS: Regular Mica supplied in "A" & "B" Characteristic at List Price. Silvered Mica in CM-19 and CM-20 Cases supplied in "C" & "D" Characteristic at List Price. Silvered Mica in CM-25, CM-30, CM-35 & CM-40 supplied in "C", "D", & "E" Characteristic at List Prices.

STANDARD TOLERANCE

Regular MICA	20%
Silvered MICA	5%

(closest tolerance .5 mmfd.)

PRICES OF OTHER AVAILABLE TOLERANCES

REGULAR MICA CAPACITORS

For 20%	(Standard) Use List Price
For 10%	add 10% to List Price
For 5%	add 20% to List Price

SILVER MICA CAPACITORS

For 5%	(Standard) Use List Price
For 3%	add 10% to List Price
For 2%	add 15% to List Price
For 1%	add 25% to List Price

NOTE: For any RMA size not shown in above listings, figure price to the nearest capacity.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TELEVISION • TRANSMITTING • INDUSTRIAL HIGH VOLTAGE MICA CAPACITORS

DC WORKING VOLTAGES: FROM 1000 TO 3000 VOLTS

Molded in CM-20, CM-35, and CM-40 Cases

Demand for smaller units in higher voltages designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS, and various INDUSTRIAL USES has increased. EL-MENCO designed and produced units listed below are especially adaptable to compact circuits where space is an important factor. Their acceptance has been overwhelming by the various manufacturers of TELEVISION RECEIVERS.

In many cases, these units will do the work of capacitors molded in CM-45, CM-50, and CM-55 cases without breaking down. NO SPECIAL MOUNTINGS ARE NECESSARY; just wire right into the circuit.

The capacitors are molded in low-loss bakelite and tested at double the branded voltage. They are tested for dielectric strength, insulation resistance, temperature coefficient, capacitance drift, susceptibility to humidity, and length of life, according to RCM Standards. All units are wax-dipped for protection against salt water immersion.

VCM-20

TYPE DESIGNATION	CAP. MMF.	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-20-B-050	5				
VCM-20-B-100	10				
VCM-20-B-120	12				
VCM-20-B-150	15	$0.30			
VCM-20-B-180	18	.30			
VCM-20-B-200	20	.30			
VCM-20-B-220	22	.30			
VCM-20-B-240	24	.30			
VCM-20-B-270	27	.30			
VCM-20-B-300	30	.35			
VCM-20-B-330	33	.35			
VCM-20-B-360	36	.35			
VCM-20-B-390	39	.35			
VCM-20-B-430	43	.35			
VCM-20-B-470	47	.35	$0.30		
VCM-20-B-500	50	.35	.35		
VCM-20-B-510	51	.35	.35		
VCM-20-B-560	56	.35	.35		
VCM-20-B-620	62	.35	.35		
VCM-20-B-680	68	.40	.35		
VCM-20-B-750	75	.45	.35	$0.30	
VCM-20-B-820	82	.45	.35	.30	
VCM-20-B-910	91	.45	.35	.35	
VCM-20-B-101	100	.45	.35	.35	
VCM-20-B-111	110	.50	.40	.35	
VCM-20-B-121	120	.50	.40	.35	$0.30
VCM-20-B-131	130	.50	.40	.35	.30
VCM-20-B-151	150	.55	.40	.35	.35
VCM-20-B-161	160	.60	.45	.35	.35
VCM-20-B-181	180	.60	.45	.35	.35
VCM-20-B-201	200	.65	.50	.40	.35
VCM-20-B-221	220	.70	.50	.40	.35
VCM-20-B-241	240	.70	.55	.40	.35
VCM-20-B-251	250		.55	.45	.40
VCM-20-B-271	270		.55	.45	.40
VCM-20-B-301	300		.60	.50	.40
VCM-20-B-331	330		.65	.50	.40
VCM-20-B-361	360		.65	.50	.40
VCM-20-B-391	390		.70	.55	.40
VCM-20-B-431	430			.55	.45
VCM-20-B-471	470			.60	.45
VCM-20-B-501	500			.60	.45
VCM-20-B-511	510			.60	.45
VCM-20-B-561	560			.65	.50
VCM-20-B-621	620			.70	.50
VCM-20-B-681	680				.55
VCM-20-B-721	750				.55
VCM-20-B-821	820				.60
VCM-20-B-911	910				.65
VCM-20-B-102	1000				.70

VCM-35 & VCM-40

TYPE DESIGNATION	CAP. MMF.	6000 VDC TEST 3000 VDC WKG. LIST PRICE	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-40-B-121	120	$0.50				
VCM-40-B-151	150	.55				
VCM-40-B-161	160	.60				
VCM-40-B-181	180	.60				
VCM-40-B-221	200	.65				
VCM-40-B-241	240	.70				
VCM-40-B-251	250	.70	$0.55			
VCM-40-B-271	270	.70	.55			
VCM-40-B-301	300	.75	.60			
VCM-40-B-331	330	.80	.60			
VCM-40-B-361	360	.85	.65			
VCM-40-B-391	390	.90	.70			
VCM-40-B-431	430	1.00	.70	$0.60		
VCM-40-B-471	470	1.05	.70	.65		
VCM-40-B-501	500	1.10	.75	.65		
VCM-40-B-511	510	1.10	.75	.65		
VCM-40-B-561	560	1.20	.80	.65		
VCM-40-B-621	620	1.25	.85	.70		
VCM-40-B-681	680	1.35	.90	.70	$0.65	
VCM-40-B-821	820	1.55	1.00	.80	.75	
VCM-40-B-911	910		1.10	.85	.80	
VCM-40-B-102	1000		1.20	.95	.80	
VCM-40-B-112	1100		1.20	1.00	.85	$0.55
VCM-40-B-122	1200		1.30	1.05	.95	.60
VCM-40-B-132	1300		1.40	1.10	1.00	.60
VCM-40-B-152	1500		1.60	1.25	1.10	.65
VCM-40-B-162	1600		1.70	1.30	1.10	.70
VCM-40-B-182	1800			1.40	1.25	.70
VCM-40-B-202	2000			1.55	1.35	.75
VCM-40-B-222	2200				1.40	.85
VCM-40-B-242	2400				1.55	.90
VCM-40-B-272	2700					.90
VCM-40-B-302	3000					1.00
VCM-40-B-332	3300					1.05
VCM-40-B-362	3600					1.15
VCM-40-B-392	3900					1.20
VCM-40-B-432	4300					1.30
VCM-40-B-472	4700					1.40
VCM-40-B-502	5000					1.45
VCM-40-B-512	5100					1.45

*All 3000 Working VDC in VCM-40 case only

All of the above units can be obtained, on request, in CM-35 cases, at 10% above list price.

All units supplied in "A" or "B" Characteristic at list price.
Case Size Dimensions (See page P-87 for illustrations):
VCM-20—$\frac{25}{32}''$ x $\frac{7}{16}''$ x $\frac{7}{32}''$ **VCM-35**—$\frac{13}{16}''$ x $\frac{13}{16}''$ x $\frac{11}{32}''$
VCM-40—1″ x ⅝″ x $\frac{11}{32}''$
Standard Tolerance: ±20%.
Prices will be quoted for closer tolerances in "Silvered" mica upon request.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

PAPER TUBULAR CAPACITORS CP TYPE

EL-MENCO CP-6
EL-MENCO CP-5
EL-MENCO CP-4
EL-MENCO CP-3
EL-MENCO CP-2
EL-MENCO CP-1

MINERAL OIL IMPREGNATION
NON-INDUCTIVE WINDING
SYNTHETIC RESIN END SEALS
STEATITE CASE

El-Menco CP type paper tubular capacitors are sealed into Steatite Ceramic Tubes which serve to insulate the capacitor electrically as well as against moisture and heat. The capacitor insert is impregnated with Mineral Oil, thereby assuring long life at 85° C operating conditions. This feature insures successful operation at the high ambient temperatures existing in small, compact enclosures.

The Non-Inductively wound paper and foil units are sealed in the Ceramic Tubes by means of baked Synthetic Resin End Fills which cannot melt at any conceivable operating temperature. The end fills will not dissolve in wax, permitting the capacitors to be potted without damage to the insert. Leads are of tinned copper wire 2¼″ long.

Many of the large Television, Transmitter and High Voltage Amplifier manufacturers have found these capacitors to be of highest quality. Breakdown tests have exceeded the required standards.

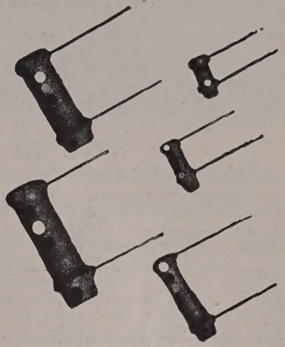
CAPACITY	1600 WVDC		1000 WVDC		600 WVDC		400 WVDC		200 WVDC	
MFD.	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
.001	CP-3-102	$.50	CP-2-102	$.40	CP-1-102	$.25				
.0015	CP-3-152	.50	CP-2-152	.40	CP-1-152	.25				
.002	CP-3-202	.50	CP-2-202	.40	CP-1-202	.25				
.0022	CP-3-222	.50	CP-2-222	.40	CP-1-222	.25				
.0025	CP-3-252	.50	CP-2-252	.40	CP-1-252	.25				
.003	CP-3-302	.50	CP-3-302	.40	CP-1-302	.25				
.0033	CP-3-332	.50	CP-3-332	.40	CP-1-332	.25				
.004	CP-3-402	.50	CP-3-402	.40	CP-1-402	.25				
.0047	CP-4-472	.50	CP-3-472	.45	CP-1-472	.25				
.005	CP-4-502	.50	CP-3-502	.45	CP-1-502	.25				
.006	CP-4-602	.50	CP-3-602	.45	CP-2-602	.25				
.0068	CP-4-682	.60	CP-3-682	.45	CP-2-682	.25				
.0075	CP-5-752	.60	CP-3-752	.45	CP-2-752	.30				
.01	CP-5-103	.60	CP-3-103	.50	CP-2-103	.30				
.015	CP-5-153	.60	CP-4-153	.50	CP-2-153	.30				
.02	CP-6-203	.60	CP-5-203	.50	CP-3-203	.30	CP-2-203	$.25		
.022	CP-6-223	.60	CP-5-223	.50	CP-3-223	.30	CP-3-223	.30		
.025	CP-6-253	.60	CP-5-253	.50	CP-4-253	.35	CP-3-253	.30		
.03	CP-6-303	.60	CP-5-303	.50	CP-4-303	.35	CP-3-303	.30		
.033	CP-6-333	.65	CP-5-333	.60	CP-4-333	.35	CP-3-333	.30		
.04			CP-6-403	.60	CP-4-403	.35	CP-3-403	.30		
.047			CP-6-473	.60	CP-4-473	.35	CP-4-473	.30		
.05			CP-6-503	.60	CP-4-503	.40	CP-4-503	.30		
.056			CP-6-563	.65	CP-5-563	.40	CP-4-563	.30		
.068					CP-6-683	.40	CP-4-683	.35		
.075					CP-6-753	.45	CP-5-753	.35		
.1					CP-6-104	.45	CP-5-104	.35	CP-4-104	$.35
.15							CP-6-154	.40	CP-4-154	.40
.22							CP-6-224	.45	CP-5-224	.40
.25							CP-6-254	.45	CP-5-254	.40
.33									CP-6-334	.50
.47									CP-6-474	.60
.5									CP-6-504	.60

STANDARD TOLERANCE ON ABOVE UNITS IS ± 20%.

DIMENSIONS FOR CP TYPE CAPACITORS

	DIAMETER	LENGTH
CP-1	⅜″	1⅛″
CP-2	⅜″	1⅜″
CP-3	7/16″	1⅜″
CP-4	9/16″	1⅝″
CP-5	¾″	2⅛″
CP-6	13/16″	2⅛″

SILVER CERAMIC HIGH "K" CAPACITORS



Bypass and Coupling Capacitors

Wax Impregnated, Low-Loss Phenolic Coating. Insulation Resistance: 10,000 Megohms Minimum. 90% Relative Humidity Test for 100 Hours. Radial Leads of No. 22 Tinned Copper Wire 1¼″ Minimum. RMA Color Coded. Standard Tolerance ± 20%. 1000 VDC Test, 500 VDC Working. Meets Requirements of RMA Standards.

TYPE DESIGNATION	CAP. MMF.	SIZE LENGTH	SIZE DIAM.	LIST PRICE
CC-1-301	300	9/16″	.250″	.25
CC-1-401	400	9/16″	.250″	.25
CC-1-501	500	9/16″	.250″	.25
CC-2-751	750	¾″	.250″	.25
CC-2-102	1000	¾″	.250″	.25
CC-2-122	1200	¾″	.250″	.25
CC-2-152	1500	¾″	.250″	.25
CC-2-202	2000	¾″	.250″	.25
CC-3-252	2500	11/16″	.350″	.30
CC-3-302	3000	11/16″	.350″	.30
CC-3-402	4000	11/16″	.350″	.35
CC-4-502	5000	1″	.350″	.40
CC-4-682	6800	1″	.350″	.40
CC-5-752	7500	1.20″	.350″	.45
CC-5-103	10000	1.20″	.350″	.50
CC-6-123	12000	1.325″	.350″	.50

FOR CAPACITIES BELOW 300 MMF. WE SUGGEST OUR CM15 TYPE CAPACITORS LISTED ON PAGE P-86.

ARCO ELECTRONICS, INC.

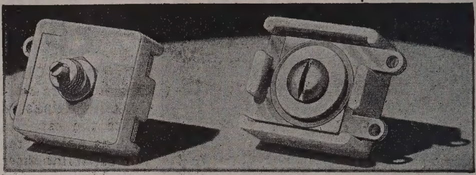
EL-MENCO CAPACITORS

Single and Dual PADDERS

El-Menco Padding Condensers have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.


TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

TYPE 30

350 Volts DC Flash-Test — 175 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302	2 Pl.	130	15	$0.55
303	3 pl.	340	65	.60
304	4 Pl.	550	100	.65
305	5 Pl.	760	190	.75
306	6 Pl.	970	275	.80
307	7 Pl.	1180	350	.85
308	8 Pl.	1390	450	.90
309	9 Pl.	1600	550	1.00
310	10 Pl.	1890	650	1.10
311	11 Pl.	2110	780	1.15
312	12 Pl.	2330	880	1.20
313	13 Pl.	2605	1150	1.30
314	14 Pl.	2830	1300	1.35
315	15 Pl.	3055	1400	1.40

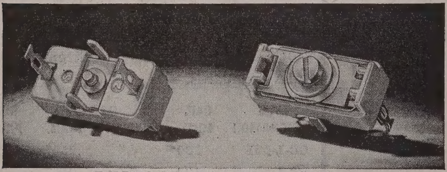
Screw is insulated from top plate my mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.

TYPE 30-M

1000 Volts DC Flash-Test — 500 Working Volts DC

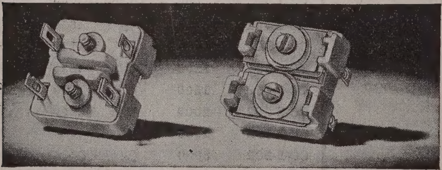
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302-M	2 Pl.	120	15	$0.55
303-M	3 Pl.	320	65	.60
304-M	4 Pl.	500	100	.70
305-M	5 Pl.	690	180	.75
306-M	6 Pl.	880	265	.80
307-M	7 Pl.	1070	340	.90
308-M	8 Pl.	1260	425	.95
309-M	9 Pl.	1415	525	1.00
310-M	10 Pl.	1600	615	1.10
311-M	11 Pl.	1785	730	1.15
312-M	12 Pl.	1970	800	1.25
313-M	13 Pl.	2155	1000	1.30
314-M	14 Pl.	2340	1100	1.35
315-M	15 Pl.	2525	1200	1.45

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.


TYPE 58 PADDER 1.000" x .468"

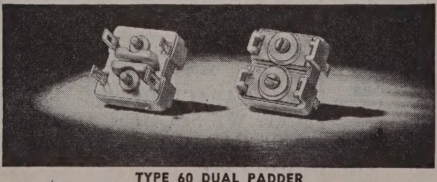
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
582	2 Pl.	80	7.5	$0.40
583	3 Pl.	160	19	.45
584	4 Pl.	240	50	.50

◀TYPE 58 Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.


TYPE 50 DUAL PADDER
(will fit any size shield having dimensions exceeding 1-1/16" x 1-1/16")

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
502	2 Pl.	80	7.5	$0.60
503	3 Pl.	160	19	.70
504	4 Pl.	240	50	.80

◀TYPE 50 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1 1/16" x 1 1/16".


TYPE 60 DUAL PADDER
(will fit any size shield having dimensions exceeding ¾" x ¾")

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
602	2 Pl.	55	7	$0.50
603	3 Pl.	100	15	.60
604	4 Pl.	160	35	.70

▲ TYPE 60 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding ¾" x ¾".

See page P-91 for Mica Trimmer Capacitors

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TYPE 46 TRIMMER

The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

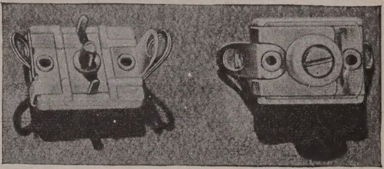
The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

El-Menco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

Trimmers shown here are standard sizes and capacities.

TYPE 46W

NUMBER PART	PLATES NUMBER OF	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
460	1¼ Pl.	15	1.5	$0.30
461	1¾ Pl.	30	2.7	.30
462	2 Pl.	80	5	.35
463	3 Pl.	180	9	.40
464	4 Pl.	280	25	.45
465	5 Pl.	380	50	.50
466	6 Pl.	480	80	.55
467	7 Pl.	580	110	.60
468	8 Pl.	680	140	.65
469	9 Pl.	780	170	.70



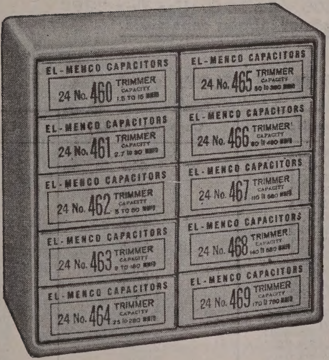
TYPE 46 TRIMMER ¾" x ⅝"

***Metal Mounting Brackets* for these trimmers can be supplied from stock**

	LIST PRICE
Bracket for mounting 2 Trimmers	$0.10
Bracket for mounting 3 Trimmers	.12
Bracket for mounting 4 Trimmers	.14
Bracket for mounting 5 Trimmers	.16
Bracket for mounting 6 Trimmers	.18

Type 46 Trimmer and Type 30 Padder Kits

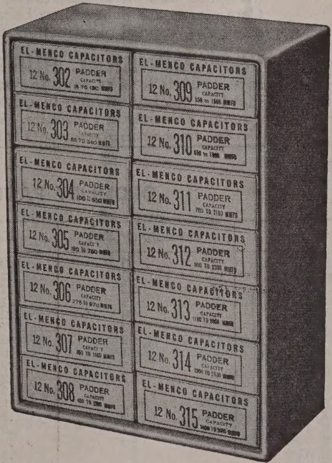
A complete stock of trimmers and padders is provided in these compact, easily handled, and readily accessible kits. Always have a full line of El-Menco trimmers and padders available for immediate use.


EL-MENCO CAPACITORS
24 No. 460 TRIMMER
24 No. 461 TRIMMER
24 No. 462 TRIMMER
24 No. 463 TRIMMER
24 No. 464 TRIMMER
24 No. 465 TRIMMER
24 No. 466 TRIMMER
24 No. 467 TRIMMER
24 No. 468 TRIMMER
24 No. 469 TRIMMER

TYPE 46 TRIMMER KIT

Provides a capacity range from 1½ to 780 mmfd.
Twenty-four units of each size available in type 46 trimmers (see page 7).
The total list price for all units included in the kit is $115.20.
Yet you may have this complete kit for only

Your Price Only $90.00*


EL-MENCO CAPACITORS
12 No. 302 PADDER
12 No. 303 PADDER
12 No. 304 PADDER
12 No. 305 PADDER
12 No. 306 PADDER
12 No. 307 PADDER
12 No. 308 PADDER
12 No. 309 PADDER
12 No. 310 PADDER
12 No. 311 PADDER
12 No. 312 PADDER
12 No. 313 PADDER
12 No. 314 PADDER
12 No. 315 PADDER

TYPE 30 PADDER KIT

Provides a capacity range from 15 to 3055 mmfd.
(30M:15 to 2525 mmfd.)
Twelve units of each size available in type 30 or type 30M (see page 6).
The total list price for all units included in the kit is $163.20.
Yet you may have this complete kit for only

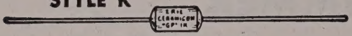
Your Price Only $125.00*

*Net

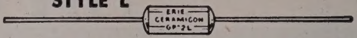
ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE CERAMICONS®

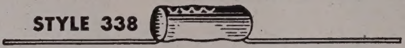
STYLE K



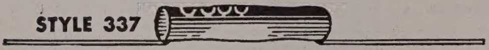
STYLE L



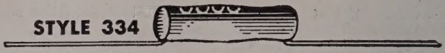
STYLE 338



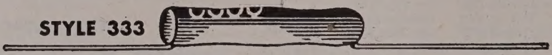
STYLE 337



STYLE 334



STYLE 333



DIMENSION SPECIFICATION CHART

Style	Length	Diameter	Leads	Insulation
K	.562″	.250″	Axial 1¼″ Min.	Molded
L	.812″	.250″	Axial 1¼″ Min.	Molded
338	.550″	.312″	Radial 1¼″ Min.	Dipped

Style	Length	Diameter	Leads	Insulation
337	.937″	.312″	Radial 1¼″ Min.	Dipped
334	1.213″	.415″	Radial 1¼″ Min.	Dipped
333	1.250″	.315″	Radial 1¼″ Min.	Dipped

ERIE CERAMICONS* are small fixed capacitors consisting essentially of a ceramic dielectric with silver electrodes which are fired on at a very high temperature. Erie Ceramicons are outstanding because of their excellent high frequency characteristics, small size, rugged construction and availability in a wide range of capacity values.

"GP" GENERAL PURPOSE CERAMICONS are ideally suited for such applications as coupling and by-passing, in circuits where temperature coefficient is not important—in other words for all receiver applications *except* in frequency determining circuits. Working voltage—500 volts D. C. Use Erie "GP" Ceramicons as replacements for molded mica and paper tubular capacitors.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
GP1K-050	5	.25
GP1K-100	10	.25
GP1K-120	12	.25
GP1K-150	15	.25
GP1K-180	18	.25
GP1K-200	20	.25
GP1K-220	22	.25
GP1K-240	24	.25
GP1K-250	25	.25
GP1K-270	27	.25
GP1K-300	30	.25
GP1K-330	33	.25
GP1K-390	39	.25
GP1K-470	47	.25
GP1K-500	50	.25
GP1K-510	51	.25
GP1K-560	56	.25
GP1K-680	68	.25
GP1K-750	75	.25
GP1K-820	82	.25
GP1K-101	100	.25
GP2K-121	120	.25
GP2K-151	150	.25
GP2K-181	180	.25
GP2K-201	200	.25
GP2K-221	220	.25
GP2K-241	240	.25
GP2K-251	250	.25
GP2K-271	270	.25

Part No.	Capacity (MMF)	List
GP2K-301	300	.25
GP2K-331	330	.25
GP2K-361	360	.25
GP2K-391	390	.25
GP2K-471	470	.25
GP2K-501	500	.25
GP2K-511	510	.25
GP2K-561	560	.25
GP2K-681	680	.25
GP2L-751	750	.25
GP2L-102	1,000	.25
GP2L-122	1,200	.25
GP2L-152	1,500	.25
GP2-333-182	1,800	.25
GP2-333-202	2,000	.25
GP2-333-222	2,200	.25
GP2-333-252	2,500	.25
GP2-333-272	2,700	.25
GP2-333-302	3,000	.25
GP2-333-332	3,300	.25
GP2-333-402	4,000	.25
GP2-333-472	4,700	.25
GP2-333-502	5,000	.25
GP2-333-562	5,600	.25
GP2-333-602	6,000	.25
GP2-333-682	6,800	.25
GP2-333-752	7,500	.25
GP2-333-103	10,000	.25

Note: All GP values supplied in standard ± 20% tolerance.

ERIE RESISTOR CORPORATION—ERIE, PA.

NPO Zero Temperature Coefficient CERAMICONS®

NPO zero temperature coefficient Ceramicons are highly recommended for frequency determining applications where no capacity change with change in temperature is desired. "Q" for NPO Ceramicons above 30 mmf is 1000 or higher. Below 30 mmf "Q" decreases slightly as capacity decreases. Working voltage—500 volts D.C. Can be used as replacements for silver mica condensers.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
NPOK-1R5	1.5	.50
NPOK-030	3	.50
NPOK-3R3	3.3	.50
NPOK-4R7	4.7	.50
NPOK-050	5	.50
NPOK-6R8	6.8	.50
NPOK-8R2	8.2	.50
NPOK-100	10	.50

Part No.	Capacity (MMF)	List
NPOK-200	20	.50
NPOL-250	25	.50
NPOL-330	33	.50
NPO-333-500	50	.55
NPO-333-750	75	.55
NPO-333-101	100	.55
NPO-334-151	150	.60
NPO-334-1750	175	.60

Note: Standard tolerance supplied is ± 10%

Negative Temperature Coefficient CERAMICONS

N080 and N750 units provide temperature compensation to eliminate drift. Positive and Negative Temperature Coefficient Ceramicons P100 through N1400 are available on special order through your distributor.

ORDER BY PART NUMBER FROM TABLE BELOW

ERIE TUBULAR TYPE N750 CERAMICONS

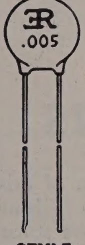
Part No.	Capacity (MMF)	List
N750K-050	5	.50
N750K-100	10	.50
N750K-470	47	.50
N750L-750	75	.50
N750L-101	100	.50

ERIE TUBULAR TYPE N080 CERAMICONS

Part No.	Capacity (MMF)	List
N080-331-100	10	.60
N080-331-220	22	.60
N080-338-330	33	.60
N080-338-470	47	.60
N080-338-620	62	.60

Note: Standard tolerance supplied is ± 10%

ERIE DISC and PLATE CERAMICONS

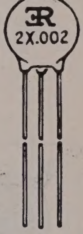


STYLE 811

ORDER BY PART NUMBER FROM TABLE BELOW

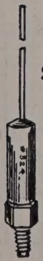
Erie Disc and Plate Ceramicons consist of a flat Hi-K* ceramic dielectric with silver fired onto the dielectric. Lead wires are firmly soldered to the silver electrodes, and the unit is given a protective coating of phenolic. Very efficient at high frequencies.

Part No.	Size	Value (MFD)	List
801-.001	3/8" Max. Dia.	.001 (Min.)	.25
801-.0015	3/8" " "	.0015 "	.25
801-.002	3/8" " "	.002 "	.25
811-.005	19/32" " "	.005 "	.25
811-.01	19/32" " "	.01 "	.25
821-.01	3/4" " "	.01 "	.30
812-.001	19/32" " "	.001 " Dual	.40
812-.0015	19/32" " "	.0015 " Dual	.40
812-.002	19/32" " "	.002 " Dual	.40
822-.003	3/4" " "	.003 " Dual	.45
822-.004	3/4" " "	.004 " Dual	.45



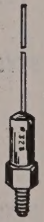
STYLE 812

ERIE STAND-OFF CERAMICONS



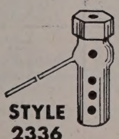
STYLE 324

Stand-off Ceramicons, an original Erie development, are now widely used for the dual purposes of by-passing R. F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for V.H.F. and U.H.F. applications, due to their low-inductance electrical paths and resultant high resonant frequency.



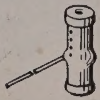
STYLE 323

ORDER BY PART NUMBER FROM TABLE BELOW



STYLE 2336

Part No.	Capacity (MMF)	List
323-500	50	.60
323-101	100	.60
323-501	500	.60
324-102	1,000	.60
324-152	1,500	.60
2322-252	2,500	1.25
2336-252	2,500	1.15
2336-502	5,000	1.15



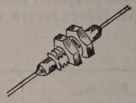
STYLE 2322

Note: Standard tolerance supplied is ± 20%

ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE FEED-THRU CERAMICONS®

This very practical feed-thru capacitor is highly recommended for by-passing R.F. to ground in feed-thru applications. Wire terminals are sufficiently rugged to serve as tie points for several connections, for supporting other circuit elements, and long enough for point to point wiring.



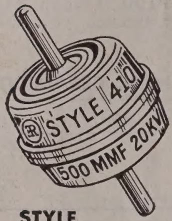
STYLE 362

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
362-152	1500	1.00

Note: Standard tolerance supplied is ± 20%

ERIE HIGH VOLTAGE CERAMICONS



STYLE 410

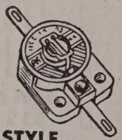
20 KV Ceramicon specially designed for television receiver power supply filter applications. Ceramic dielectric has built-in corona shields for extra protection against internal flashover. Capacity—500 mmf minimum. 1⅛″ diameter x ⅞″ long. Approved by leading television manufacturers for original equipment.

ORDER BY PART NUMBER FROM TABLE BELOW

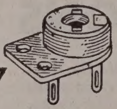
Part No.	Capacity (MMF)	List
410-501	500	2.25

Note: Standard tolerance supplied is ± 20%

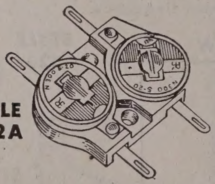
ERIE CERAMICON TRIMMERS



STYLE TS2A



STYLE 557



STYLE TD2A

Erie Ceramicon trimmers give maximum stability and ease of adjustment. Capacity change is constant per degree of rotation. Silver electrodes are fired onto ceramic rotor and base. 360 degree rotor completely covers entire track on stator thus preventing dust and other foreign matter from affecting characteristics of the unit.

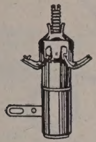
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity Range (MMF)	Temperature Coefficient	List
TS2A-1.5	1.5-7	NPO	1.50
TS2A-3	3-12	NPO	1.50
TS2A-4	4-30	N500	1.50
TS2A-7	7-45	N500	1.50
TD2A-1.5	1.5-7	NPO	2.50
TD2A-3	3-12	NPO	2.50
TD2A-4	4-30	N500	2.50
TD2A-7	7-45	N500	2.50
557-3	3-12	NPO	1.25
557-5	5-25	NPO	1.25
557-8	8-50	N750	1.25

"Hi-K", "Ceramicon" and "GP" are registered trade names and refer to ceramic dielectric condensers manufactured by Erie Resistor Corp

ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE TUBULAR TRIMMERS



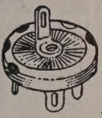
STYLE 532

Here is a compact, economical tubular trimmer that is ideal for applications calling for a low minimum capacity and a high ratio of maximum to minimum capacity. Has molded plastic dielectric. Can be mounted on panels having a thickness of .040″ to .065″

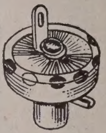
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity Range (MMF)	List
532-08-0R5	0.5-5	.55
532-10	1-8	.55

ERIE BUTTON® SILVER MICA CAPACITORS



STYLE CB



STYLE FA

These are midget silver-mica capacitors, for use where compact size, minimum series inductance, and high leakage resistance are essential. Erie button silver-mica capacitors are unmatched for V.H.F. and U.H.F. work. "Q" at 1 MC is not less than 1000 above 100 mmf; not less than 700 between 50 and 100 mmf; not less than 500 below 50 mmf. Type 370-CB has ring type metal shell with three soldering ears. High potential terminal at either end for feed-thru connection. Type 370-FA is fastened to chassis with 3-48 screw.

ORDER BY PART NUMBER FROM TABLE BELOW

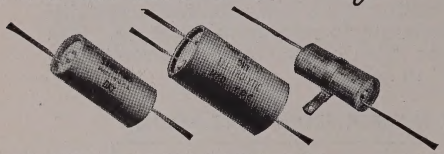
Part No. FA Styles	Part No. CB Styles	Cap. (MMF)	Tol.	List
370-FA-150M	370-CB-150M	15	20%	1.25
370-FA-150K	370-CB-150K	15	10%	1.25
370-FA-150J	370-CB-150J	15	5%	1.85
370-FA-250M	370-CB-250M	25	20%	1.25
370-FA-250K	370-CB-250K	25	10%	1.25
370-FA-250J	370-CB-250J	25	5%	1.85
370-FA-500M	370-CB-500M	50	20%	.90
370-FA-500K	370-CB-500K	50	10%	.90
370-FA-500J	370-CB-500J	50	5%	1.30
370-FA-101M	370-CB-101M	100	20%	.90
370-FA-101K	370-CB-101K	100	10%	.90
370-FA-101J	370-CB-101J	100	5%	1.30
370-FA-151M	370-CB-151M	150	20%	.90
370-FA-151K	370-CB-151K	150	10%	.90
370-FA-151J	370-CB-151J	150	5%	1.30
370-FA-201M	370-CB-201M	200	20%	1.00
370-FA-201K	370-CB-201K	200	10%	1.00
370-FA-201J	370-CB-201J	200	5%	1.45
370-FA-251M	370-CB-251M	250	20%	1.10
370-FA-251K	370-CB-251K	250	10%	1.10
370-FA-251J	370-CB-251J	250	5%	1.65
370-FA-301M	370-CB-301M	300	20%	1.25
370-FA-301K	370-CB-301K	300	10%	1.25
370-FA-301J	370-CB-301J	300	5%	1.85
370-FA-401M	370-CB-401M	400	20%	1.25
370-FA-401K	370-CB-401K	400	10%	1.25
370-FA-401J	370-CB-401J	400	5%	1.85
370-FA-501M	370-CB-501M	500	20%	1.25
370-FA-501K	370-CB-501K	500	10%	1.25
370-FA-501J	370-CB-501J	500	5%	1.85
370-FA-751M	370-CB-751M	750	20%	2.10
370-FA-751K	370-CB-751K	750	10%	2.10
370-FA-751J	370-CB-751J	750	5%	2.90
370-FA-102M	370-CB-102M	1000	20%	2.50
370-FA-102K	370-CB-102K	1000	10%	2.50
370-FA-102J	370-CB-102J	1000	5%	3.50

"Button" is a registered trade name of Erie Resistor Corp.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE MT-MTD-MTH *Chieftain*



SANGAMO Type MT "Chieftain" electrolytics are especially designed for television and other electronic applications where operation at 85°C. temperatures is required. They are hermetically sealed in round aluminum containers which are encased in heavy insulating sleeves on which polarity is clearly indicated. Being small in physical size they are most popular where mounting in limited space is required — They will fit anywhere and can be mounted in almost any position. Double-thick paper spacers assure adequate breakdown characteristics and all sections are tightly held in place within the container. Multiple staking connects the terminal tabs to the electrodes and provides permanent low resistance contact throughout the life of the capacitor. Low voltage units utilize etched cathodes to maintain uniform capacity when they are subjected to combined conditions of heat and high ripple currents.

Single Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MT-0210	10	25	⅝ x 1 1/16	$1.00	$0.60
MT-0225	25	25	⅝ x 1 1/16	1.00	.60
MT-0250	50	25	⅝ x 1 5/16	1.10	.66
MT-0510	10	50	⅝ x 1 1/16	1.00	.60
MT-0525	25	50	⅝ x 1 5/16	1.05	.63
MT-0550	50	50	¾ x 1 9/16	1.20	.72
MT-1504	4	150	⅝ x 1 1/16	1.00	.60
MT-1508	8	150	⅝ x 1 5/16	1.05	.63
MT-1512	12	150	⅝ x 1 5/16	1.10	.66
MT-1516	16	150	⅝ x 1 9/16	1.15	.69
MT-1520	20	150	⅝ x 1 9/16	1.20	.72
MT-1530	30	150	¾ x 1 9/16	1.30	.78
MT-1540	40	150	¾ x 1 13/16	1.35	.81
MT-1550	50	150	⅞ x 1 13/16	1.40	.84
MT-2508	8	250	⅝ x 1 9/16	1.15	.69
MT-2512	12	250	⅝ x 1 13/16	1.25	.75
MT-2516	16	250	¾ x 1 9/16	1.30	.78
MT-2520	20	250	¾ x 1 13/16	1.35	.81
MT-2540	40	250	⅞ x 2 5/16	1.55	.93
MT-3508	8	350	¾ x 1 9/16	1.20	.72
MT-3512	12	350	¾ x 1 13/16	1.30	.78
MT-3516	16	350	⅞ x 1 13/16	1.40	.84
MT-4504	4	450	⅝ x 1 5/16	1.15	.69
MT-4508	8	450	¾ x 1 9/16	1.25	.75
MT-4510	10	450	¾ x 1 9/16	1.30	.78
MT-4512	12	450	⅞ x 1 9/16	1.35	.81
MT-4516	16	450	⅞ x 1 13/16	1.40	.84
MT-4520	20	450	1 x 1 13/16	1.55	.93
MT-4530	30	450	1 x 2 5/16	1.70	1.02
MT-4540	40	450	1 x 2 ⅞	1.80	1.08

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTD-0210	10-10	25	⅞ x 1 1/16	$1.40	$0.84
MTD-0220	20-20	25	⅞ x 1 1/16	1.40	.84
MTD-1520	20-20	150	¾ x 1 9/16	1.65	.99
MTD-1530	30-30	150	⅞ x 1 9/16	1.80	1.08
MTD-301	50-30	150	1 x 1 13/16	1.95	1.17
MTD-302	40-20	150	1 x 1 13/16	1.75	1.05
MTD-1540	40-40	150	1 x 1 13/16	1.85	1.11
MTD-1550	50-50	150	1 x 2 5/16	2.10	1.26
MTD-2520	20-20	250	1 x 1 13/16	1.85	1.11
MTD-3520	20-20	350	1 x 2 ⅞	2.25	1.35
MTD-4508	8- 8	450	⅞ x 1 13/16	1.70	1.02
MTD-4510	10-10	450	1 x 1 13/16	1.85	1.11
MTD-4520	20-20	450	1 x 2 ⅞	2.50	1.50

NOTE: All Dual units furnished with metal mounting strap. Straps for other sizes are available at extra cost.

NOTE: Packaging: 10, 25, or 50 capacitors per display carton.

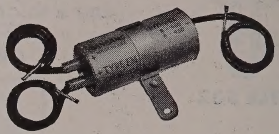
NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tubes.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTH-0610	100	6	⅝ x 1 1/16	$1.20	$0.72
MTH-0625	250	6	⅝ x 1 9/16	1.35	.81
MTH-0650	500	6	¾ x 2 5/16	1.55	.93
MTH-06100	1000	6	1 x 1 13/16	1.90	1.14
MTH-06150	1500	6	1 x 2 5/16	2.10	1.26
MTH-1210	100	12	⅝ x 1 9/16	1.20	.72
MTH-1225	250	12	¾ x 1 13/16	1.45	.87
MTH-1250	500	12	⅞ x 2 5/16	1.70	1.02
MTH-1510	100	15	⅝ x 1 9/16	1.25	.75
MTH-1525	250	15	¾ x 1 13/16	1.55	.93
MTH-1550	500	15	⅞ x 2 5/16	1.75	1.05
MTH-2510	100	25	¾ x 1 9/16	1.35	.81
MTH-2525	250	25	⅞ x 1 13/16	1.70	1.02
MTH-2550	500	25	1 x 2 5/16	2.30	1.38
MTH-5010	100	50	⅞ x 1 9/16	1.40	.84

NOTE: Dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.

NOTE: Packaging 10, 25, or 50 capacitors per display carton.

TYPE FM *Arrowhead*



The SANGAMO Type FM "Arrowhead" electrolytic capacitors are similar in design to the Type MT "Chieftain" in every respect except leads. The Type FM is equipped with flexible, insulated wire leads and stud terminals eliminating the problem of crossed wires and the necessity for the use of insulating sleeves. They are much smaller than the wax-end filled types with insulated leads. The capacitors themselves are housed in round aluminum containers which are encased in heavy insulating sleeves, and they are especially designed for the rugged television requirements where 85°C. operating temperatures are encountered.

Single Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FM-0210	10	25	⅝ x 1 1/16	$1.10	$0.66
FM-0225	25	25	⅝ x 1 1/16	1.10	.66
FM-0250	50	25	⅝ x 1 5/16	1.20	.72
FM-0510	10	50	⅝ x 1 1/16	1.10	.66
FM-0525	25	50	⅝ x:1 5/16	1.15	.69
FM-0550	50	50	¾ x 1 9/16	1.30	.78
FM-1504	4	150	⅝ x 1 1/16	1.10	.66
FM-1508	8	150	⅝ x 1 5/16	1.15	.69
FM-1512	12	150	⅝ x 1 5/16	1.20	.72
FM-1516	12	150	⅝ x 1 9/16	1.25	.75
FM-1520	20	150	⅝ x 1 9/16	1.30	.78
FM-1530	30	150	¾ x 1 9/16	1.40	.84
FM-1540	40	150	¾ x 1 13/16	1.45	.87
FM-1550	50	150	⅞ x 1 13/16	1.50	.90
FM-2508	8	250	⅝ x 1 9/16	1.25	.75
FM-2512	12	250	⅝ x 1 13/16	1.35	.81
FM-2516	16	250	¾ x 1 9/16	1.40	.84
FM-2520	20	250	¾ x 1 13/16	1.45	.87
FM-2540	40	250	⅞ x 2 5/16	1.65	.99
FM-3508	8	350	¾ x 1 9/16	1.30	.78
FM-3512	12	350	¾ x 1 13/16	1.40	.84
FM-3516	4	450	⅞ x 1 13/16	1.50	.90
FM-4504	4	450	⅝ x 1 5/16	1.25	.75
FM-4508	8	450	¾ x 1 9/16	1.35	.81
FM-4510	10	450	¾ x 1 9/16	1.40	.84
FM-4512	12	450	⅞ x 1 9/16	1.45	.87
FM-4516	16	450	⅞ x 1 13/16	1.50	.90
FM-4520	20	450	1 x:1 13/16	1.65	.99
FM-4530	30	450	1 x 2 5/16	1.80	1.08
FM-4540	40	450	1 x 2 ⅞	1.90	1.14

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMD-0210	10-10	25	⅞ x 1 1/16	$1.50	$0.90
FMD-0510	10-10	50	⅞ x 1 5/16	1.50	.90
FMD-1520	20-20	150	¾ x 1 9/16	1.75	1.05
FMD-305	30-20	150	⅞ x 1 9/16	1.80	1.08
FMD-1530	30-30	150	⅞ x 1 9/16	1.90	1.14
FMD-302	40-20	150	1 x 1 13/16	1.85	1.11
FMD-304	40-30	150	1 x 1 13/16	1.90	1.14
FMD-1540	40-40	150	1 x 1 13/16	1.95	1.17
FMD-301	50-30	150	1 x 1 13/16	2.05	1.23
FMD-1550	50-50	150	1 x 2 1/16	2.20	1.32
FMD-4508	8- 8	450	⅞ x 1 13/16	1.80	1.08
FMD-308	8-16	450	1 x 1 13/16	2.10	1.26
FMD-4520	20-20	450	1 x 2 ⅞	2.60	1.56

Triple Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMT-1520	20-20-20	150	⅞ x 1 9/16	$2.30	$1.38
FMT-1530	30-30-30	150	⅞ x 2 5/16	2.45	1.47
FMT-310	40-20-20	150	⅞ x 2 5/16	2.35	1.41
FMT-312	40-30-20	150	⅞ x 2 5/16	2.45	1.47
FMT-1540	40-40-40	150	1 x 2 5/16	2.55	1.53
FMT-315	50-30-20	150	1 x:2 5/16	2.55	1.53

NOTE: All units are supplied with mounting strap attached.

NOTE: Packaging: 10, 25, or 50 capacitors per display carton.

NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL *Warrior*

SANGAMO
DRY ELECTROLYTIC
MADE IN U.S.A.

The SANGAMO Type PL "Warrior" electrolytic capacitors are specially designed for all television and electronic applications requiring long life and dependable performance at 85°C under conditions of extreme ripple currents and high surge voltages. They are sealed in round aluminum cans and have twist-prong tabs for washer or direct chassis mounting. These terminal tabs are securely clamped and staked to the terminal lugs, providing permanent, low resistance connections. In all cases the aluminum can is negative and the mounting rings provides the negative electrical connection.

The Type PL has been especially engineered for the rigid TV replacement applications found in all of the leading television receivers manufactured in the industry.

Single Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resa'e Net Price
PL-7001	2000	6	1⅜ x 2	$2.55	$1.53
PL-700	3000	10	1⅜ x 3	2.90	1.74
PL-701	1000	15	1 x 3	2.55	1.53
PL-703	2000	15	1⅜ x 3	3.45	2.07
PL-0240	40	25	1 x 2	1.35	.81
PL-02100	100	25	1 x 2	1.60	.96
PL-02500	500	25	1 x 3	2.55	1.53
PL-705	1000	25	1⅜ x 3	3.55	2.13
PL-05150	150	50	1 x 2	1.80	1.08
PL-05500	500	50	1⅜ x 3	2.65	1.59
PL-1530	30	150	1 x 2	1.55	.93
PL-1550	50	150	1 x 2	1.65	.99
PL-1580	80	150	1 x 2	1.85	1.11
PL-2520	20	250	1 x 2	1.60	.96
PL-2540	40	250	1 x 2	1.80	1.08
PL-2560	60	250	1 x 2½	2.05	1.23
PL-3050	50	300	1 x 2½	2.05	1.23
PL-30125	125	300	1⅜ x 3	3.50	2.10
PL-3550	50	350	1 x 3	2.10	1.26
PL-3580	80	350	1⅜ x 2½	2.85	1.71
PL-35125	125	350	1⅜ x 3	3.95	2.37
PL-4080	80	400	1⅜ x 2½	2.95	1.77
PL-4510	10	450	1 x 2	1.55	.93
PL-4515	15	450	1 x 2	1.70	1.02
PL-4520	20	450	1 x 2	1.80	1.08
PL-4530	30	450	1 x 2½	1.95	1.17
PL-4540	40	450	1 x 3	2.05	1.23
PL-4580	80	450	1⅜ x 3	3.05	1.83
PL-45125	125	450	1⅜ x 4	3.85	2.31
PL-4730	30	475	1 x 3	2.00	1.20
PL-4740	40	475	1⅜ x 2	2.50	1.50
PL-4790	90	475	1⅜ x 3½	3.50	2.10
PL-5010	10	500	1 x 2½	1.60	.96
PL-5020	20	500	1 x 3	1.85	1.11

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PLD-706	1000-1000	15	1 x 3½	$4.40	$2.64
PLD-0240	40-40	25	1 x 2	1.60	.96
PLD-0550	50-50	50	1 x 2	1.70	1.02
PLD-1520	20-20	150	1 x 2	1.70	1.02
PLD-707	30-15	150	1 x 2	1.75	1.05
PLD-1530	30-30	150	1 x 2	1.85	1.11
PLD-712	40-20	150	1 x 2	1.85	1.11
PLD-1540	40-40	150	1 x 2½	1.90	1.14
PLD-716	50-30	150	1 x 2½	2.00	1.20
PLD-1550	50-50	150	1 x 2½	2.15	1.29
PLD-2520	20-20	250	1 x 2	1.90	1.14
PLD-2540	40-40	250	1 x 3	2.50	1.50
PLD-2580	80-80	300	1⅜ x 3½	4.05	2.43
PLD-715	120-20	300	1⅜ x 3½	4.00	2.40
PLD-4015	15-15	400	1 x 2½	2.25	1.35
PLD-717	80-10	400	1⅜ x 3	3.40	2.04
PLD-4510	10-10	450	1 x 2	1.90	1.14
PLD-718	15-10	450	1 x 3	2.25	1.35
PLD-4520	20-20	450	1 x 3	2.55	1.53
PLD-4540	40-40	450	1⅜ x 3	3.45	2.07
PLD-719	80-10	450	1⅜ x 3	3.60	2.16
PLD-4740	40-40	475	1⅜ x 3	4.30	2.79
PLD-720	20-20	300-25	1 x 2	1.85	1.11
PLD-721	20-80	450-350	1⅜ x 3½	3.65	2.19
PLD-722	40-10	450-350	1⅜ x 2	2.60	1.56
PLD-725	80-10	450-25	1⅜ x 3	3.40	2.04
PLD-726	80-50	450-50	1⅜ x 3	3.50	2.10
PLD-727	20-100	475-300	1⅜ x 3½	3.95	2.37

Triple Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PLT-0220	20-20-20	25	1 x 2	$1.95	$1.17
PLT-0530	30-30-30	50	1 x 2	2.15	1.29
PLT-730	10-30-30	150	1 x 2	2.35	1.41
PLT-1520	20-20-20	150	1 x 2	2.30	1.38
PLT-738	40-30-20	150	1 x 2	2.50	1.50
PLT-1540	40-40-40	150	1 x 3	2.60	1.56
PLT-739	10-15-15	250	1 x 2	2.45	1.47
PLT-740	40-20-20	250	1 x 3	2.90	1.74
PLT-3010	10-10-10	300	1 x 2	2.40	1.44
PLT-4010	10-10-10	400	1 x 2½	2.40	1.44
PLT-4510	10-10-10	450	1 x 2½	2.60	1.56
PLT-741	15-15-10	450	1 x 3	2.95	1.77
PLT-4520	20-20-20	450	1⅜ x 2½	3.60	2.16
PLT-4710	10-10-10	475	1 x 3	3.00	1.80
PLT-742	30-30-20	475	1⅜ x 3	4.45	2.67
PLT-745	20-250-100	150- 15- 15	1⅜ x 2½	2.90	1.74
PLT-746	100-50-25	150- 50- 25	1 x 3	3.00	1.80
PLT-747	30-20-100	150-150- 6	1 x 2	2.40	1.44
PLT-748	20-20-20	150-150- 25	1 x 2	2.20	1.32
PLT-750	30-20-20	150-150- 25	1 x 2	2.25	1.35
PLT-751	30-30-20	150-150- 25	1 x 2	2.30	1.38
PLT-752	40-30-20	150-150- 25	1 x 2	2.35	1.41
PLT-753	50-30-100	150-150- 25	1 x 2½	2.70	1.62
PLT-754	50-50-20	150-150- 25	1 x 2½	2.65	1.59
PLT-755	70-70-20	200-200- 50	1⅜ x 3	3.40	2.04
PLT-757	15-15-20	250-250- 25	1 x 2	2.35	1.41
PLT-758	30-30-20	250-250- 25	1 x 2½	2.80	1.68
PLT-759	80-80-60	250-250-200	1⅜ x 3½	4.50	2.70
PLT-760	10-20-30	250-250-350	1 x 3	3.00	1.80
PLT-762	20-20-20	300-300- 25	1 x 2½	2.75	1.65
PLT-763	40-15-20	300-300- 25	1 x 2½	2.95	1.77
PLT-764	40-20-10	350-300-200	1⅜ x 2	3.30	1.98
PLT-765	10-10-20	350 350- 25	1 x 2	2.25	1.35
PLT-766	15-15-20	350-350- 25	1 x 2½	2.70	1.62
PLT-767	30-20-20	350-350- 25	1 x 3	3.10	1.86
PLT-769	15-15-40	400-400- 25	1 x 2½	2.80	1.68
PLT-770	20-20-20	400-400- 25	1 x 3	2.85	1.71
PLT-771	30-100-25	450- 25- 25	1⅜ x 2	2.95	1.77
PLT-772	10-10-20	450-350- 25	1 x 2	2.30	1.38
PLT-773	10-10-50	450-350- 25	1 x 3	2.40	1.44
PLT-774	15-20-20	450-350-250	1⅜ x 2	2.95	1.77
PLT-775	10-30-30	450-400-300	1⅜ x 2½	3.35	2.01
PLT-776	10-10-10	450-450- 25	1 x 2½	2.40	1.44
PLT-777	10-10-20	450-450- 25	1 x 2½	2.40	1.44
PLT-778	10-20-20	450-450- 25	1 x 3	2.70	1.62
PLT-779	15-15-20	450-450- 25	1 x 3	2.70	1.62
PLT-780	20-15-20	450-450- 25	1 x 3	2.90	1.74
PLT-782	20-20-20	450-450- 25	1 x 3	3.05	1.83
PLT-783	30-30-20	450-450- 25	1⅜ x 2½	3.55	2.13
PLT-784	40-40-40	450-450-150	1⅜ x 3½	4.15	2.49
PLT-785	40-10-80	450-450-200	1⅜ x 3	3.90	2.34
PLT-786	15-15-10	450-450-300	1 x 3	2.85	1.71
PLT-787	20-20-60	450-450-350	1⅜ x 3½	4.05	2.43
PLT-789	40-10-10	450-450-350	1⅜ x 3	3.30	1.98
PLT-790	20-20-40	475-300- 25	1⅜ x 2	3.10	1.86
PLT-792	40-40-25	475-400- 50	1⅜ x 3	4.30	2.58

Quadruple Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PLQ-4510	10-10-10-10	450	1⅜ x 2	$3.35	$2.01
PLQ-4520	20-20-20-20	450	1⅜ x 3	4.70	2.82
PLQ-800	30-30-15-10	450	1⅜ x 3½	4.70	2.82
PLQ-4710	10-10-10-10	475	1⅜ x 2	3.50	2.10
PLQ-801	40-20-10-10	475	1⅜ x 3	5.10	3.06
PLQ-802	30-30-30-40	150-150-150- 25	1⅜ x 2	3.10	1.86
PLQ-803	40-40-30-20	150-150-150- 25	1⅜ x 2	3.10	1.86
PLQ-805	50-50-50-20	150-150-150- 25	1⅜ x 2	3.55	2.13
PLQ-806	10-10-10-20	300-300-300- 25	1⅜ z 2	2.95	1.77
PLQ-808	60-40-20-50	300-300-300- 25	1⅜ x 3½	4.70	2.82
PLQ-810	40-40-20-10	350-300-300- 25	1⅜ z 3	4.50	2.70
PLQ-811	10-10-10-10	350-350-300-300	1⅜ x 2	3.10	1.86
PLQ-812	40-10-80-10	400-350-250-250	1⅜ x 3½	4.65	2.79
PLQ-814	20-20-20-20	400-400-400- 25	1⅜ x 2½	3.85	2.31
PLQ-815	20-15-15-20	450-350-350- 25	1⅜ x 2	3.80	2.28
PLQ-816	20-15-20-20	450-450- 25- 25	1⅜ x 2	3.45	2.07
PLQ-818	20-20-30-30	450-450-300-300	1⅜ x 3	4.50	2.70
PLQ-819	40-10-35-10	450-450-350-350	1⅜ x 3½	4.60	2.76
PLQ-820	10-10-10-20	450-450-450- 25	1⅜ x 2	3.15	1.89
PLQ-821	40-30-10-20	450-450-450- 25	1⅜ x 3	4.50	2.70
PLQ-823	10-10-10-10	450-450-450-150	1⅜ x 2	3.15	1.89
PLQ-824	60-10-10-20	450-450-450-150	1⅜ x 3	4.55	2.73
PLQ-825	40-20-10-10	475-475-475- 25	1⅜ x 3	4.85	2.91

NOTE: Maximum operating temperature of 475 volt units is 65°C.

NOTE: Each unit is supplied with a bakelite and a metal mounting plate. Additional hardware available at extra cost.

NOTE: Packaging: Individual display carton.

CARDBOARD INSULATING TUBES

Catalog Number	Can Size Dia. Len.	List Price	Resale Net Price
KCT-1	1 x 2	$0.06	$0.03
KCT-2	1 x 2½	.06	.03
KCT-3	1 x 3	.06	.03
KCT-4	1 x 4	.06	.03
KCT-5	1⅜ x 2	.06	.03
KCT-6	1⅜ x 2½	.06	.03
KCT-7	1⅜ x 3	.06	.03
KCT-8	1⅜ x 3½	.06	.03
KCT-9	1⅜ x 4	.06	.03

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE CS *Tomahawk*

SANGAMO
MADE IN U.S.A.
MFD-VDC
20-150
20-150
CAT. NO. CSD

The SANGAMO Type CS "Tomahawk" electrolytic capacitors are contained in wax-filled cardboard tubes with insulated leads approximately 8 inches in length extending from both ends of the unit. Capacity, voltage and polarity of each section is clearly indicated by color of the lead wires; coding information necessary to identify the individual sections is clearly stamped on the tube. Each unit is supplied with a mounting strap to facilitate mounting to the chassis.

Dual Common Negaitve Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSD-0210	10-10	25	⅝ x 2⅜	$1.40	$0.84
CSD-0510	10-10	50	⅝ x 2⅜	1.40	.84
CSD-1508	8- 8	150	⅝ x 2⅜	1.50	.90
CSD-1516	16-16	150	¾ x 2½	1.80	1.08
CSD-1520	20-20	150	¾ x 2½	1.65	.99
CSD-500	30-20	150	⅞ x 2½	1.70	1.02
CSD-1530	30-30	150	⅞ x 2½	1.80	1.08
CSD-505	40-20	150	1 x 2½	1.75	1.05
CSD-506	40-30	150	1 x 2½	1.80	1.08
CSD-1540	40-40	150	1 x 2½	1.85	1.11
CSD-512	50-30	150	1 x 2½	1.95	1.17
CSD-1550	50-50	150	1 x 3	2.10	1.26
CSD-2516	16-16	250	1 x 2½	1.75	1.05
CSS-4508	8- 8	450	1 x 3⅛	1.70	1.02
CSD-522	8-16	450	1 x 2⅞	2.00	1.20
CSD-4520	20-20	450	1 x 3⅝	2.50	1.50

Dual Separate Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSS-1520	20-20	150	1 x 2½	$2.05	$1.23
CSS-4508	8- 8	450	1 x 3⅛	2.15	1.29
CSS-4516	16-16	450	1¼ x 3⅛	2.80	1.68

Triple Common Negative Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CST-1520	20-20-20	150	1 x 2⅞	$2.20	$1.32
CST-523	40-20-20	150	1 x 2⅞	2.25	1.35
CST-524	40-30-20	150	1 x 2⅞	2.35	1.41
CST-1540	40-40-40	150	1 x 3⅛	2.45	1.47
CST-526	20-20-20	150-150-25	1 x 2½	2.05	1.23
CST-527	40-20-20	150-150-25	1 x 2⅞	2.15	1.29
CST-528	40-30-20	150-150-25	1 x 2⅞	2.20	1.32
CST-532	50-30-20	150-150-25	1 x 2⅞	2.35	1.41
CST-533	50-30-100	150-150-25	1 x 3⅛	2.55	1.53
CST-534	80-40-20	150-150-25	1 x 3⅛	2.60	1.56
CST-535	12-12-20	450-450-25	1 x 2⅞	2.30	1.38
CST-537	20-20-20	450-450-25	1¼ x 3⅛	2.90	1.74

NOTE: Packaging: 10, 25, or 50 per display carton.

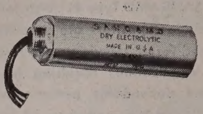
COLOR CODE OF WIRE LEADS FOR TYPES CS, AND SL CAPACITORS

Black...Common negative
Orange...........................Positive, highest voltage or capacity
Red..........................Positive, next highest voltage or capacity
Blue..........................Positive, next highest voltage or capacity
Yellow........................Positive, next highest voltage or capacity
Brown............................Negative, in separate section unit

NOTE: Lead colors are determined by the rated working voltages. Where there are two or more sections of different voltages and the same capacity, the lead color will be determined by the voltage; with the same voltages and unequal capacities the lower capacity takes the next color in the sequence. If there are two sections with equal capacities and voltages the two lead wires will be in the same color.

NOTE: Based upon proposed R.M.A. Color code.

TYPE SL *Mohican*



Designed primarily as replacements for wet electrolytics, the Type SL electrolytic capacitors are assembled in round aluminum cans with threaded necks providing easy mounting to a chassis with the aid of a palnut which is supplied. The Type SL is completely insulated from the container, the negative connection being made to one of the insulated leads extending through the threaded neck of the can.

Single Section

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
SL-2512	12	250	1 x 2½	$1.75	$1.05
SL-2525	25	250	1 x 3½	1.95	1.17
SL-4508	8	450	1⅜ x 2½	2.20	1.32
SL-4512	12	450	1⅜ x 2½	2.40	1.44
SL-4516	16	450	1⅜ x 2½	2.45	1.47
SL-4520	20	450	1⅜ x 2½	2.70	1.62
SL-4530	30	450	1⅜ x 3½	3,00	1.80
SL-4540	40	450	1⅜ x 4¼	3.15	1.89

Common Negative Section

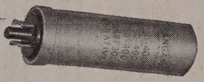
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
SLD-4508	8- 8	450	1⅜ x 3½	$3.00	$1.80
SLD-4516	16-16	450	1⅜ x 3½	3.55	2.13
SLT-4508	8-8-8	450	1⅜ x 3½	5.00	3.00

High Voltage, Series Wound Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
SL-6004	4	600	1⅜ x 3½	$2.95	$1.77
SL-6008	8	600	1⅜ x 4¼	3.15	1.89
SL-6016	16	600	1⅜ x 4⅛	3.75	2.25

NOTE: Packaging: Individual carton.
NOTE: For lead color code chart see adjoining column.

TYPE TS *Cherokee*



Ideally suited for all applications where quick capacitor changes are required, the SANGAMO Type TS units are equipped with a four-pin octal base mounting for use with standard octal base tube sockets. The special design of the bakelite octal base insures that the aluminum container will not contact the mounting surface and the connections to the brass pin terminals are imbedded in this bakelite base. The base pins are nickel-plated to prevent corrosion and resultant poor contact with the socket terminals.

Single Section

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
TS-1520	20	150	1⅜ x 2½	$3.95	$2.37
TS-1540	40	150	1⅜ x 2½	4.10	2.46
TS-4510	10	450	1⅜ x 2½	4.05	2.43
TS-4520	20	450	1⅜ x 2½	4.30	2.58
TS-4540	40	450	1⅜ x 2½	4.55	2.73
TS-4580	80	450	1⅜ x 4¼	5.55	3.33

Dual Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
TSD-1520	20-20	150	1⅜ x 2½	$4.20	$2.52
TSD-1540	40-40	150	1⅜ x 2½	4.40	2.64
TSD-4510	10-10	450	1⅜ x 2½	4.40	2.64
TSD-4520	20-20	450	1⅜ x 2⅛	5.05	3.03

Multiple Sections

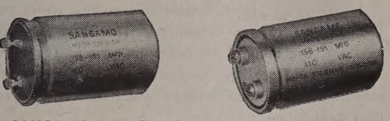
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
TST-4510	10-10-10	450	1⅜ x 2½	$5.10	$3.06
TST-901	20-20-20	450-450-25	1⅜ x 2½	5.55	3.33

NOTE: Not normally carried in stock. Available on special order only.
NOTE: Packaging: Individual carton.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS TYPE EM (MOTOR STARTING)

Trailblazer



The SANGAMO Type EM electrolytic capacitor is a standard universal replacement for all motor starter types presently in use, and its dimensions are comparable in every respect. The Type EML is provided with solder lug terminals, the Type EMS being equipped with screw types; otherwise the two units are identical in construction and operational characteristics. Insulating tubes are supplied with both types.

110 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EML-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EML-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EML-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EML-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EML-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EML-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EML-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EML-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EML-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EML-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EML-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EML-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EML-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EML-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EML-11161	161-180	161	2 x 3⅛	3.25	2.27
EML-11189	189-216	189	2 x 3⅛	3.75	2.62
EML-11216	216-240	216	2 x 3⅛	4.05	2.83
EML-11243	243-270	243	2 x 3⅛	4.70	3.29
EML-11270	270-300	270	2 x 3⅛	4.75	3.32
EML-11324	324-360	324	2 x 4⅛	5.40	3.78
EML-11378	378-420	378	2 x 4⅛	6.00	4.20
EML-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-2220	20-24	20	1⅜ x 3⅛	$2.91	$2.03
EML-2226	26-30	26	1⅜ x 3⅛	3.35	2.34
EML-2232	32-36	32	2 x 4⅛	3.79	2.65
EML-2238	38-42	38	2 x 4⅛	4.30	3.01
EML-2243	43-48	43	2 x 4⅛	4.55	3.18
EML-2253	53-60	53	2 x 4⅛	5.19	3.63

110 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EMS-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EMS-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EMS-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EMS-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EMS-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EMS-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EMS-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EMS-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EMS-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EMS-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EMS-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EMS-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EMS-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EMS-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EMS-11161	161-180	161	2 x 3⅛	3.25	2.27
EMS-11189	189-216	189	2 x 3⅛	3.75	2.62
IMS-11216	216-240	216	2 x 3⅛	4.05	2.83
EMS-11243	243-270	243	2 x 3⅛	4.70	3.29
EMS-11270	270-300	270	2 x 3⅛	4.75	3.32
EMS-11324	324-360	324	2 x 4⅛	5.40	3.78
EMS-11378	378-420	378	2 x 4⅛	6.00	4.20
EMS-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-2220	20-24	20	1⅜ x 3⅛	$2.96	$2.06
EMS-2226	26-30	26	1⅜ x 3⅛	3.40	2.37
EMS-2232	32-36	32	2 x 4⅛	3.84	2.68
EMS-2238	38-42	38	2 x 4⅛	4.35	3.04
EMS-2243	43-48	43	2 x 4⅛	4.60	3.21
EMS-2253	53-60	53	2 x 4⅛	5.24	3.66

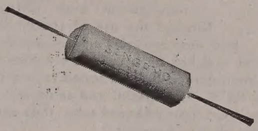
NOTE: For insulating tube dimensions add 1/16" to the can diameter and ⅝" to the can length.

NOTE: Packaging: Individual display carton.

PAPER CAPACITORS

Redskin

PLASTIC MOLDED TUBULAR



The SANGAMO "Redskin" is molded in a hard-thermosetting plastic providing more stable capacity values, excellent seal characteristics, and satisfactory operation up to 85°C. temperature. Small in physical size, and rugged in construction, this pioneer tubular is especially adaptable to television, auto radio, small AC-DC set, and other uses. The leads are firmly imbedded in the hard plastic case and have been especially designed to resist breakage. The "Redskin" assures operating dependability under extremes of heat, humidity and physical stress.

200 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
300201	.1	½ x 1½	.35	.21
3002025	.25	⅝ x 2	.45	.27
300205	.5	¾ x 2	.65	.39
300210	1.0	1 x 2⅛	1.00	.60

400 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
300411	.01	⅜ x 1⅛	.25	.15
300412	.02	7/16 x 1¼	.25	.15
300415	.05	½ x 1½	.30	.18
300401	.1	9/16 x 1⅝	.35	.21
300402	.2	⅝ x 2	.40	.24
3004025	.25	⅝ x 2	.70	.42
300405	.5	⅞ x 2	.85	.51
300410	1.0	1 1/16 x 2½	1.25	.75

600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
300635	.0005	5/16 x 1	$0.25	$0.15
300621	.001	5/16 x 1	.25	.15
300622	.002	5/16 x 1	.25	.15
300623	.003	5/16 x 1	.25	.15
300624	.004	5/16 x 1	.25	.15
300625	.005	5/16 x 1	.25	.15
300626	.006	⅜ x 1⅛	.25	.15
300611	.01	7/16 x 1¼	.30	.18
300612	.02	7/16 x 1¼	.30	.18
300613	.03	½ x 1½	.35	.21
300614	.04	½ x 1½	.35	.21
300615	.05	½ x 1½	.40	.24
300616	.06	9/16 x 1⅝	.40	.24
300601	.1	⅝ x 2	.45	.27
300602	.2	¾ x 2	.70	.42
3006025	.25	¾ x 2	.85	.51
300605	.5	1 x 2⅛	1.15	.69
300610	1.0	1⅜ x 2⅝	1.95	1.17

1600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
301635	.0005	7/16 x 1¼	$0.60	$0.36
301621	.001	7/16 x 1¼	.60	.36
301622	.002	7/16 x 1¼	.65	.39
3016225	.0025	7/16 x 1¼	.65	.39
301623	.003	7/16 x 1¼	.65	.39
301624	.004	7/16 x 1¼	.65	.39
301625	.005	7/16 x 1¼	.65	.39
301626	.006	7/16 x 1¼	.70	.42
301627	.007	½ x 1½	.70	.42
301628	.008	½ x 1½	.75	.45
301611	.01	½ x 1½	.75	.45
1016115	.015	½ x 1½	.75	.45
301612	.02	9/16 x 1⅝	.85	.51
3016125	.025	9/16 x 1⅝	.85	.51
301613	.03	⅝ x 2	.95	.57
301614	.04	⅝ x 2	1.00	.60
301615	.05	⅝ x 2	1.10	.66

NOTE: Additional capacity values in the 200, 400 and 1000 volt ratings can be supplied on request.

NOTE: Packaging: 20, 50, or 100 per display carton.

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 13 *Sioux*

The SANGAMO "Sioux" paper tubular capacitor has been specifically designed for television applications where long, dependable and trouble-free service is required in high voltage applications. Through the use of special sealing materials and new construction techniques the use of wax as a filler and seal has been completely eliminated. They are mineral oil impregnated and designed to withstand continuous operation at 85°C. The special end seals will not crack, melt, or peel away from the cardboard tube, thus excluding moisture over long periods of operation.

TYPE 13 TELEVISION PAPER TUBULAR CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
130635	.0005	6000	11/16 x 1⅞	$1.35	$0.81
130621	.001	6000	11/16 x 2	1.35	.81
130622	.002	6000	11/16 x 2½	1.35	.81
130623	.003	6000	11/16 x 3	1.35	.81
130624	.004	6000	¾ x 2¾	1.35	.81
130625	.005	6000	⅞ x 2¾	1.35	.81
130611	.01	6000	1 x 3	1.40	.84
130612	.02	6000	1¼ x 3⅛	1.45	.87
130613	.03	6000	1⅜ x 3¼	1.50	.90
130614	.04	6000	1⅜ x 3½	1.55	.93
130615	.05	6000	1½ x 3¾	1.60	.96
130721	.001	7500	¾ x 2	1.35	.81
130725	.005	7500	⅞ x 3	1.45	.87
131035	.0005	10000	¾ x 3	1.50	.90
131021	.001	10000	⅞ x 3	1.60	.96
131022	.002	10000	1 x 3	1.70	1.02

NOTE: Mounting brackets available at extra cost.
NOTE: Packaging: 5, 10, or 25 per display carton.

TYPE 21 *Chippewa*

Hermetically sealed in metal tubes, the SANGAMO Type 21 paper capacitor is primarily designed for bypass and coupling applications. They are non-inductively wound; and, impregnated and filled with mineral oil assuring greatest stability of capacity and low power factor over the wide range of temperatures from —55°C. to +85°C. Each unit is provided with a mounting bracket and an external cardboard sleeve to insulate it from the chassis and other metal parts. The capacitor section is also insulated from the metal tube itself.

TYPE 21 METAL CASES MINERAL OIL PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2106-.006	.006	½ x 1 5/16	$0.95	$0.57
2106-.01	.01	½ x 1 5/16	.95	.57
2106-.02	.02	½ x 1 9/16	1.05	.63
2106-.03	.03	½ x 1 9/16	1.10	.66
2106-.05	.05	¾ x 1 9/16	1.10	.66
2106-.06	.06	¾ x 1 9/16	1.10	.66
2106-.1	.1	¾ x 1 13/16	1.25	.75
2106-.25	.25	13/16 x 2 5/16	1.70	1.02
2106-.5	.5	1 1/16 x 2 5/16	2.20	1.32

1000 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2110-.006	.006	½ x 1 5/16	$1.10	$0.66
2110-.01	.01	½ x 1 9/16	1.10	.66
2110-.05	.05	¾ x 1 11/16	1.30	.78
2110-.1	.1	13/16 x 2 1/16	1.50	.90
2110-.25	.25	1 1/16 x 2 5/16	2.30	1.38

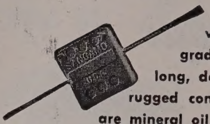
1600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2116-.0005	.0005	¾ x 1 5/16	$1.10	$0.66
2116-.001	.001	¾ x 1 5/16	1.10	.66
2116-.002	.002	¾ x 1 5/16	1.10	.66
2116-.005	.005	¾ x 1 7/16	1.20	.72
2116-.01	.01	¾ x 1 7/16	1.20	.72
2116-.02	.02	¾ x 1 9/16	1.30	.78
2116-.05	.05	13/16 x 2 1/16	1.30	.78
2116-.1	.1	1 1/16 x 2 1/16	2.10	1.26

2000 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2106-.003	.003	½ x 1 5/16	$0.95	$0.57
2120-.0005	.0005	13/16 x 1 7/16	$1.25	$0.75
2120-.001	.001	13/16 x 1 7/16	1.25	.75
2120-.005	.005	13/16 x 1 9/16	1.25	.75
2120-.01	.01	13/16 x 1 9/16	1.25	.75
2120-.02	.02	13/16 x 1 13/16	1.30	.78
2120-.05	.05	13/16 x 2 5/16	1.45	.87

TYPE PC *Black Arrow*



The Type PC capacitor is wound with pure aluminum foil and high grade kraft capacitor tissue to insure long, dependable service under the most rugged conditions. The Type PC capacitors are mineral oil impregnated and sealed with a special sealing compound which prevents entrance of moisture and maintains the high insulation resistance required for their application.

TYPE PC MOLDED PAPER CAPACITOR

Catalog Number	Capacity mfd.	Working Volts D.C.	List Price	Resale Net Price
PC-0823	.003	800	$0.65	$0.39
PC-0626	.006	600	.60	.36
PC-0611	.01	600	.65	.39
PC-0312	.02	300	.60	.36

NOTE: Packaging: 25, 50, or 100 per display carton.

TYPE 40-41 *Pueblo*

The SANGAMO Types 40 and 41 diaclor impregnated and filled paper capacitors are ideal for use in high voltage filter applications. Enclosed in aluminum containers, they facilitate convenient mounting to the chassis, an insulating washer and spade lug being provided for this purpose. In the Type 40 one connection is provided by an insulated terminal and the other is provided by the case. In the Type 41 both terminals are completely insulated from the case.

TYPE 40 PAPER CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4006-1	1.	600	1½ x 1⅝	$3.85	$2.31
4006-2	2.	600	1½ x 2⅜	4.60	2.76
4006-4	4.	600	1½ x 3⅝	6.30	3.78
4010-1	1.	1000	1½ x 2⅜	4.20	2.52
4010-2	2.	1000	1½ x 3⅝	5.45	3.27
4015-.25	.25	1500	1½ x 1⅝	4.85	2.91
4015-.5	.5	1500	1½ x 2⅜	5.00	3.00
4015-1	1.	1500	1½ x 3⅜	5.45	3.27

TYPE 41 PAPER CAPACITORS

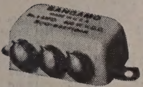
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4106-1	1.	600	1½ x 1⅝	$4.70	$2.82
4106-2	2.	600	1½ x 2⅜	5.40	3.24
4106-4	4.	600	1½ x 3⅝	7.10	4.26
4110-1	1.	1000	1½ x 2⅜	5.00	3.00
4110-2	2.	1000	1½ x 3⅝	6.30	3.78
4115-.25	.25	1500	1½ x 1⅝	5.65	3.39
4115-.5	.5	1500	1½ x 2⅜	5.85	3.51
4115-1	1.	1500	1½ x 3⅜	6.30	3.78

NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 50 Pathfinder



The Type 50 paper capacitors are primarily intended for bypass application. They are non-inductively wound, are supplied in fractional capacity values, and will provided efficient and continuous operation in R.F. and A.F. bypass, audio frequency coupling, and other A.C. circuits. These units are impregnated and filled with mineral oil and may be operated under severe humidity conditions at temperatures up to +85°C.

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5006-.05	.05	1 13/16	1	¾	$2.90	$1.74
5006-.1	.1	1 13/16	1	¾	2.95	1.77
5006-.25	.25	1 13/16	1	¾	3.10	1.86
5006-.5	.5	1 13/16	1	1	3.30	1.98
5006-1	1.0	2	1¾	⅞	3.75	2.25
5006-2	2.0*	2	2	1⅛	5.00	3.00
5006-.05x2	.05-.05	1 13/16	1	¾	3.65	2.19
5006-.1x2	.1-.1	1 13/16	1	¾	3.70	2.22
5006-.25x2	.25-.25	1 13/16	1	⅞	3.75	2.25
5006-.5x2	.5-.5	2	1¾	⅞	4.30	2.58
5006-1x2	1.0-1.0*	2	2	1⅛	5.30	3.18
5006-.1x3	.1-.1 .1	1 13/16	1	¾	4.20	2.52
5006-.25x3	.25-.25-.25	2	1¾	⅞	4.75	2.85
5006-.5x3	.5-.5-.5*	2	2	1⅛	5.75	3.45

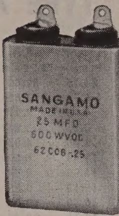
1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5010-.05	.05	1 13/16	1	¾	$3.05	$1.83
5010-.1	.1	1 13/16	1	¾	3.15	1.89
5010-.25	.25	1 13/16	1	⅞	3.25	1.95
5010-.5	.5	2	1¾	⅞	3.55	2.13
5010-1	1.0*	2	2	1⅛	4.40	2.64
5010-.05x2	.05-.05	1 13/16	1	¾	3.85	2.31
5010-.1x2	.1-.1	1 13/16	1	⅞	4.00	2.40
5010-.25x2	.25-.25	2	1¾	⅞	4.20	2.52
5010-.5x2	.5-.5*	2	2	1⅛	5.45	3.27
5010-.1x3	.1-.1-.1	2	1¾	⅞	4.60	2.76
5010-.25x3	.25-.25-.25*	2	2	1⅛	5.50	3.00

NOTE: *For bottom or top terminal, case size becomes 2″ x 2″ x 1¼″

NOTE: Packaging: Individual display carton.

TYPE 62-64 Scout



The Types 62 and 64 SANGAMO non-inductively wound paper capacitors are impregnated and filled with mineral oil and are hermetically sealed in seamless drawn-steel cases. The mineral oil impregnant assures dependable service betwen the wide temperature limits of —55°C. and +85°C. Standard capacitors are supplied with top terminals and brackets for upright mounting. When bottom terminals and inverted mounting are required, add the letter "B" to the end of the catalog number.

TYPE 62 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B06-.01	.01	1⅜	11/16	1 5/32	$3.65	$2.19
62B06-.05	.05	1⅜	11/16	1 5/32	3.66	2.19
62B06-.1	.1	1⅜	11/16	1 5/32	3.65	2.19
62B06-.25	.25	1⅜	11/16	1 5/32	3.90	2.34
62C06-.5	.5	1⅜	11/16	1 27/32	4.20	2.52
62A06-1.	1.0	1⅜	11/16	2¼	4.65	2.79
62A06-2.	2.0	1⅜	1¼	2 5/16	6.10	3.66

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B10-.05	.05	1⅜	11/16	1 5/32	$3.75	$2.25
62B10-.1	1.	1⅜	11/16	1 5/32	4.00	2.40
62C10-.25	.25	1⅜	11/16	1 27/32	4.20	2.52
62A10-.5	.5	1⅜	11/16	2¼	4.45	2.67
62A10-1.	1.0	1⅜	1¼	2 5/16	5.20	3.12

TYPE 64 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A06-.01	.01	2 5/16	11/16	2 5/16	$3.55	$2.13
64A06-.05	.05	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.1	.1	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.25	.25	2 5/16	11/16	2 5/16	3.85	2.31
64A06-.5	.5	2 5/16	11/16	2 5/16	4.10	2.46
64A06-1.	1.0	2 5/16	11/16	2 5/16	4.70	2.82
64A06-2.	2.0	1⅞	1 5/16	2 11/32	6.05	3.63

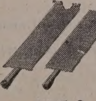
1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A10.05	.05	2 5/16	11/16	2 5/16	$3.70	$2.22
64A10-.1	.1	2 5/16	11/16	2 5/16	3.95	2.37
64A10-.25	.25	2 5/16	11/16	2 5/16	4.15	2.49
64A10-.5	.5	2 5/16	11/16	2 5/16	4.40	2.64
64A10-1.	1.0	1⅞	1 5/16	2 11/32	5.15	3.09

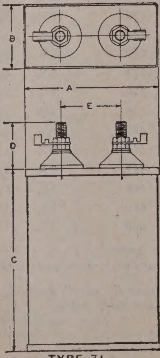
NOTE: Not normally carried in stock. Available on special order only.
NOTE: Packaging: Individual display carton.

TYPE A BRACKET

TYPE B BRACKET



TYPE C BRACKET



TYPE 71

TYPE 71 Seminole

SANGAMO Type 71 diaclor impregnated and filled paper capacitors have the advantage of longer life, lighter weight, and smaller size. Diaclor is a specially compounded, chemically purified chlorinated dielectric oil. This synthetic impregnant, whose characteristics can be controlled with great uniformity, possess a high dielectric constant, high volume resistivity, low power factor, high dielectric strength, and is non-inflammable and non-explosive. If mounting brackets are desired the type required should be specified when ordering. Either composition rivet, screw type or stand-off porcelain terminals can be supplied and the type desired should be specified.

600 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7106-.5	.5	1 13/16	1 1/16	1⅝	⅞	13/16	2¼	$4.70	$2.82
7106-1	1.	1 13/16	1 1/16	2	⅞	13/16	2¼	5.80	3.48
7106-2	2.	1 13/16	1 1/16	2¾	⅞	13/16	2¼	7.15	4.29
7106-4	4.	2½	1 3/16	2⅞	⅞	1⅛	3	9.10	5.46
7106-6	6.	2½	1 3/16	3¾	⅞	1⅛	3	11.30	6.78
7106-8	8.	3¾	1¼	3¼	⅞	2	4⅜	13.50	8.10
7106-10	10.	3¾	1¼	3⅞	⅞	2	4⅜	15.15	9.09

TYPE 71 ***continued on following page P-102***

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 71 (cont.)

1000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7110-.1	.1	1 13/16	1 1/16	1⅝	⅞	13/16	2¼	$4.15	$2.49
7110-.25	.25	1 13/16	1 1/16	1⅝	⅞	13/16	2¼	4.70	2.82
7110-.5	.5	1 13/16	1 1/16	2	⅞	13/16	2¼	4.95	2.97
7100-1	1.	1 13/16	1 1/16	2⅛	⅞	13/16	2¼	6.35	3.81
7110-2	2.	1 13/16	1 1/16	3⅞	⅞	13/16	2¼	8.25	4.95
7110-4	4.	2½	1 3/16	4⅛	⅞	1⅛	3	10.45	6.27
7110-6	6.	3¾	1¼	3⅞	⅞	2	4⅜	14.05	8.43
7110-8	8.	3¾	1¼	4⅝	⅞	2	4⅜	15.15	9.09
7110-10	10.	3¾	1¾	4¼	⅞	2	4⅜	16.80	10.08
7110-12	12.	3¾	2¼	3⅞	⅞	2	4⅜	18.15	10.89
7110-15	15.	3¾	2½	4⅝	⅞	2	4⅜	20.10	12.06

1500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7115-.5	.5	1 13/16	1 1/16	2¼	⅞	13/16	2¼	$6.35	$3.81
7115-1	1.	1 13/16	1 1/16	3¼	⅞	13/16	2¼	7.45	4.47
7115-2	2.	2½	1 3/16	3⅝	⅞	1⅛	3	10.45	6.27
7115-4	4.	3¾	1¼	4¼	⅞	2	4⅜	14.05	8.43
7115-6	6.	3¾	1¾	4½	⅞	2	4⅜	17.05	10.23
7115-8	8.	3¾	2½	4⅝	⅞	2	4⅜	20.90	12.54
7115-10	10.	3¾	3 3/16	4⅛	⅞	2	4⅜	25.05	15.03
7115-12	12.	3¾	3 3/16	4¾	⅞	2	4⅜	27.25	16.35
7115-15	15.	3¾	4 9/16	4¼	⅞	2	4⅜	30.00	18.00

2000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7120-.1	.1	1 13/16	1 1/16	1⅝	1⅜	13/16	2¼	$6.60	$3.96
7120-.25	.25	1 13/16	1 1/16	2	1⅜	13/16	2¼	7.15	4.29
7120-.5	.5	1 13/16	1 1/16	2⅞	1⅜	13/16	2¼	7.45	4.47
7120-1	1.	2½	1 3/16	3¼	1⅜	1⅛	3	9.10	5.46
7120-2	2.	3¾	1¼	3¾	1⅜	2	4¾	10.75	6.45
7120-4	4.	3¾	2¼	3¾	1¾	2	4⅜	15.15	9.09
7120-6	6.	3¾	2½	4¾	1¾	2	4⅜	20.10	12.06
7120-8	8.	3¾	3 3/16	4¾	1¾	2	4⅜	25.05	15.03
7120-10	10.	3¾	4 9/16	4¾	1¾	2	4⅜	30.55	18.33
7120-12	12.	3¾	4 9/16	5⅛	1¾	2	4⅜	33.30	19.98

2500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7125-.5	.5	2½	1 3/16	2⅞	1¾	1⅛	3	$11.55	$6.93
7125-1	1.	3¾	1¼	3¼	1¾	2	4⅜	13.20	7.92
7125-2	2.	3¾	1¾	4¾	1¾	2	4⅜	21.45	12.87
7125-4	4.	3¾	2¼	5⅛	1¾	2	4⅜	30.00	18.00
7125-10	10.	3¾	4 9/16	6	1¾	2	4⅜	75.10	45.06

3000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7130-.1	.1	2½	1 3/16	2	1¾	1⅛	3	$14.05	$8.43
7130-.25	.25	2½	1 3/16	2½	1¾	1⅛	3	14.85	8.91
7130-.5	.5	2½	1 3/16	3¾	1¾	1⅛	3	16.80	10.08
7130-1	1.	3¾	1¼	4¼	1¾	2	4⅜	20.10	12.06
7130-2	2.	3¾	2¼	4½	1¾	2	4⅜	25.05	15.03
7130-4	4.	3¾	4 9/16	4¼	1¾	2	4⅜	36.85	22.11

4000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7140-1	1.	3¾	1¾	3¼	1¾	2	4⅜	$25.05	$15.03
7140-.25	.25	3¾	1¾	3¼	1¾	2	4⅜	26.40	15.84
7140-.5	.5	3¾	1¾	3½	1¾	2	4⅜	30.00	18.00
7140-1	1.	3¾	2¼	4¼	1¾	2	4⅜	36.85	22.11
7140-2	2.	3¾	3 3/16	5½	1¾	2	4⅜	46.75	28.05
7140-4	4.	3¾	4 9/16	7	1¾	2	4⅜	66.85	40.11

5000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7150-.5	.5	3¾	2¼	4¼	2¾	2	4⅜	$33.30	$19.98
7150-1	1.	3¾	4 9/16	4¼	2¾	2	4⅜	41.80	25.08
7150-2	2.	3¾	4 9/16	5¾	2¾	2	4⅜	53.65	32.19

6000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7160-1	1.	3¾	4 9/16	5	2¾	2	4⅜	$83.60	$50.16

NOTE: Standard tolerance ±10%.

NOTE: Brackets supplied at no extra cost.

NOTE: Items in normal demand carried in stock. Other items on special order only.

NOTE: **Packaging**: Individual display carton.

TYPE 75 *Ute*

SANGAMO
MADE IN U.S.A.
5MFD 660WVAC
7566-5

SANGAMO Type 75 diaclor impregnated and filled paper capacitors are designed for continuous A.C. duty in ambient temperatures up to 75°C. These capacitors are recommended for use with capacitor motors, as power factor connection units, and for other similar A.C. applications.

Catalog Number	Capacity mfd.	Working Volts D.C.	Dimensions — Inches L	W	H	List Price	Resale Net Price
7522-3.75	3.75	220	2½	1 3/16	2⅞	$ 5.90	$3.54
7522-5	5.	220	2½	1 3/16	3½	6.70	4.02
7522-7.5	7.5	220	2½	1 3/16	4¾	8.40	5.04
7522-12	12.	220	3¾	1¼	4⅝	12.00	7.20
7533-3.75	3.75	330	2½	1 3/16	3⅞	6.70	4.02
7533-5	5.	330	2½	1 3/16	4¾	7.65	4.59
7533-10	10.	330	3¾	1¾	4¼	11.45	6.87
7544-2	2.	440	1 13/16	1 1/16	3⅞	6.50	3.90
7544-3.75	3.75	440	2½	1 3/16	4¼	7.75	4.65
7544-5	5.	440	3¾	1¼	3¾	9.15	5.49
7544-12	12.	440	3¾	2¼	4½	16.00	9.60
7566-2	2.	660	2½	1 3/16	3⅞	7.65	4.59
7566-3.75	3.75	660	3¾	1¾	3½	9.50	5.70
7566-5	5.	660	3¾	1¾	4¼	11.30	6.78

NOTE: Standard tolerance ±6%.

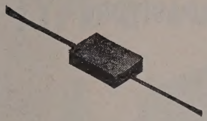
NOTE: Brackets can be supplied at extra cost; they are not standard equipment.

NOTE: Not normally carried in stock. Available on special order only.

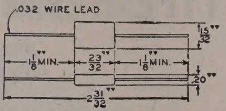
NOTE: Packaging: Individual sales carton.

SANGAMO CAPACITORS

TYPE K Mica Capacitor



TYPE KR Silvered Mica



Type K Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working—1000 V.D.C. Test			
K-1550	.000005	$0.25	$0.15
K-1410	.00001	.25	.15
K-1415	.000015	.25	.15
K-1420	.00002	.25	.15
K-1425	.000025	.25	.15
K-1430	.00003	.25	.15
K-1439	.000039	.25	.15
K-1443	.000043	.20	.12
K-1450	.00005	.20	.12
K-1475	.000075	.20	.12
K-1310	.0001	.20	.12
K-1315	.00015	.20	.12
K-1320	.0002	.20	.12
K-1325	.00025	.25	.15
K-1330	.0003	.25	.15
K-1340	.0004	.25	.15
K-1350	.0005	.25	.15
K-1370	.0007	.35	.21
K-1380	.0008	.35	.21
K-1210	.001	.35	.21

Standard tolerance, ±20%, B characteristic.

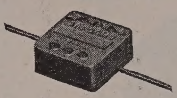
Type KR Silvered Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working—1000 V.D.C. Test			
KR-1550	.000005	$0.45	$0.27
KR-1410	.00001	.40	.24
KR-1415	.000015	.40	.24
KR-1420	.00002	.40	.24
KR-1425	.000025	.40	.24
KR-1430	.00003	.40	.24
KR-1439	.000089	.40	.24
KR-1443	.000043	.40	.24
KR-1450	.00005	.40	.24
KR-1475	.000075	.40	.24
KR-1310	.0001	.40	.24
KR-1315	.00015	.45	.27
KR-1320	.0002	.45	.27
KR-1325	.00025	.45	.27
KR-1330	.0003	.55	.33
KR-1340	.0004	.65	.39
KR-1350	.0005	.70	.42
KR-1370	.0007	.75	.45
KR-1380	.0008	.80	.48
KR-1210	.001	.90	.54

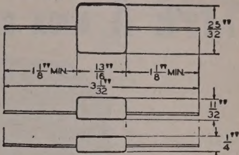
Standard tolerance, ±5%, C characteristic.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

TYPE C Mica Capacitor



TYPE CR Silvered Mica



Type C Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working—1000 V.D.C. Test			
C-1350	.0005	$0.25	$0.15
C-1362	.00062	.25	.15
C-1375	.00075	.25	.15
C-1380	.0008	.25	.15
C-1390	.0009	.25	.15
C-1210	.001	.30	.18
C-1215	.0015	.30	.18
C-1220	.002	.40	.24
C-1225	.0025	.45	.27
*C-1230	.003	.50	.30
*C-1240	.004	.50	.30
*C-1250	.005	.65	.39
*C-1260	.006	.65	.39
300 V.D.C. Working—600 V.D.C. Test			
*C-06275	.0075	.90	.54
*C-06280	.008	1.00	.60
*C-06290	.009	1.00	.60
*C-06110	.01	1.20	.72

Standard tolerance, ±20%, B characteristic. *Thickness 11/32"

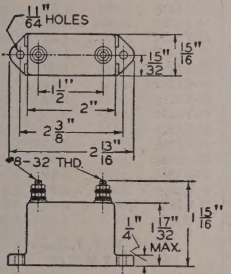
Type CR Silvered Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working—1000 V.D.C. Test			
CR-1350	.0005	$0.70	$0.42
CR-1362	.00062	.80	.48
CR-1375	.00075	.85	.51
CR-1380	.0008	.95	.57
CR-1390	.0009	1.00	.60
CR-1210	.001	1.10	.66
CR-1215	.0015	1.35	.81
CR-1220	.002	1.35	.81
CR-1225	.0025	1.80	1.08
*CR-1230	.003	2.05	1.23
*CR-1240	.004	2.15	1.29
*CR-1250	.005	2.25	1.35
*CR-1260	.006	2.40	1.44
300 V.D.C. Working—600 V.D.C. Test			
*CR-06275	.0075	2.45	1.47
*CR-06280	.008	2.80	1.68
*CR-06290	.009	2.95	1.77
*CR-06110	.01	3.20	1.92

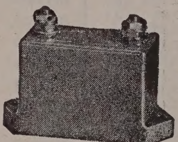
Standard tolerance, ±5%, C characteristic. *Thickness 11/32"

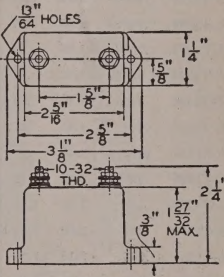
Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

TYPES F1 AND F2 MICA CAPACITORS



TYPE F1





TYPE F2

Types F1 and F2 capacitors, the smallest of the Sangamo line of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.

TYPE F1 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F1-331	.0001	3000	$12.60	$7.56
F1-332	.0002	3000	12.60	7.56
F1-3325	.00025	3000	12.60	7.56
F1-335	.0005	3000	12.60	7.56
F1-321	.001	3000	12.60	7.56
F1-322	.002	3000	12.60	7.56
F1-223	.003	2000	12.60	7.56
F1-224	.004	2000	12.60	7.56
F1-225	.005	2000	12.60	7.56
F1-226	.006	2000	12.60	7.56
F1-1528	.008	1500	12.60	7.56
F1-111	.01	1000	12.60	7.56
F1-112	.02	1000	14.30	8.58
F1-0215	.05	250	14.30	8.58
F1-0201	.1	250	15.10	9.06

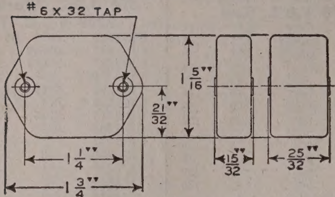
TYPE F2 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F2-531	.0001	5000	$17.30	$10.38
F2-5325	.00025	5000	17.30	10.38
F2-535	.0005	5000	17.30	10.38
F2-536	.0006	5000	17.30	10.38
F2-521	.001	5000	17.30	10.38
F2-522	.002	5000	17.30	10.38
F2-523	.003	5000	17.30	10.38
F2-325	.005	3000	17.30	10.38
F2-326	.006	3000	17.30	10.38
F2-211	.01	2000	17.30	10.38
F2-212	.02	2000	17.30	10.38
F2-1515	.05	1500	17.30	10.38
F2-0501	.1	500	19.20	11.52
F2-0202	.2	250	25.25	15.15
F2-02025	.25	250	27.90	16.74

Standard tolerance ±5%, B characteristic.
Inquiry should be directed to the factory for availability of capacities and voltages other than those listed above.
Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE A MICA CAPACITORS



TYPE A THIN AND THICK

600 W.V.D.C.— 1200 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
A-T1450	.00005	$1.45	$0.87
A-T1310	.0001	1.45	.87
A-T1315	.00015	1.45	.87
A-T1320	.0002	1.45	.87
A-T1325	.00025	1.45	.87
A-T1350	.0005	1.45	.87
A-T1210	.001	1.45	.87
A-T1220	.002	1.65	.99
A-T1225	.0025	1.70	1.02
A-T1230	.003	1.85	1.11
A-T1240	.004	2.00	1.20
A-T1250	.005	2.10	1.26
A-T1260	.006	2.20	1.32
A-T1280	.008	2.45	1.47
A-T1110	.01	2.80	1.68
A-T1115	.015	3.05	1.83
A-T1120	.02	3.55	2.13
A-T1125	.025	4.35	2.61
A-T1130	.03	4.55	2.73
A-K1140	.04	5.85	3.51
A-K1150	.05	7.10	4.26
A-K1160	.06	8.05	4.83

1200 W.V.D.C.— 2500 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
A-T2450	.00005	$1.60	$0.96
A-T2310	.0001	1.60	.96
A-T2315	.00015	1.60	.96
A-T2320	.0002	1.60	.96
A-T2325	.00025	1.60	.96
A-T2350	.0005	1.60	.96
A-T2210	.001	1.90	1.14
A-T2220	.002	2.50	1.50
A-T2225	.0025	2.80	1.68
A-T2230	.003	2.95	1.77
A-T2240	.004	3.10	1.86
A-T2250	.005	3.30	1.98
A-T2260	.006	3.45	2.07
A-T2280	.008	4.10	2.46
A-T2110	.01	4.70	2.82
A-K2115	.015	5.80	3.48
A-K2120	.02	7.05	4.23
A-K2125	.025	7.90	4.74
A-K2130	.03	8.10	4.86

2500 W.V.D.C.— 5000 T.V.D.C.

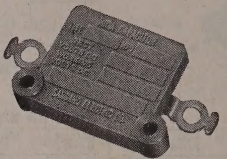
Catalog Number	Capacity Mfd.	List Price	Net Price
A-T5450	.00005	$1.90	$1.14
A-T5310	.0001	1.90	1.14
A-T5325	.00025	2.15	1.29
A-T5350	.0005	2.55	1.53
A-T5210	.001	2.90	1.74
A-T5220	.002	4.25	2.55
A-T5225	.0025	4.60	2.76
A-T5230	.003	5.10	3.06
A-T5240	.004	5.65	3.39
A-K5250	.005	6.20	3.72
A-K5260	.006	6.35	3.81
A-K5280	.008	6.85	4.11
A-K5110	.01	7.30	4.38
A-K5115	.015	8.05	4.83

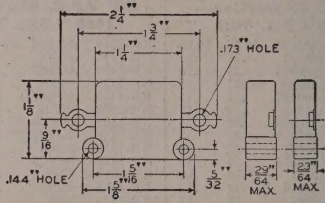
*Thickness 25/32" — Standard Insulators are available if desired. If .144" clearance holes are required, designate by adding letter "A" to Type No. (AA).

Standard tolerance ±20%, B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

TYPE H MICA CAPACITORS





TYPE H THICK AND THIN

600 W.V.D.C.— 1200 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T1450	.00005	$1.20	$0.72
H-T1310	.0001	1.20	.72
H-T1320	.0002	1.20	.72
H-T1325	.00025	1.25	.72
H-T1330	.0003	1.20	.72
H-T1340	.0004	1.20	.72
H-T1350	.0005	1.20	.72
H-T1210	.001	1.20	.72
H-T1215	.0015	1.20	.72
H-T1220	.002	1.30	.78
H-T1225	.0025	1.30	.78
H-T1230	.003	1.45	.87
H-T1240	.004	1.50	.90
H-T1250	.005	1.55	.93
H-T1260	.006	1.80	1.08
H-T1270	.007	1.85	1.11
H-T1280	.008	1.90	1.14
H-T1110	.01	2.15	1.29
H-K1115	.015	2.65	1.59
H-K1120	.02	3.05	1.83
H-K1125	.025	3.60	2.16
H-K1130	.03	4.45	2.67

1200 W.V.D.C.— 2500 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T2450	.00005	$1.60	$0.96
H-T2310	.0001	1.60	.96
H-T2320	.0002	1.60	.96
H-T2325	.00025	1.60	.96
H-T2330	.0003	1.60	.96
H-T2340	.0004	1.60	.96
H-T2350	.0005	1.60	.96
H-T2210	.001	1.80	1.08
H-T2215	.0015	2.30	1.38
H-T2220	.002	2.40	1.44
H-T2225	.0025	2.80	1.68
H-T2230	.003	3.05	1.83
H-K2240	.004	3.05	1.83
H-K2250	.005	3.30	1.98
H-K2260	.006	3.30	1.98
H-K2280	.008	3.85	2.31
H-K2110	.01	5.10	3.06

2500 W.V.D.C.— 5000 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T5450	.00005	$1.90	$1.14
H-T5310	.0001	1.90	1.14
H-T5320	.0002	1.90	1.14
H-T5325	.00025	2.20	1.32
H-T5330	.0003	2.25	1.35
H-T5340	.0004	2.30	1.38
H-T5350	.0005	2.40	1.44
H-T5210	.001	2.80	1.68
H-T5215	.0015	3.55	2.13
H-K5220	.002	4.15	2.49
H-K5230	.003	4.90	2.94
H-K5240	.004	5.65	3.39
H-K5250	.005	6.40	3.84

*Thickness 29/64". For meter mounting bracket add letter "E" to Type designation; if assembled add 30 cents to list price; if unassembled add 20 cents and specify case size.

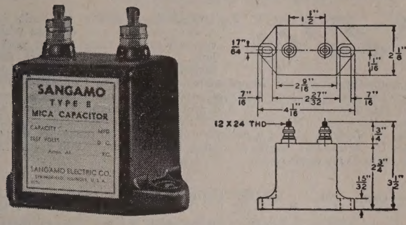
Standard tolerance ±20%, B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE E MICA CAPACITORS



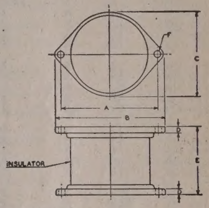
TYPE E

Catalog Number	Capacity Mfd.	Test Volts D.C.	List Price	Resale Net Price
E-1245	.00005	12500	$11.00	$ 6.60
E-1231	.0001	12500	11.00	6.60
E-12325	.00025	12500	11.00	6.60
E-1235	.0005	12500	11.00	6.60
E-1221	.001	12500	11.00	6.60
E-12215	.0015	12500	13.05	7.83
E-1222	.002	12500	15.00	9.00
E-1023	.003	10000	18.05	10.83
E-1024	.004	10000	19.05	11.43
E-1025	.005	10000	20.05	12.03
E-721	.001	7000	10.05	6.03
E-722	.002	7000	13.05	7.83
E-723	.003	7000	14.05	8.43
E-711	.01	7000	21.05	12.63
E-3524	.004	3500	14.05	8.43
E-3525	.005	3500	13.05	7.83
E-3511	.01	3500	20.05	12.03
E-3512	.02	3500	20.05	12.03
E-3515	.05	3500	23.05	13.83
E-215	.05	2000	20.05	12.03
E-201	.1	2000	23.05	13.83

Standard tolerance ±20%.

This type capacitor specifically designed for amateur transmitters. It is not recommended for commercial applications.

TYPES G1, G2, G3 AND G4 MICA CAPACITORS



TYPE G1, 2, 3 and 4

TYPE G1

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G1-641	.00001	6000	$35.45	$21.27
G1-645	.00005	6000	38.20	22.92
G1-631	.0001	6000	40.60	24.36
G1-632	.0002	6000	40.60	24.36
G1-634	.0004	6000	44.35	26.61
G1-635	.0005	6000	46.65	27.99
G1-621	.001	6000	46.65	27.99
G1-6215	.0015	6000	48.90	29.34
G1-622	.002	6000	48.90	29.34
G1-623	.003	6000	50.60	30.36
G1-624	.004	6000	50.60	30.36
G1-625	.005	6000	50.60	30.36
G1-526	.006	5000	51.45	30.87
G1-511	.01	5000	51.45	30.87
G1-4115	.015	4000	51.45	30.87
G1-312	.02	3000	51.45	30.87

TYPE G2

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G2-1031	.0001	10000	$65.55	$39.33
G2-10315	.00015	10000	65.55	39.33
G2-1032	.0002	10000	65.55	39.33
G2-10325	.00025	10000	65.55	39.33
G2-1035	.0005	10000	65.55	39.33
G2-1021	.001	10000	65.55	39.33
G2-10212	.0012	10000	65.55	39.33
G2-10215	.0015	10000	65.55	39.33
G2-1022	.002	10000	65.55	39.33
G2-823	.003	8000	65.55	39.33
G2-824	.004	8000	65.55	39.33
G2-525	.005	5000	65.55	39.33
G2-526	.006	5000	69.15	41.49
G2-511	.01	5000	69.15	41.49
G2-4115	.015	4000	69.15	41.49
G2-312	.02	3000	69.15	41.49

Type G ceramic cased capacitors are intended for service where highest voltage and R.F. current ratings are required, such as in commercial transmitting or induction heating applications. All possible steps are taken in design and manufacturing operations to insure permanence of quality. Current ratings of these four sizes as well as detailed information on the Type G5 will be supplied upon request. Terminal plates are designed to permit any usual connecting or mounting practices.

TYPE G3

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G3-2045	.00005	20000	$110.90	$66.54
G3-2031	.0001	20000	121.00	72.60
G3-2032	.0002	20000	131.10	78.66
G3-20325	.00025	20000	131.10	78.66
G3-2033	.0003	20000	131.10	78.66
G3-2035	.0005	20000	137.15	82.29
G3-2038	.0008	20000	137.15	82.29
G3-2021	.001	20000	141.15	84.69
G3-15215	.0015	15000	143.20	85.92
G3-1522	.002	15000	143.20	85.92
G3-1523	.003	15000	151.25	90.75
G3-1524	.004	15000	151.25	90.75
G3-1025	.005	10000	151.25	90.75
G3-1026	.006	10000	151.25	90.75
G3-1028	.008	10000	151.25	90.75
G3-1011	.01	10000	151.25	90.75
G3-512	.02	5000	151.25	90.75
G3-313	.03	3000	151.25	90.75

TYPE G4

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G4-3043	.00003	30000	$167.90	$ 100.74
G4-3045	.00005	30000	167.90	100.74
G4-3031	.0001	30000	210.30	126.18
G4-30315	.00015	30000	210.30	126.18
G4-30325	.00025	30000	221.16	132.69
G4-3035	.0005	30000	221.16	132.69
G4-3038	.0008	30000	221.16	132.69
G4-3021	.001	30000	229.10	137.46
G4-25215	.0015	25000	229.10	137.46
G4-2022	.002	20000	229.10	137.46
G4-2023	.003	20000	229.10	137.46
G4-2024	.004	20000	234.35	140.61
G4-1525	.005	15000	242.00	145.20
G4-1526	.006	15000	252.25	151.35
G4-1228	.008	12000	260.00	156.00
G4-1011	.01	10000	272.44	163.46
G4-612	.02	6000	272.44	163.46
G4-514	.04	5000	272.44	163.46

Standard tolerance ±5%, B characteristic.

TYPE G MICA CAPACITOR DIMENSIONS — INCHES

Type	A	B	C	D	E	F
G1	3¼	3 13/16	2 13/16	¼	2½	17/64
G2	4¼	5	3½	¼	3	9/32
G3	5¾	6½	5	⅜	4	.377
G4	5¾	6½	5	⅜	5¾	.377

Inquiry as to the availability of capacities and voltages other than those listed above should be directed to the factory.

Prices subject to change without notice.

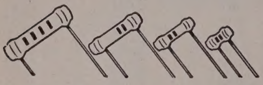
Centralab CRL Centralab

FIRST IN COMPONENTS RESEARCH — SAFEST FOR SERVICING

CERAMIC CAPACITORS

More and more modern circuits specify "permanent" ceramic capacitors . . . designed and produced under Centralab's exclusive methods . . . making them "safest for servicing" for most electronic applications. Reliable performance, proved where older capacitor types do not last. Install them throughout radio or TV receiver circuits and your "call backs" or repeat calls for capacitor failure on the same jobs will decrease. Centralab ceramic capacitors mean more satisfied customers for you and more profits from your service calls.

BC HI-KAP TUBULARS



For bypass, coupling and general use in AM, FM, TV, Audio or other r. f. circuits. Tolerance ±20% through 2200 mmf.; higher cap. guaranteed minimum values (GMV). 85° C. plus operation. Tropicalized. 1000 volts D.C. test; 600 volts D.C. working. Packaged 5 per envelope.

Cat. No.	Cap. Mmf	Size	List Price
D6-050	5	A	$0.25
D6-100	10	A	.25
D6-120	12	A	.25
D6-150	15	A	.25
D6-180	18	A	.25
D6-220	22	A	.25
D6-250	25	A	.25
D6-270	27	A	.25
D6-330	33	A	.25
D6-390	39	A	.25
D6-470	47	A	.25
D6-500	50	A	.25
D6-560	56	A	.25
D6-680	68	A	.25
D6-750	75	A	.25
D6-101	100	A	.25
D6-121	120	A	.25
D6-151	150	A	.25
D6-181	180	A	.25
D6-201	200	A	.25
D6-221	220	A	.25
D6-251	250	A	.25
D6-301	300	A	.25
D6-331	330	A	.25
D6-391	390	A	.25
D6-401	400	A	.25
D6-471	470	A	.25
D6-501	500	A	.25
D6-561	560	A	.25

Cat. No.	Cap. Mmf.	Size	List Price
D6-601	600	A	$0.25
D6-681	680	A	.25
D6-751	750	A	.25
D6-102	1,000	A	.25
D6-122	1,200	B	.25
D6-152	1,500	B	.25
D6-182	1,800	B	.25
D6-202	2,000	B	.25
D6-222	2,200	B	.25
D6-252	2,500	B	.25
D6-272	2,700	B	.25
D6-302	3,000	B	.25
D6-332	3,300	C	.25
D6-402	4,000	C	.25
D6-472	4,700	C	.25
D6-502	5,000	C	.25
D6-562	5,600	D	.25
D6-682	6,800	D	.25
D6-103	10,000	D	.25

BODY DIMENSIONS

Size	Diam.	Length
A	.230″	.475″
B	.230″	.750″
C	.255″	.885″
D	.310″	1.180″

DK-200 CAPACITOR KIT:

200 assorted tubulars in most commonly used values. (600 volt rating)................ **$50.00**

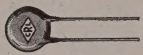
DK-40 PLASTI-PAK:

40 tubulars of popular values. (600 volt rating)............ **$11.00**

DK-25 PLASTI-PAK:

25 tubulars of popular values. (600 volt rating)........ **$6.75**

DISK HI-KAPS



Fit narrow spaces. Tolerances GMV except Cat. No. DD-2-502 is −20% +80%. 1000 volts D.C. test; 600 volts D.C. working. Packaged 5 per envelope.

TYPE DD—SINGLE DISCS

Cat. No.	Cap. Mfd.	Diam. Ins.	Thick. Ins.	List Price
DD-471	.00047	¼	.156	$0.25
DD-801	.0008	¼	.156	.25
DD-102	.001	⅜	.156	.25
DD-152	.0015	⅜	.156	.25
DD-202	.002	9/16	.156	.25
DD-502	.005	9/16	.156	.25
DD-103	.01	⅝	.156	.25
DD-203	.02	9/16	.156	.45

TYPE DD-2—DUAL DISCS

DD-2-102	2x.001	⅜	.156	$0.40
DD-2-152	2x.0015	9/16	.156	.40
DD-2-502	2x.005	⅝	.156	.45

TYPE DD-3*—SHIELDED DUAL DISCS

Cat. No.	Cap. Mfd.	Diam. Ins.	Thick. Ins.	List Price
DD-3-102	2x.001	⅜	.225	$0.45
DD-3-152	2x.0015	⅜	.225	.45
DD-3-202	2x.002	9/16	.225	.45
DD-3-502	2x.005	9/16	.225	.50
DD-3-103	2x.01	⅝	.225	.50

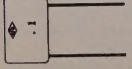
DDK-25 PLASTI-PAK

25 Cat. No. DD-502 Discs (600 volts rating). List......... **$6.25**

DK-100 PLASTI-PAK:

100 popular tubular and disc values. (600 volt rating). List.... **$25.00**

TYPE DF FLAT-PLATE HI-KAPS*

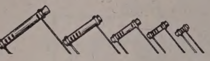


A dependable 600 volt ceramic capacitor recommended for general replacement application.

Cat. No.	Cap. Mfd.	Length Inches.	Height Inches	Thick. Inches	List Price
DF-203	.02	1-9/32″	27/32″	5/64″	$0.60
DF-503	.05	1-9/32″	27/32″	3/32″	.70
DF-104	.1	1-9/32″	27/32″	⅛″	.80

* Packaged singly.

TC TEMPERATURE COMPENSATING TUBULARS



Designed especially to limit frequency drift in r. f. circuits where temperature variations are prevalent. These capacitors are constructed with a ceramic body which changes capacitance as the temperature varies. Use Centralab T.C. Hi-Kaps when servicing superhet receivers—replace older types in oscillator and detector circuits in TV, AM and FM receivers. TCZ units are negative-positive-zero (NPO) type. TCN units are temperature compensating, N750 type, giving a negative change of 750 parts per million per degree C. Packaged singly, including instructions. 1,200 volts D.C. test; 600 volts D.C. working.

TCZ NEGATIVE POSITIVE ZERO (NPO)

Cat. No.	Cap. Mmf.	Tol. Mmf.	Size	List Price
TCZ-.5	.5	± .25	A	$0.75
TCZ-.68	.68	± .25	A	.75
TCZ-1	1.	± .25	A	.75
TCZ-1.5	1.5	± .25	A	.75
TCZ-2.2	2.2	± .25	A	.75
TCZ-3.3	3.3	± .25	A	.75
TCZ-4.7	4.7	± .5	A	.60
TCZ-6.8	6.8	± .5	A	.60
TCZ-10	10.	± .5	A	.60
TCZ-12	12.	± .5	A	.60
TCZ-15	15.	± .5	A	.60
TCZ-18	18.	± .5	A	.60
TCZ-20	20.	± .5	A	.60
		Tol. %		
TCZ-22	22.	±2½	A	.50
TCZ-24	24.	±2½	A	.50
TCZ-27	27.	±2½	B	.50
TCZ-30	30.	±2½	B	.50
TCZ-33	33.	±2½	B	.50
TCZ-36	36.	±2½	B	.50
TCZ-39	39.	±2½	B	.50
TCZ-43	43.	±2½	B	.50
TCZ-47	47.	±2½	B	.50
TCZ-51	51.	±2½	B	.50
TCZ-56	56.	±2½	B	.50
TCZ-62	62.	±2½	C	.50
TCZ-68	68.	±2½	C	.50
TCZ-75	75.	±2½	C	.50
TCZ-82	82.	±2½	C	.50
TCZ-91	91.	±2½	C	.50
TCZ-100	100.	±2½	C	.50
TCZ-110	110.	±5	C	.50
TCZ-120	120.	±5	C	.50
TCZ-130	130.	±5	D	.50
TCZ-150	150.	±5	D	.50
TCZ-160	160.	±5	D	.50
TCZ-180	180.	±5	D	.50
TCZ-200	200.	±5	E	.50
TCZ-220	220.	±5	E	.50
TCZ-240	240.	±5	E	.50
TCZ-270	270.	±5	E	.50
TCZ-300	300.	±5	E	.50

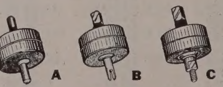
TCN NEG. TEMP. UNITS (N750)

Cat. No.	Cap. Mmf.	Tol. Mmf.	Size	List Price
TCN-5	5.	± .5	A	$0.60
TCN-10	10.	± .5	A	.60
TCN-12	12.	± .5	A	.60
TCN-15	15.	± .5	A	.60
TCN-18	18.	± .5	A	.60
TCN-20	20.	± .5	A	.60
		Tol. %		
TCN-22	22.	±2½	A	.50
TCN-24	24.	±2½	A	.50
TCN-27	27.	±2½	A	.50
TCN-30	30.	±2½	A	.50
TCN-33	33.	±2½	A	.50
TCN-36	36.	±2½	A	.50
TCN-39	39.	±2½	A	.50
TCN-43	43.	±2½	A	.50
TCN-47	47.	±2½	A	.50
TCN-51	51.	±2½	A	.50
TCN-56	56.	±2½	A	.50
TCN-62	62.	±2½	A	.50
TCN-68	68.	±2½	B	.50
TCN-75	75.	±2½	B	.50
TCN-82	82.	±2½	B	.50
TCN-91	91.	±2½	B	.50
TCN-100	100.	±2½	B	.50
TCN-110	110.	±5	B	.50
TCN-120	120.	±5	B	.50
TCN-130	130.	±5	B	.50
TCN-150	150.	±5	B	.50
TCN-160	160.	±5	B	.50
TCN-180	180.	±5	C	.50
TCN-200	200.	±5	C	.50
TCN-220	220.	±5	C	.50
TCN-220	220.	±5	C	.50
TCN-240	240.	±5	C	.50
TCN-270	270.	±5	C	.50
TCN-300	300.	±5	C	.50
TCN-330	330.	±5	C	.50
TCN-360	360.	±5	D	.50
TCN-390	390.	±5	D	.50
TCN-430	430.	±5	D	.50
TCN-470	470.	±5	D	.50
TCN-510	510.	±5	D	.50
TCN-560	560.	±5	E	.50
TCN-620	620.	±5	E	.50
TCN-680	680.	±5	E	.50
TCN-750	750.	±5	E	.50

BODY DIMENSIONS

Size	Diam.	Length
A	.200″	.400″
B	.200″	.690″
C	.225″	.860″
D	.285″	1.165″
E	.286″	1.625″

TV HI-VO KAPS



Centralab TV Hi-Vo-Kaps have proved their dependability. Years of research and know-how in ceramic manufacture have gone into the development of these husky capacitors. That is why they have become the accepted standard for filter and bypass applications in television high voltage power supplies. Body sizes—501, 1″ diam. x .510″. 502, 1″ diam. x 1.050″. 503, 1.4″ diam. x 1.250″. Terminals: A—plain studs. B—One slotted 1/16″ wide x 1/16″ deep, other tapped 6-32, ¼″ deep. C—Screw terminals, male 6-32 x ¼″, female 6-32 x ¼″. Capacity tolerance −20% +50%.

Cat. No.	Cap. Mmf.	V.D.C. Working	Term.	List Price
TV1-501	500	10,000	A	$1.75
TV2-501	500	10,000	B	1.75
TV3-501	500	10,000	C	1.75
TV1-502	500	20,000	A	2.25
TV2-502	500	20,000	B	$2.25
TV3-502	500	20,000	C	2.25
TV1-503	500	30,000	A	4.50

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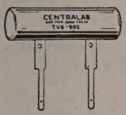
CERAMIC CAPACITORS

TV6 MOLDED 6000 VOLT REPLACEMENT TUBULARS



Used in capacity deflection circuits in electrostatic TV sets, also in voltage divider circuits in electro dynamic TV sets. Molded casing assures adequate external insulation. Tolerance GMV. Body size ¾" diam. x 2¾".

Cat. No.	Cap. Mfd.	V.D.C. Working	List Price
TV6-502	.005	6000	**$1.10**

TV6-200 TO TV6-600 SERIES

A smaller, tubular type high voltage capacitor, especially suited for conversion of TV sets for larger size picture tubes. Reliable, lasting performance. All units rated with ±20% tolerance.

Cat. No.	Cap. Mmf.	V.D.C. Working	BODY SIZE Diam.	BODY SIZE Length	List Price
TV6-200	20	6000	.255"	.885"	**$ .50**
TV6-300	30	6000	.310"	1.640"	**.50**
TV6-400	40	6000	.310"	1.180"	**.50**
TV6-500	50	6000	.310"	1.180"	**.50**
TV6-600	60	6000	.310"	1.180"	**.50**

CERAMIC MIN-KAPS

Tiny flat-plate capacitors, size 17/32" x 7/32" x 7/64". Tolerance −20% +80%. Space savers for low voltage applications. 5 per package.

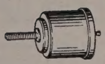
Cat. No.	Cap. Mfd.	V.D.C. Working	List Price	Cat. No.	Cap. Mfd.	V.D.C. Working	List Price
DM-201	.0002	150	**$0.35**	DM-202	.002	150	**$0.45**
DM-501	.0005	150	**.35**	DM-502	.005	150	**.45**
DM-102	.001	150	**.35**	DM-103	.01	150	**.65**

FT FEED THROUGH HI-KAPS

For single hole mounting where capacity ground to chassis or shield is desired. 1000 volts D.C. test, 600 volts D.C. working. Packaged singly.

Cat. No.	Cap. Mmf.	Tol.	List Price
FT-500	500	±20%	**$1.00**
FT-1000	1000	±20%	**1.00**
FT-1500	1500	−20% +50%	**1.00**

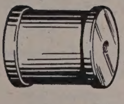
HIGH ACCURACY CAPACITORS



Precision ceramic capacitors for applications involving rigid frequency control. Excellent as prime or secondary standards. 13/16" diameter. Metal case grounded with mounting stud 11/32" long 6/32" thread. Other terminal opposite end, plain stud ¼" long. Tolerance ±1%.

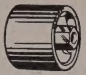
Cat. No.	Cap. Mmf.	V.D.C. Working	Length	List Price
950-501	500	500	9/16"	**$40.00**
950-102	1000	500	11/16"	**40.00**
950-202	2000	500	15/16	**40.00**

TRANSMITTING CAPACITORS



Type 851 ceramic capacitors are high voltage units, held to ±10% tolerance. Size 1 9/32" diam. x 1 15/32". End terminal plates are center tapped 10-32.

Cat. No.	Cap. Mmf.	V.D.C. Working	Temp. Coef.	List Price
851-25Z	25	15,000	NPO	**$10.00**
851-50Z	50	15,000	NPO	**10.00**
851-100N	100	15,000	N750	**10.00**
851-200N	200	7,500	N750	**10.00**



Type 850S high voltage ceramic capacitors are ±10% tolerance, Type "S" with centered hex studs, one each end, projecting ⅛", tapped 6-32, ¼" deep. Type SL have off center solder lugs 17/32" long with 6-32 tapped hole.

Cat. No.	Cat. No.	Cap. Mmf.	V.D.C. Working	Temp. Coef.	List Price
850S-25Z	850SL-25Z	25	7500	NPO	**$3.00**
850S-50Z	850SL-50Z	50	7500	NPO	**3.00**
850S-50N	850SL-50N	50	7500	N750	**3.00**
850S-75N	850SL-75N	75	7500	N750	**3.00**
850S-100N	850SL-100N	100	5000	N750	**3.00**

SMALL HIGH VOLTAGE UNITS

TYPES 853-853A, 854-854A, 855-855A

The three series which follow are exceedingly compact ceramic capacitors, similar in appearance to type 850S above. Mounting is with axial screw type terminals tapped 2-56. Tolerance ±10%. Sizes: 853, 9/16" diam. x ½". 854, 7/16" diam. x 7/16 855, 5/16" diam. x ⅜".

Types 853, 854 and 855 also available with axial leads, 1½" long, in place of screw terminals. For lead types, use same Cat. Nos., omitting "A". Same list prices.

Cat. No.	Cap. Mmf.	V.D.C. Wkg.	Temp. Coef.	List Price
853A-10Z	10	5000	NPO	**$3.00**
853A-20Z	20	5000	NPO	**3.00**
853A-40N	40	5000	N750	**3.00**
854A-5Z	5	5000	NPO	**3.00**
854A-10Z	10	5000	NPO	**3.00**
854A-20N	20	5000	N750	**3.00**
855A-3Z	3	5000	NPO	**3.00**
855A-5Z	5	5000	NPO	**3.00**
855A-10N	10	5000	N750	**3.00**

CERAMIC TRIMMERS

Type 820, at left; 27/32" x ⅝".

Cat. No.	Cap. Range Mmf.	List Price
840-A	2.6– 6.	**$0.75**
820-B	6. –20.	**.75**
820-C	7. –35.	**.75**

Type 822, at left, 27/32" x 21/32". Nos. ending in Z, zero temp. coef. (NPO) ending in N, neg. temp. coef. (N650).

Cat. No.	Range Mmf.	List Price
822-EZ	1.5– 7.0	**$1.50**
822-CZ	2. – 7.5	**1.50**
822-BZ	2.5– 13.	**1.50**
822-AZ	4.5– 25.	**1.50**
822-DN	2.0– 6.0	**1.50**
822-CN	4.5– 25.	**1.50**
822-BN	7. – 45.	**1.50**
822-AN	5. – 50.	**1.50**

Type 823, at left, 1¼" x 15/16"W. Neg. temp. coef.

Cat. No.	Range Mmf.	List Price
823-EZ	5.– 12.	**$2.50**
823-DZ	6.– 25.	**2.50**
823-BZ	10.– 50.	**2.50**
823-AZ	12.– 60.	**2.50**
823-EN	8.– 25.	**2.50**
823-DN	8.– 50.	**2.50**
823-BN	10.–100.	**2.50**
823-AN	20.–125.	**2.50**

TYPE 829 TUBULAR TRIMMERS

Tiny, tubular trimmer, used widely in TV and FM circuits.

Cat. No.	Range Mmf.	List Price
829-3	.5 –3.	**$0.50**
829-4	1. – 4.	**.50**
829-6	1. – 6.	**.50**
829-7	1. – 7.5	**.60**
829-10	1.5–10.	**.60**

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PRINTED ELECTRONIC CIRCUITS (P. E. C.)

Since their introduction a few short years ago, Centralab printed electronic circuits have skyrocketed in popularity. First developed for the manufacturing trade, increasing demand from the industry at large brought about a line of stock P. E. C. items for servicemen, hams and laboratory experimenters. Printed electronic circuits consist of capacitors and resistors, including the use of pure metallic silver fired to Ceramic-X plates . . . with integral "printed" circuit connections, brought out to convenient external leads which are anchored mechanically. The complete unit is protected with a moisture-proof phenolic coating. The result is a unit group of components of ultra compactness and permanence. No other modern development in electronic circuitry offers so many advantages in low powered applications as regards small size, low cost assembly and utmost reliability. A complete P. E. C. replacement guide is available FREE at any Centralab Distributor.

RESISTOR AND RESIS.-CAP. UNITS

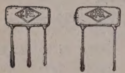

Plate size, 17/32" x 7/32" x 7/64" thick max. Capacitors 150 V.D.C.W. Resistors, 1/5 watt.

Cat. No.	Dwg.	Consists of	List Price
PC-2	A	2 meg. Resis.	$0.35
PC-21	B	½ meg.; 110,000 ohms	.50
PC-30	C	R=240,000 ohms. C=1000 mmf.	.50
PC-33	D	R= meg. C=1000 mmf.	.50
PC-36	E	R=100,000 ohms. C=100 mmf.	.50

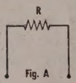

Fig. A

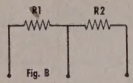

Fig. B

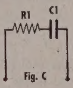

Fig. C

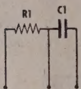

Fig. D

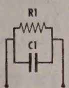

Fig. E

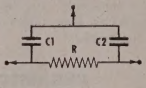

Fig. F

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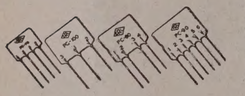
FILPEC BALANCED DIODE LOAD FILTER

Plate size, 17/32" x 9/32" x 7/64" thick max. Capacitors, 100 V.D.C.W. Resistors, 1/5 watt.

Cat. No.	Dwg.	Consists of	List Price
PC-50	F	C1=100 mmf. C2=100 mmf. R=47,000 ohms.	$0.60
PC-51	F	C1=150 mmf. C2=150 mmf. R=47,000 ohms.	.60
PC-52	F	C1=50 mmf. C2=50 mmf. R=47,000 ohms.	.60

P. E. C. INTERSTAGE COUPLING PLATES AND VERTICAL INTEGRATORS



The couplate combines three capacitors and two resistors and is designed to replace the normal components of the audio circuit.

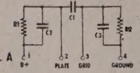


Fig. A

MIDGET NO. 2 TRIODE COUPLATES

Plate size, 13/16" x 9/16" x 5/32" thick—Capacitors rated at 450 W.V.D.C. Resistors 1/5 watt.

CAT. NO. PC-70 MIDGET NO. 2 COUPLATE

Consisting of	List Price
C1=.005 mfd. C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms.	$0.70

CAT. NO. PC-71 MIDGET NO. 2 COUPLATE

Consisting of	List Price
C1=.005 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms.	$0.70

STANDARD TRIODE COUPLATES

Plate size, 13/32" x 13/16" x 11/64" thick, max. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-80 STANDARD COUPLATE

Consisting of	List Price
C1=.01 mfd. C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms.	$0.75

CAT. NO. PC-81 STANDARD COUPLATE

Consisting of	List Price
C1=.01 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms.	$0.75

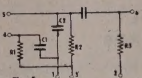


Fig. C

PENTODE COUPLATES

Plate size, 1 17/64" x 7/8" x 11/64" thick max. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-90 PENTODE COUPLATE

Consisting of	List Price
C1=.005 mfd. C2=50 mmf. C3=2000 mmf. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms.	$0.90

CAT. NO. PC-91 PENTODE COUPLATE

Consisting of	List Price
C1=.005 mfd. C2=100 mmf. C3=.005 mfd. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms.	$0.90

CAT. NO. PC-92 PENTODE COUPLATE

Consisting of	List Price
C1=.005 mfd. C2=100 mmf. C3=2000 mmf. R1=4.7 megohms. R2=1 megohm R3=2.2 megohms.	$1.00

TV VERTICAL INTEGRATOR PLATES

Due to great saving in assembly costs, this Centralab printed circuit is being used widely in television vertical integrator networks. Two forms are available. Either one has only three external leads. Size, PC-100 1 3/32" x 13/16" x 11/64" thick, max. PC-101, 1 9/16" x 1 1/16" x 3/16" thick, max. Capacitors, 450 V.D.C.W. Resistor, 1/5 watt.

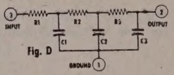


Fig. D

CAT. NO. PC-100 VERTICAL INTEGRATOR PLATES

Consisting of	List Price
C1=.002 mfd. C2=.005 mfd. C3=.005 mfd. R1=2200 ohms. R2=8200 ohms. R3=8200 ohms.	$1.10

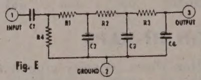
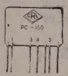


Fig. E

CAT. NO. PC-101 VERTICAL INTEGRATOR PLATES

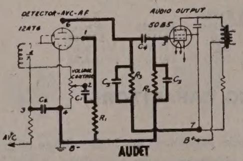
Consisting of	List Price
C1=.01 mfd. C2=.002 mfd. C3=.005 mfd. C4=.005 mfd. R1=22000 ohms. R2=8200 ohms. R3=8200 ohms. R4=22000 ohms.	$1.25

AUDET—P. E. C. OUTPUT STAGE FOR A.C.-D.C. RECEIVERS



AUDET is a compact (1⅝" x ⅞" x 11/64"), highly efficient and dependable audio-detector plate with 7 leads, furnishing the values of all components generally found in the output stage of 5 tube A.C.-D.C. radio receivers. Where trouble develops in this part of a set, it is simple and economical to replace the entire stage with AUDET. The values of the components may differ slightly from the original circuit, but the slight difference may be overlooked as no noticeable change in performance will be noted.

With only 7 leads, you have installed 8 modern components—3 resistors and 5 capacitors—an economical repair.



Audet P. E. C. also will find application in other types of miniature or portable equipment where size and weight are prime factors. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-150 AUDET

Consisting of	List Price
C1=.002 mfd. C2=220 mmf. C3 and C5=250 mmf. C4=.005 mfd. R1=6.8 megohms. R2=470,000 ohms. R3=470,000 ohms.	$1.00

CAT. NO. PC-151 AUDET

(For use where greater low frequency response is required)

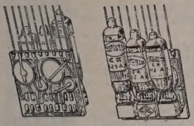
Consisting of	List Price
C1=.005 mfd. C2=220 mmf. C3 and C5=250 mmf. C4=.005 mfd. R1=6.8 megohms. R2=470,000 ohms. R3=470,000 ohms.	$1.15

Centralab CRL Centralab

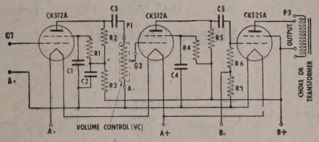
FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

PRINTED CIRCUITS P. E. C.

AMPEC—COMPLETE THREE STAGE AMPLIFIER



There's never been an electronic device like Centralab's Ampec. In this compact unit—permanently bonded to a master plate—are all the components of an audio amplifier—tube socket, capacitators, resistors, wiring—a three tube, three stage speech amplifier. Similar Centralab units are used widely in hearing aids, for the most trouble-free performance ever attained. Ampec has other interesting applications such as mike preamplifier, miniature or portable radio receiver (pocket type), amplification for walkie-talkie or portable amateur field equipment. Each unit packaged in a hinged cover plastic box, with complete instructions for use.



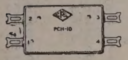
Size, 1¼" x 1⅛" x .340" over tube sockets. Capacitors, 100 V.D.C.W. Resistors, 1/5 watt. Recommended tube complement, T-1 and T-2 (see dwg.) Raytheon type CK512AX; T-3 Raytheon type CK525AX. Gain frequency performance—A voltage 1.2; input voltage, 1 millivolt; B voltage 22. 50,000 ohm plate output load. At 1000 cycles per second the amplification factor is 4000. Volume control (VC in dwg.) not furnished. The ideal control is Centralab Cat. No. B16-128 or switch type Cat. No. B16-228.

Cat. No.	Type	Consisting of	List Price
PC-200	AMPEC	Complete Three Stage Speech Amplifier, including three built-in sockets, less tubes.	**$15.00**
PC-201	AMPEC	Same as PC-200, but furnished complete with tubes, two CK512AX and one CK525AX.	**26.00**

Tubes—Listed separately as a matter of convenience.

Cat. No.	Consisting of	List Price
CK512AX	Raytheon Subminiature Voltage Amplifier Pentode Tube	**$3.40**
CK525AX	Raytheon Subminiature Output Pentode Tube	**4.25**

TELEVISION H-PADS FOR ATTENUATION OF SIGNAL STRENGTH



These handy Centralab P. E. C. units are specially designed for use in television antenna installations where signal strength needs attenuation to secure optimum performance. The proper H-Pad, in many instances will match the signal strength to the requirements of the receiver. This can prevent overloading, can eliminate tearing of the image, and improve both audio and video results. They are especially valuable where the television set is located too close to the broadcast station. In connection with a switching arrangement, they are helpful in balancing signals from stations which, because of high power or location, are too strong in relation to other stations. H-pads also are useful in matching impedance between the antenna and the receiver.

The H-Pad has four terminals, and is for installation in series with the standard 300 ohm antenna. Full directions are included.

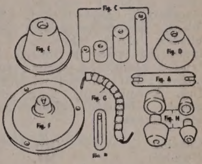
Size—1¼" x 13/16" x 3/16" thick.

Terminals—Solder terminals, 9/32" long.

Packaged—Singly in envelopes. In sets of four (PCH-100) in a plastic box.

Cat. No.	Type	Attenuation Rating	List Price
PCH-10	H-Pad	10 db	**$0.80**
PCH-20	H-Pad	20 db	**.80**
PCH-30	H-Pad	30 db	**.80**
PCH-40	H-Pad	40 db	**.80**
PCH-100 SET OF FOUR H-PADS. One each of the above, in plastic box			**3.00**

STEATITE



Centralab has been producing fine ceramics since 1928 . . . primarily for its own use in fixed resistors, ceramic capacitors, switches—and more recently, printed electronic circuits. Often called upon by other manufacturers to produce many "standard" and custom designs, some very intricate, Centralab is the only ceramic manufacturer capable of producing many of these in quantity. All items listed are Grade L-5 Steatite, approved without limitation for Army and Navy use.

Characteristics: Uniform, white appearance, high dielectric strength, exceedingly low loss at high frequencies, and strong mechanically. Impervious to moisture and common acids, will not warp, withstands high temperatures; harder than hardest quartz.

SPREADERS—STRAIN INSULATORS

Deluxe Grade—Fig. "A". Rounded and grooved. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-1	2¾"	½"	2"	**$0.70**
X-2	4"	¾"	3"	**1.00**
X-3	6"	¾"	5"	**1.25**

Standard Grade—Not illustrated. Square and rectangular bars. Packaged singly.

Cat. No.	O.A. Length	Size	Line Spacing	List Price
X-4	3"	½" x ⅜"	2"	**$0.15**
X-5	5"	½" x ½"	4"	**.25**
X-6	7"	½" x ½"	6"	**.45**

Deluxe Aircraft Type Insulator—Fig. B. Fully glazed. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-7	1½"	17/32"	¾"	**$0.65**

STANDOFF OR PILLAR INSULATORS

See Figure "C". Circumference glazed, tapped for screw sizes shown. "X" numbers below are catalog numbers.

Length	¼" Diam.* #6-32 Thd.	List Price	½" Diam.** #6-32 Thd.	List Price
½"	X-8	**$0.55**	X-12	**$0.12**
¾"	X-9	**.55**	X-13	**.15**
1"	X-10	**.60**	X-14	**.16**
1¼"	X-11	**.70**	X-15	**.17**
1½"			X-16	**.17**
2"			X-17	**.18**
2½"			X-18	**.19**
3"			X-19	**.20**

* Packaged 5 per carton.

Length	¾" Diam.** #10-32 Thd.	List Price	1" Diam.** ¼"-20 Thd.	List Price
¾"	X-20	**$0.16**		
1"	X-21	**.17**	X-28	**$0.18**
1¼"	X-22	**.18**	X-29	**.19**
1½"	X-23	**.18**	X-30	**.20**
2"	X-24	**.19**	X-31	**.21**
2½"	X-25	**.20**	X-32	**.23**
3"	X-26	**.22**	X-33	**.28**
4"	X-27	**.25**	X-34	**.33**
5"			X-35	**.37**

** Packaged singly.

FEED-THROUGH INSULATORS

Glazed Surface—No hardware included. Packaged singly.

Cat. No.	Fig.	Height	Base Diam.	Max.-Screw Size	List Price
X-36	D	⅞"	1¼"	10-32	**$0.25**
X-37	D	1⅛"	1¾"	¼"-20	**.30**
X-38	E	1⅝"	2½"	⅜"-16	**1.50**
X-39	F	1"	3⅛"	8-32	**1.50**

FISH SPINE BEADS

See Fig. G. Four beads will cover 1", or package of 100 covers 25" of buss wire. 5/16" O.D., ⅛" I.D. Packaged 100 per envelope.

CAT. NO. X-40. Carton of 100 Beads. List Price. **$1.25**

THROUGH PANEL BUSHINGS

See Fig. "H". Matched pairs of male and female bushings for feeding through chassis, panels, shields, racks or cases. No hardware included. Packaged—One matched pair per carton.

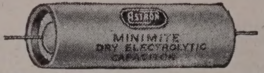
Cat. No. Pair	Top Height	Max. Diam.	Panel Hole	Panel Thickness	Max. Screw Size	List Price
X-41	⅛"	½"	5/16"	to ⅛"	6-32	**$0.30**
X-42	7/32"	⅝"	7/16"	to ⅛"	8-32	**.40**
X-43	⅜"	½"	¼"	to 3/16"	6-32	**.35**
X-44	⅜"	⅝"	⅜"	to ⅜"	8-32	**.40**
X-45	¾"	1⅛"	¾"	to ⅜"	10-32	**1.00**
X-46	1⅝"	1¼"	½"	to 2"	10-32	**1.70**

FOR MORE COMPLETE INFORMATION ON CRL COMPONENTS SEE YOUR DISTRIBUTOR.

ASTRON Capacitors

Dedicated
to Quality Output and
Golden Rule Service

"MINIMITE" TYPE MM METAL TUBULAR DRY ELECTROLYTICS



High quality compact electrolytic capacitors. Ideally suited for under-chassis and wherever mounting space is limited. Hermetically sealed in seamless extruded aluminum shells; covered with kraft board insulating sleeves; bare tinned wire leads for easy soldering and mounting. Exceptionally long shell life guaranteed. Fabricated to assure adequate voltage breakdown characteristics and very low leakage.

Catalog Number	Cap. Mf.	D.C. Wkg. Volts	Size† Diam.		Length	List Price
MM-10-25	10	25	½	x	1⅝	$ .75
MM-25-25	25	25	½	x	1⅝	.85
MM-50-25	50	25	⅝	x	1⅝	1.00
MM-100-25	100	25	⅝	x	1⅝	1.20
MM-10-50	10	50	½	x	1⅝	.80
MM-25-50	25	50	½	x	1⅝	.90
MM-50-50	50	50	⅝	x	1⅝	1.05
MM-8-150	8	150	½	x	1⅝	.80
MM-16-150	16	150	⅝	x	1⅝	.90
MM-20-150	20	150	⅝	x	1⅝	.95
MM-30-150	30	150	¾	x	1⅝	1.00
MM-40-150	40	150	¾	x	1⅝	1.10
MM-50-150	50	150	¾	x	2 1/16	1.20
MM-4-450	4	450	⅝	x	1⅝	.90
MM-8-450	8	450	¾	x	1⅝	.95
MM-10-450	10	450	¾	x	1⅝	1.05
MM-16-450	16	450	⅞	x	2 1/16	1.35
MM-20-450	20	450	1	x	2 1/16	1.50
MM-30-450	30	450	1	x	2⅜	1.65
MM-40-450	40	450	1	x	2 11/16	2.00
Dual Capacitance Units						
MM-2x20-150	20+20	150	¾	x	1⅝*	1.30
MM-2x30-150	30+30	150	⅞	x	1⅝*	1.50
MM-2x40-150	40+40	150	⅞	x	2 1/16*	1.70
MM-2x8-450	8+8	450	⅞	x	2 1/16*	1.70
MM-2x10-450	10+10	450	⅞	x	2 1/16*	1.85

†—Dimensions are for metal tubes. Add 1/16″ to diameter and ⅛″ to length for over-all dimensions for cardboard insulating sleeve.

*—Furnished with radial mounting strap.

TYPE ES CARDBOARD TUBE DRY ELECTROLYTICS

Internally wrapped in plastic film and contained in a strong, impregnated kraft tube filled with a high melting point wax. Long life and reliable performance assured. Capacity, voltage and polarity of each section clearly identified on container and by the color of the insulated leads (approximately 6 inches long). Supplied with mounting strap centrally located.

Catalog Number	Cap. Mf.	D.C. Wkg. Volts	Size Diam.		Length	List Price
Dual Units—Common Negative						
ES-2x10-25	10+10	25	9/16	x	2½	$1.05
ES-2x20-150	20+20	150	¾	x	2½	1.30
ES-2x30-150	30+30	150	⅞	x	2½	1.50
ES-2x40-150	40+40	150	1	x	2½	1.70
ES-5030-150	50+30	150	1	x	2½	1.70
ES-2x50-150	50+50	150	1	x	3	1.85
ES-8040-150	80+40	150	1⅛	x	3	2.00
Dual Units—Separate Sections						
ES-220	20+20	150	1	x	2⅜	2.00
Triple Units—Common Negative						
ES-3x20-150	20+20+20	150	1	x	2½	2.00
ES-310	40+30+20	150	1	x	3	2.15
ES-311	80+40+20	150	1⅛	x	3¼	2.50
ES-312	40+10/20	150/25	1	x	2½	1.95
ES-313	40+30/20	150/25	1	x	3	2.05
ES-314	40+40/40	150/25	1	x	3¼	2.20

TYPE EY TWIST PRONG DRY ELECTROLYTICS

Popular type used by leading radio and TV mfrs. Simple twist prong tab mounting and hermetically sealed in aluminum drawn can. Single and multiple sections. Suitable for operation at ambient temperatures up to 85°C.

Cathode, welded to mounting tab ring serves as negative terminal. Multiple section units concentrically wound with a common cathode. Terminal tabs, welded to terminal lugs, insure permanent low resistance connections. Terminal coding permanently metal-stamped on each unit. One metal and one insulating mounting plate supplied with each unit.

Catalog Number	Cap. Mf.	Volts D.C. Wkg.	Size Diam.		Length	List Price
Single Sections						
EY-50-150	50	150	1	x	2	$1.45
EY-100-150	100	150	1	x	2	2.10
EY-30-350	30	350	1	x	2	1.70
EY-50-350	50	350	1	x	3	2.05
EY-125-350	125	350	1⅜	x	3	3.55
EY-10-450	10	450	1	x	2	1.30
EY-20-450	20	450	1	x	2	1.75
EY-30-450	30	450	1	x	2½	1.90
EY-40-450	40	450	1	x	3½	2.25
EY-80-450	80	450	1⅜	x	3	3.85
Dual Sections						
EY-2x30-150	30+30	150	1	x	2	1.75
EY-5030-150	50+30	150	1	x	2½	1.95
EY-2x50-150	50+50	150	1	x	2½	2.10
EY-2x15-350	15+15	350	1	x	2	2.10
EY-2x20-350	20+20	350	1	x	2½	2.35
EY-2x10-450	10+10	450	1	x	2	2.10
EY-2x20-450	20+20	450	1	x	3	2.65
EY-2x40-450	40+40	450	1⅜	x	3	4.00
EY-8010-450	80+10	450	1⅜	x	3	4.25
EY 2x1000-15	1000+1000	15	1⅜	x	3	4.95
EY-200	250/1000	10/6	1	x	2	2.75
Triple Sections						
EY-310	40+40+40	25	1	x	2	2.15
EY-311	15+15/1200	150/1.5	1	x	2	2.80
EY-312	40+20/100	150/25	1	x	2½	3.00
EY-313	40+20/20	150/25	1	x	2	2.35
EY-314	50+30/30	150/25	1	x	2	2.45
EY-315	20+20+20	150	1	x	2	2.30
EY-316	40+40+40	150	1	x	2½	2.60
EY-317	15+15/20	350/25	1	x	2½	2.55
EY-318	30+30/50	350/50	1⅜	x	2½	3.05
EY-319	15+10/20	350/25	1	x	2	2.40
EY-320	10+10+10	450	1	x	3	2.50
EY-321	20+20+20	450	1⅜	x	3	3.45
EY-322	20+20/20	450/25	1	x	3	2.95
EY-323	40+20/25	450/50	1⅜	x	3	3.40
EY-324	60+30+10	450	1⅜	x	3½	4.25
Quadruple Sections						
EY-410	40+40+40/20	150/25	1⅜	x	2	3.15
EY-411	10+10+10+10	450	1⅜	x	2	3.25
EY-412	20+20+20+20	450	1⅜	x	3	4.50
EY-413	20/20/20/20	450/400 350/25	1⅜	x	3	3.80
EY-414	40+30+20/20	450/25	1⅜	x	3½	4.45

Mounting Plates

EYP-1	Metal Grounding plate for 1″ dia. Cans	.06
EYP-2	Insulating Plate for 1″ dia. Cans	.06
EYP-3	Metal Grounding Plate for 1⅜″ dia. Cans	.10
EYP-4	Insulating Plate for 1⅜″ dia. Cans	.10

ASTRON Capacitors

Dedicated
to Quality Output and
Golden Rule Service

"METALITE"

Metallized Paper Capacitors

Ultra compact, space-saving capacitors having the unique property of self-healing as well as long life. Will answer your miniaturization problems. Available in cardboard tubular containers, hermetically sealed metal containers and other standard and special designs.

ASTRON
METALITE
METALLIZED PAPER CAPACITOR

CARDBOARD TUBULARS

Type ML, furnished in kraft paper tubes; vacuum impregnated in mineral wax, and double coated with mineral wax for superior moisture-resistant properties. They are suitable for service up to 65°C.

Catalog	Cap.	Size			List
Number	Mf.	Diam.		Length	Price

200 Volts D-C Working

ML-2-01	.01	⅜	x	⅝	$ .65
ML-2-02	.02	⅜	x	⅝	.65
ML-2-05	.05	⅜	x	⅝	.65
ML-2-1	.1	⅜	x	⅝	.70
ML-2-25	.25	15/32	x	⅝	.90
ML-2-5	.5	15/32	x	1⅛	1.05
ML-2-1M	1.0	9/16	x	1⅛	1.30
ML-2-2M	2.0	⅝	x	1⅝	1.80

400 Volts D-C Working

ML-4-01	.01	⅜	x	⅝	.70
ML-4-02	.02	⅜	x	⅝	.70
ML-4-05	.05	15/32	x	⅝	.70
ML-4-1	.1	15/32	x	1⅛	.80
ML-4-25	.25	9/16	x	1⅛	1.00
ML-4-5	.5	⅝	x	1⅝	1.15
ML-4-1M	1.0	23/32	x	2⅛	1.60

600 Volts D-C Working

ML-6-01	.01	⅜	x	⅝	.70
ML-6-02	.02	⅜	x	⅝	.70
ML-6-03	.03	15/32	x	⅝	.80
ML-6-05	.05	15/32	x	⅝	.80
ML-6-1	.1	15/32	x	1⅛	.90
ML-6-25	.25	⅝	x	1⅛	1.10
ML-6-5	.5	23/32	x	1⅝	1.45
ML-6-1M	1.0	23/32	x	2⅛	1.80

STANDARD TOLERANCE:—20+30 percent. Lead length 1½ inches minimum.

ASTRON
METALITE

GLASS TERMINAL HERMETICALLY SEALED TUBULARS

Type MQC, encased in tinned non-ferrous shells with glass-to-metal hermetic terminal seals. Impregnated in mineral wax; available in 200 VDCW, 400 VDCW and 600 VDCW. Type MQM, mineral oil impregnated units for special applicators in 400 VDCW and 600 VDCW. Standardly supplied with one foil grounded to outer shell, type MQM is also available in an internally insulated construction as type MQCF or MQMF.

200 Volts D-C Working

MQC-2-01	.01	.250	x	13/16	$2.05
MQC-2-05	.05	.250	x	13/16	2.10
MQC-2-1	.1	.312	x	13/16	2.15
MQC-2-25	.25	.400	x	13/16	2.35
MQC-2-5	.5	.400	x	1 1/16	2.40
MQC-2-1M	1.0	.562	x	1¼	2.65
MQC-2-1.5M	1.5	.562	x	1¾	2.85
MQC-2-2M	2.0	.670	x	1-55/64	3.95

Number Catalog	Mf. Cap.	Diam. Size		Length	Price List

150 Volts D-C Working

MQC-1.5-4M	4.0	1	x	1-55/64	5.00
MQC-1.5-6M	6.0	1	x	1-55/64	5.85
MQC-1.5-8M	8.0	1	x	2-23/64	6.65

400 Volts D-C Working

MQM-4-01	.01	.250	x	13/16	2.10
MQM-4-03	.03	.312	x	13/16	2.15
MQM-4-05	.05	.312	x	1 1/16	2.20
MQM-4-1	.1	.400	x	1 1/16	2.25
MQM-4-25	.25	.562	x	1 1/16	2.45
MQM-4-5	.5	.562	x	1¾	2.75
MQM-4-1M	1.0	.670	x	2-23/64	3.05
MQM-4-1.5M	1.5	1	x	2-23/64	4.10
MQM-4-2M	2.0	1	x	2-23/64	4.65
MQM-4-4M	4.0	1⅛	x	2-23/64	6.85

600 Volts D-C Working

MQM-6-01	.01	.250	x	13/16	2.15
MQM-6-03	.03	.312	x	13/16	2.20
MQM-6-05	.05	.312	x	1 1/16	2.25
MQM-6-1	.1	.400	x	1 1/16	2.30
MQM-6-25	.25	.562	x	1¼	2.70
MQM-6-5	.5	.670	x	1¾	3.00
MQM-6-1M	1.0	.750	x	2-23/64	3.65
MQM-6-2M	2.0	1	x	2-23/64	5.15

STANDARD TOLERANCE: —15+25 percent. If plastic outer sleeving is required add "P" to type i.e.: MQCP-2-5. Add $.15 to list price for plastic sleeving. If internally insulated construction with glass-to-metal hermetic terminals at each end is required, specify the letter "F" (MQCF) and add 1/16" to length. Lead length 1¾" minimum.

ASTRON
METALITE

METAL ENCASED TUBULARS

These hermetically sealed metallized paper tubulars are mineral wax filled and impregnated. Designed for operation at ambients up to 85°C, they are available in types MRF — internally insulated and MRG — uninsulated.

200 Volts D-C Working

MRF-2-05	.05	⅜	x	29/32	$1.40
MRF-2-1	.1	7/16	x	29/32	1.45
MRF-2-25	.25	½	x	29/32	1.60
MRF-2-5	.5	½	x	1 13/32	1.70
MRF-2-1M	1.0	.670	x	1 13/32	2.10
MRF-2-2M	2.0	.670	x	1 29/32	3.60

150 Volts D-C Working

MRF-1.5-4M	4.0	1	x	1 31/32	4.35
MRF-1.5-6M	6.0	1	x	1 31/32	5.30
MRF-1.5-8M	8.0	1⅛	x	1 31/32	6.10
MRF-1.5-10M	10.0	1¼	x	1 31/32	7.20

400 Volts D-C Working

MRF-4-05	.05	½	x	29/32	1.45
MRF-4-1	.1	½	x	1 13/32	1.60
MRF-4-25	.25	.670	x	1 13/32	1.80
MRF-4-5	.5	.670	x	1 29/32	2.00
MFR-4-1M	1.0	¾	x	2 13/32	2.50
MRF-4-2M	2.0	1	x	2 15/32	3.60
MRF-4-3M	3.0	1⅛	x	2 15/32	4.80
MRF-4-4M	4.0	1¼	x	2 15/32	5.90

600 Volts D-C Working

MRF-6-02	.02	7/16	x	29/32	1.45
MRF-6-03	.03	7/16	x	29/32	1.50
MRF-6-05	.05	½	x	29/32	1.55
MRF-6-1	.1	½	x	1 13/32	1.70
MRF-6-2	.2	.670	x	1 13/32	1.90
MRF-6-25	.25	.670	x	1 13/32	2.00
MRF-6-5	.5	.670	x	1 29/32	2.40
MRF-6-1M	1.0	¾	x	2 13/32	3.00
MRF-6-2M	2.0	1⅛	x	2 15/32	4.00
MRF-6-3M	3.0	1¼	x	2 15/32	5.30

STANDARD TOLERANCE: —20+30 percent. For grounded section, metal-encased units, specify type MRG and deduct 3/32 inches from length.

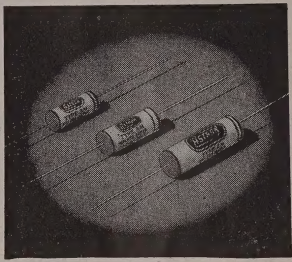
If plastic outer sleeving is required add "P" to type. i.e. MRFP-6-25 Add $.15 to list price. Lead length 1¾ inches minimum.

TYPE AM

Molded Paper TUBULARS

- **High Temperature**
- **Humidity Proof**
- **Heat Resistant**

These paper tubulars, molded in a high temperature, heat resistant, plastic compound which will not coldflow at 100°C. are perfectly sealed against severe conditions of humidity. Designed for continuous operation up to 85°C. and rated conservatively, they are ideal for TV, radio and other electronic applications.



Catalog	Cap.	Size			List
Number	Mf.	Diam.		Length	Price

200 Volts D.C.

AM-2-01	.01	⅜	x	1	$ .25
AM-2-02	.02	⅜	x	1	.25
AM-2-05	.05	⅜	x	1 3/16	.25
AM-2-1	.1	7/16	x	1 3/16	.35
AM-2-2	.2	⅝	x	1⅞	.45
AM-2-25	.25	⅝	x	1⅞	.45
AM-2-5	.5	⅝	x	1⅞	.60

400 Volts D.C.

AM-4-01	.01	⅜	x	1	.25
AM-4-02	.02	⅜	x	1 3/16	.25
AM-4-05	.05	7/16	x	1 3/16	.30
AM-4-1	.1	½	x	1⅝	.35
AM-4-2	.2	⅝	x	1⅞	.40
AM-4-25	.25	⅝	x	1⅞	.45

600 Volts D.C.

AM-6-001	.001	⅜	x	1	.25
AM-6-002	.002	⅜	x	1	.25
AM-6-003	.003	⅜	x	1	.25
AM-6-004	.004	⅜	x	1	.25
AM-6-005	.005	⅜	x	1	.25
AM-6-006	.006	⅜	x	1	.25
AM-6-01	.01	⅜	x	1 3/16	.30
AM-6-02	.02	7/16	x	1 3/16	.35
AM-6-03	.03	½	x	1⅝	.35
AM-6-05	.05	½	x	1⅝	.40
AM-6-08	.08	⅝	x	1⅞	.40
AM-6-1	.1	⅝	x	1⅞	.45

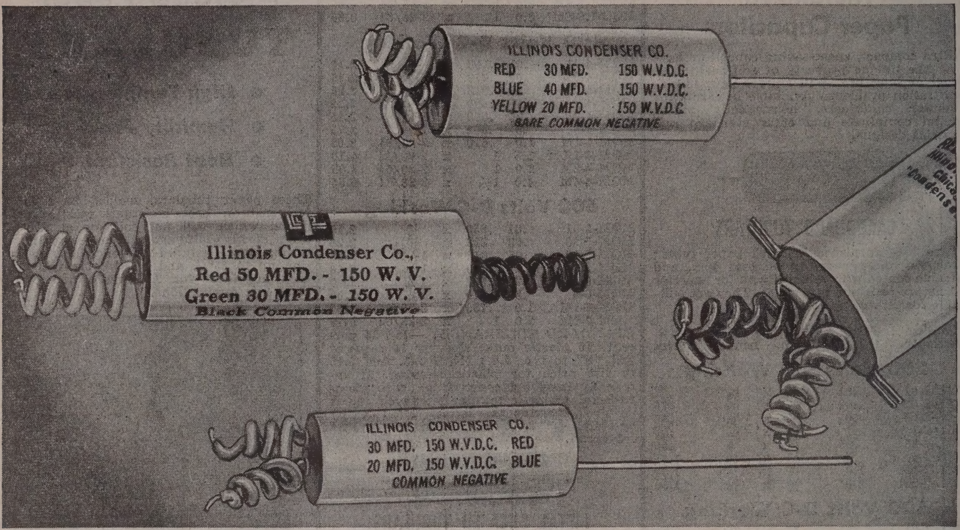
1600 Volts D.C.

AM-16-001	.001	⅜	x	1 3/16	.55
AM-16-002	.002	⅜	x	1 3/16	.55
AM-16-003	.003	⅜	x	1 3/16	.55
AM-16-005	.005	7/16	x	1 3/16	.55
AM-16-006	.006	7/16	x	1 3/16	.55
AM-16-008	.008	½	x	1⅝	.60
AM-16-01	.01	½	x	1⅝	.60
AM-16-015	.015	½	x	1⅝	.60
AM-16-02	.02	⅝	x	1⅞	.60
AM-16-03	.03	⅝	x	1⅞	.60

ILLINOIS CONDENSERS

"TIME TESTED QUALITY"

ILLINOIS CONDENSER COMPANY • 1616 N. THROOP STREET, CHICAGO 22, ILL.


ILLINOIS CONDENSER CO.
RED 30 MFD. 150 W.V.D.C.
BLUE 40 MFD. 150 W.V.D.C.
YELLOW 20 MFD. 150 W.V.D.C.
BARE COMMON NEGATIVE
Illinois Condenser Co.,
Red 50 MFD. - 150 W. V.
Green 30 MFD. - 150 W. V.
Black Common Negative
ILLINOIS CONDENSER CO.
30 MFD. 150 W.V.D.C. RED
20 MFD. 150 W.V.D.C. BLUE
COMMON NEGATIVE

Type IHC

**BUILT FOR LONG LIFE UNDER SEVEREST OPERATING CONDITIONS . . .
COLOR CODED LEADS ARE SECURELY ANCHORED . . .
COMMON NEGATIVE OR MULTIPLE NEGATIVE UNITS FOR ALL SERVICE APPLICATIONS**

"ILLINI-HYCAPS"

Through careful selection of high temperature sealing compounds and superior engineering design, these completely hermetically sealed, compact tubular electrolytic condensers are the acme of dependability. They operate efficiently under high temperatures and will give long life under all climatic conditions.

The small size and convenient mounting features of our type IHC "ILLINI-HYCAPS" make them popular in both manufacturing and replacement work.

Leads are color coded and securely anchored in the hard wax seal. Dual units have four leads for universal replacement work and are completely insulated.

TYPE IHC — DUAL UNITS — LOW VOLTAGE
Common Negative

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
IHC 1125	10-10	25	3/4"	1¾"	$1.40
IHC 1150	10-10	50	1"	1¾"	1.40
IHC 16815	16-8	150	1"	2"	1.55
IHC 161615	16-16	150	3/4"	2⅜"	1.55
IHC 2215	20-20	150	3/4"	2⅜"	1.65
IHC 2215-D	20-20	150 Dual Neg.	15/16"	2¾"	2.05

TYPE IHC — MULTIPLE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
IHC 3215	30-20	150	15/16"	2¾"	1.70
IHC 3315	30-30	150	15/16"	2¾"	1.80
IHC 4215	40-20	150	15/16"	2¾"	1.75
IHC 4415	40-40	150	15/16"	2¾"	1.85
IHC 5315	50-30	150	15/16"	2¾"	1.95
IHC 5515	50-50	150	1"	2⅞"	2.10
IHC 6215	60-20	150	15/16"	2¾"	1.95
IHC 8415	80-40	150	1"	2¾"	2.25
IHC 8815	80-80	150	1-1/8"	2¾"	2.50
IHC 125100	125-100	150	1-1/4"	3⅛"	3.10
IHC 2225	20-20/25	150/25	7/8"	2⅜"	2.05
IHC 8225	80-20/25	150/25	1"	2⅞"	2.55
IHC 84215	80-40-20	150	1-1/8"	2⅞"	2.75
IHC 43215	40-30-20	150	1"	2⅞"	2.35
IHC 53100	50-30/100	150/25	1"	3"	2.55
IHC 5525	50-50/25	150/25	1"	3"	2.50
IHC 44425	40-40/25	150/25	1"	2⅞"	2.25
IHC 22215	20-20-20	150	1"	2⅜"	2.20
IHC 12510025	125-100/25	150/25	1-1/4"	3"	3.00

LUG MOUNTING SEPARATE SECTIONS — DUAL NEGATIVES

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
ULM 2847	8-8	475 Dual Neg.	1-3/8"	3⅜"	3.60
ULM 21647	16-16	475 Dual Neg.	1-3/8"	3⅜"	4.35

ILLINOIS CONDENSERS

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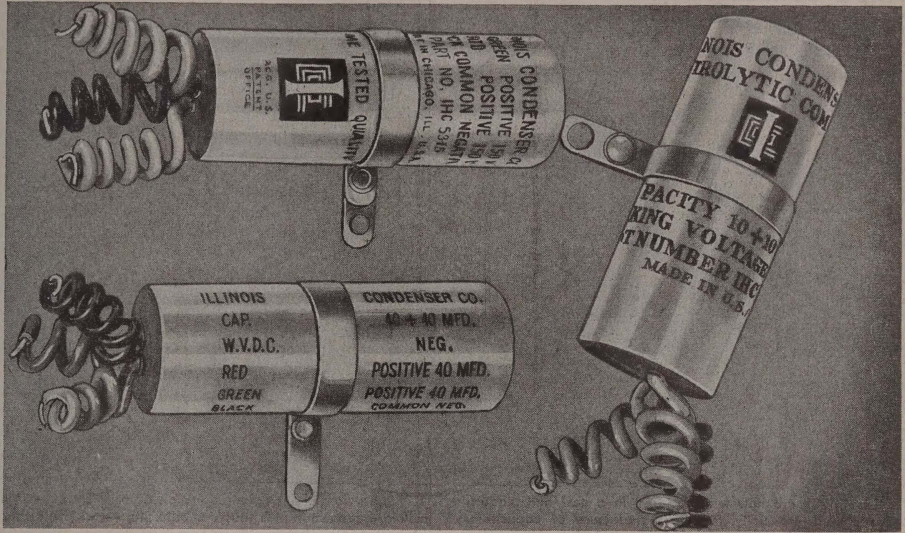
REG. U.S. PATENT OFFICE
TIME TESTED QUALITY
ILLINOIS CONDENSER CO.
GREEN POSITIVE 150 V.
RED POSITIVE 150 V.
BLACK COMMON NEGATIVE
PART NO. IHC 5315
MADE IN CHICAGO, ILL. U.S.A.
ILLINOIS CONDENSER CO.
CAP. 40 + 40 MFD.
W.V.D.C.
NEG.
RED POSITIVE 40 MFD.
GREEN POSITIVE 40 MFD.
BLACK COMMON NEG.
ILLINOIS CONDENSERS
ELECTROLYTIC CO.
CAPACITY 10+10
WORKING VOLTAGE
PART NUMBER IHC
MADE IN U.S.A.

TUBULAR ELECTROLYTICS

Type IHC

(continued)

Hermetically Sealed With High Temperature Compounds
Flexible Insulated Wire Leads Clamp Mounting

Clamp may be moved to any position on tube for rapid mounting.

TYPE IHC

VOLTAGE — SINGLE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
IHC 1245	12	450	⅞"	2¾"	$1.35
IHC 1645	16	450	15/16"	2¾"	1.40
IHC 2045	20	450	1"	2¾"	1.55
IHC 3045	30	450	1⅛"	2¾"	1.70
IHC 4045	40	450	1⅛"	2¾"	1.80
IHC 5045	50	450	1⅛"	3¼"	2.35
IHC 6045	60	450	1⅛"	3¼"	2.60
IHC 8045	80	450	1 3/16"	3¼"	2.95

HIGH SURGE — SINGLE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
IHC 12500	12	500	15/16"	2¾"	1.95
IHC 16500	16	500	15/16"	2¾"	2.00
IHC 20500	20	500	1"	2¾"	2.25
IHC 30500	30	500	1"	3¼"	2.40
IHC 40500	40	500	1⅛"	3¼"	2.65

HIGH VOLTAGE — MULTIPLE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	SIZE Length	List Price
IHC 8845	8-8	450 CN*	1⅛"	2¾"	1.70
IHC-D 8845	8-8	450 DN†	1⅛"	2¾"	2.10
IHC 101045	10-10	450 CN	1⅛"	2¾"	1.85
IHC-D 101045	10-10	450 DN	1⅛"	2¾"	2.20
IHC 16845	16-8	450 CN	1⅛"	3"	2.00
IHC 161645	16-16	450 CN	1 3/16"	3"	3.00
IHC-D 161645	16-16	450 DN	1 3/16"	3¼"	3.40
IHC 22450	20-20	450 CN	1 3/16"	3¼"	2.50
IHC 33450	30-30	450 CN	1¼"	3¼"	3.95
IHC 44450	40-40	450 CN	1⅜"	3¼"	4.10
IHC 801045	80-10	450	1⅜"	3¼"	4.25
IHC 88845	8-8-8	450	1 3/16"	3"	2.75
IHC 11145	10-10-10	450	1 3/16"	3"	3.00
IHC 66645	16-16-16	450	1¼"	3¼"	3.10
IHC 22245	20-20-20	450	1¼"	3¼"	3.95
IHC 222245	20-20-20-20	450	1⅜"	3⅜"	4.50

*CN Common Negatives
†DN Dual Negatives

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TIME TESTED QUALITY

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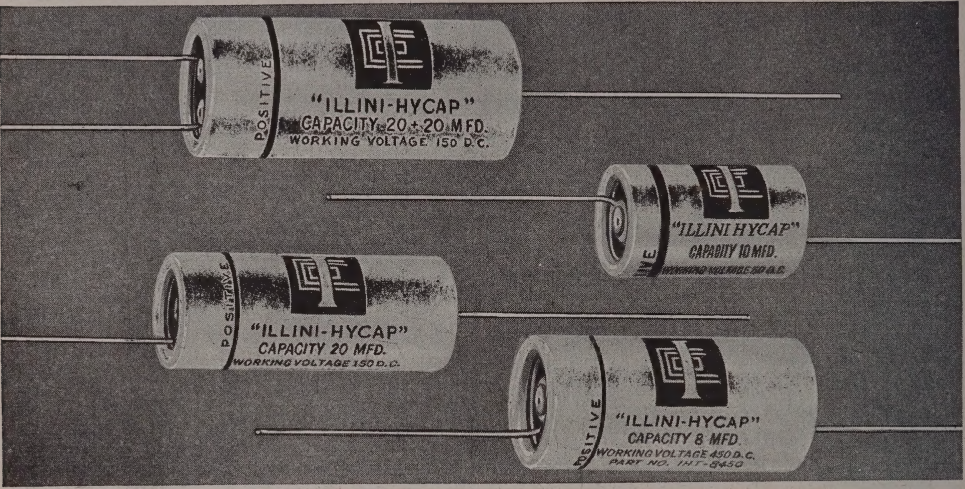


"ILLINI-HYCAPS" are now manufactured in a new and modern plant designed especially for the manufacture of capacitors. Our thorough engineering, plus old manufacturing skills and a rigid policy of quality control enables us to produce a product that is of unexcelled quality.

"ILLINI-HYCAPS" are again available, and you will agree after using them that they meet every requirement a superior condenser should have for long life and dependable service.

"ILLINI-HYCAPS" are guaranteed unconditionally for a period of one year, from date of purchase.

1. Short proof — ample separation of foils by highest purity cellulose separator plus tough anodic film — will withstand the highest surge voltages.
2. Condenser hermetically sealed and anchored in an aluminum shell. Completely resistant to changes due to temperature and humidity. Built to withstand all kinds of vibrations and shocks.
3. Attractive kraft tube spun over condenser ends . . . prevents shorting of pig tail leads to condenser or other components. Aluminum lock-washers hold leads securely in place, will not loosen or break off.
4. Low power factor, low leakage, excellent shelf life.
5. Extremely longer life — due to our use of C. P. chemicals and highest purity foils and insulation materials available. A balanced non-corrosive electrolyte contributes to quiet, stable operation.

Type IHT

"ILLINI-HYCAP" — TUBULAR ELECTROLYTIC CONDENSERS

HI-CAPACITY — LOW VOLTAGE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE		List Price
			Diameter	Length	
IHT 2505	250	5	13/16"	2¼"	$1.35
IHT 25005	500	5	13/16"	2¼"	1.55
IHT 10010	100	10	11/16"	1¾"	1.20
IHT 20010	200	10	13/16"	1¾"	1.70
IHT 40010	400	10	13/16"	2¼"	1.90
IHT 10006	1000	6	1-1/16"	2¼"	1.90
IHT 20006	2000	6	1-1/16"	2⅞"	2.30
IHT 10012	1000	12	1-1/16"	2⅞"	2.25
IHT 125	1	25	11/16"	1¾"	.90
IHT 425	4	25	11/16"	1¼"	1.00
IHT 109	10	90	11/16"	1¾"	1.00
IHT 5025	50	25	11/16"	1¾"	1.10
IHT 550	5	50	11/16"	1⅛"	1.00
IHT 1025	10	25	11/16"	1¼"	1.00
IHT 1050	10	50	11/16"	1¼"	1.00
IHT 2525	25	25	11/16"	1¼"	1.05
IHT 2590	25	90	11/16"	1¼"	1.20
IHT 5050	50	50	13/16"	1¾"	1.20
IHT 10025	100	25	13/16"	1¾"	1.35
IHT 415	4	150	11/16"	1¾"	1.00
IHT 8150	8	150	11/16"	1¼"	1.05
IHT 10150	10	150	11/16"	1¼"	1.05
IHT 12150	12	150	11/16"	1¾"	1.10
IHT 16150	16	150	11/16"	1¾"	1.15
IHT 2015	20	150	11/16"	1¾"	1.20
IHT 2415	24	150	11/16"	1¾"	1.20
IHT 3015	30	150	13/16"	1¾"	1.30
IHT 4015	40	150	13/16"	1¾"	1.35
IHT 5015	50	150	13/16"	1¾"	1.40
IHT 7515	75	150	15/16"	2"	1.55
IHT 10015	100	150	15/16"	2¼"	1.75

ILLINOIS CONDENSERS
"TIME TESTED QUALITY"

ILLINOIS CONDENSER COMPANY • 1616 N. THROOP STREET, CHICAGO 22, ILL.

POSITIVE
"ILLINI-HYCAP"
CAPACITY 20 + 20 MFD.
WORKING VOLTAGE 150 D.C.
"ILLINI HYCAP"
CAPACITY 10 MFD.
"ILLINI-HYCAP"
CAPACITY 20 MFD.
WORKING VOLTAGE 150 D.C.
"ILLINI-HYCAP"
CAPACITY 8 MFD.
WORKING VOLTAGE 450 D.C.
PART NO. IHT-8450

"ILLINI-HYCAP" Electrolytic Capacitors

Type IHT

(continued)

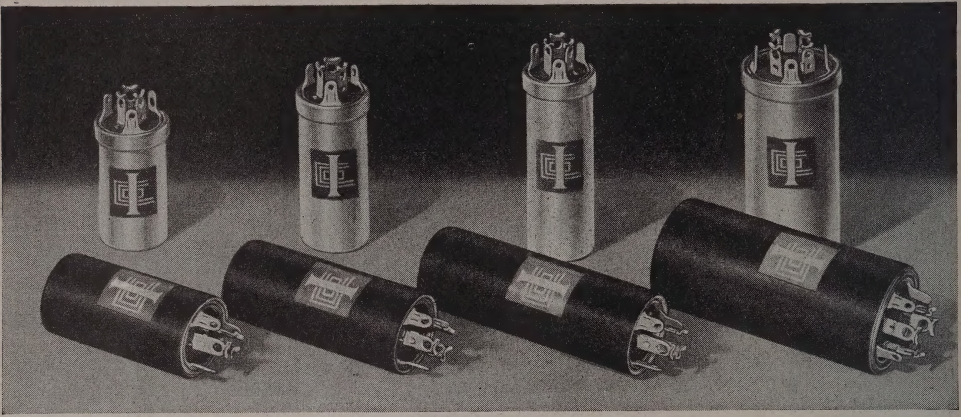
INTERMEDIATE VOLTAGE UNITS

Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	Length	List Price
IHT 40175	40	175	13/16"	1¾"	$1.45
IHT 50175	50	175	13/16"	1¾"	1.75
IHT 60175	60	175	13/16"	2 3/16"	1.95
IHT 30200	30	200	13/16"	2 3/16"	1.45
IHT 8250	8	250	11/16"	1¾"	1.15
IHT 16250	16	250	13/16"	1¾"	1.30
IHT 20250	20	250	13/16"	1¾"	1.35
IHT 30250	30	250	15/16"	2"	1.45
IHT 40250	40	250	13/16"	2¼"	1.75
IHT 80250	80	250	1-1/8"	2¼"	2.30
IHT 8300	8	300	11/16"	1¾"	1.15
IHT 2035	20	350	1-1/16"	2¼"	1.45
IHT 3035	30	350	1-1/16"	2¼"	1.65
IHT 4035	40	350	1-1/16"	2⅞"	1.75
HIGH VOLTAGE					
IHT 4450	4	450	11/16"	1¾"	1.15
IHT 6450	6	450	13/16"	1¾"	1.15
IHT 8450	8	450	13/16"	1¾"	1.25
IHT 10450	10	450	13/16"	1¾"	1.30
IHT 1245	12	450	3/4"	2¼"	1.35
IHT 1645	16	450	3/4"	2¼"	1.40
IHT 2045	20	450	1-1/16"	2¼"	1.55
IHT 3045	30	450	1-1/16"	2¼"	1.70
IHT 4045	40	450	1-1/16"	2¾"	1.80
IHT 5045	50	450	1-1/16"	2¾"	2.10
TYPE IHT — SPECIAL HIGH VOLTAGE					
IHT 8500	8	500	15/16"	1⅞"	1.30
IHT 16500	16	500	1-1/16"	1⅞"	2.20
IHT 20500	20	500	1-1/16"	2¼"	2.45
IHT 30500	30	500	1-1/16"	2⅞"	2.75
IHT 40500	40	500	1-1/16"	2⅞"	3.00
TYPE IHT — DUAL UNITS — ALUMINUM CAN — LOW VOLTAGE					
IHT 2215M	20-20	150	15/16"	1⅞"	1.65
IHT 3315M	30-30	150	15/16"	2¼"	1.80
IHT 4415M	40-40	150	15/16"	2¼"	1.85
IHT 5315M	50-30	150	15/16"	2¼"	1.95
TYPE IHT — DUAL UNITS — ALUMINUM CAN					
IHT 8845M	8-8	450	1-1/16"	2¼"	1.70
IHT 121245M	12-12	450	1-1/16"	2¼"	2.00
IHT 16845M	16-8	450	1-1/16"	2¼"	2.00
IHT 161645M	16-16	450	1-1/16"	2⅞"	2.25
IHT 2245M	20-20	450	1-1/16"	2⅞"	2.50

ILLINOIS CONDENSERS

"TIME TESTED QUALITY"

ILLINOIS CONDENSER COMPANY • 1616 N. THROOP STREET, CHICAGO 22, ILL.



Type UMP

FOR *TELEVISION,* RADIO, ELECTRONICS

Illinois standard, twist prong mounting condensers offer a wider range of voltage and capacity types than have heretofore been possible in units of comparable size. They are designed to give maximum efficiency, both in operating characteristics and ease of mounting and wiring.

The electrical characteristics of our type UMP are superb. Capacities are always plus. This, coupled with low power factor and low leakage, makes them ideal for use in all electronic circuits.

Units are hermetically sealed in seamless drawn aluminum cans. Mounting and soldering lugs are sturdy and heavily tinned. Cathode tabs are electrically welded to mounting ring. Each unit is vibration proof—and they will stand up in any climate.

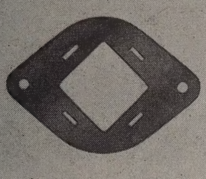
Arranged in a variety of can sizes and capacity combinations, the attached listing represents the majority of condenser types in use today.

SINGLE UNITS

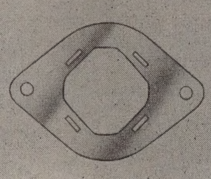
Part No.	Capacity Mfd.	Working Voltage D. C.	SIZE Diameter	Length	List Price
UMP-13	3000	10	1⅜"	3"	$2.78
UMP-15	1000	15	1"	3"	2.55
UMP-12	2000	15	1⅜"	3"	3.45
UMP-21	100	25	1"	2"	1.65
UMP-25	500	25	1"	3"	2.55
UMP-205	1000	25	1⅜"	3"	3.55
UMP-505	500	50	1⅜"	3"	2.65
UMP-150	50	150	1"	2"	1.65
UMP-165	100	150	1"	3"	2.00
UMP-254	40	250	1"	2½"	1.80
UMP-258	80	250	1"	3"	2.30
UMP-355	50	350	1"	3"	2.10
UMP-351	125	350	1⅜"	3"	3.65
UMP-400	10	450	1"	3"	1.55
UMP-415	15	450	1"	2"	1.70
UMP-420	20	450	1"	2"	1.80
UMP-430	30	450	1"	2½"	1.95
UMP-440	40	450	1"	3"	2.05
UMP-480	80	450	1⅜"	3"	3.05
UMP-610	10	525	1"	2½"	1.85
UMP-620	20	525	1"	3"	2.65
UMP-630	30	525	1⅜"	2½"	2.95
UMP-640	40	525	1⅜"	3"	3.20

ILLINOIS CONDENSERS
"TIME TESTED QUALITY"

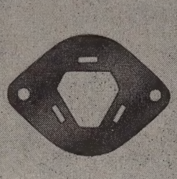
ILLINOIS CONDENSER COMPANY • 1616 N. THROOP STREET, CHICAGO 22, ILL.



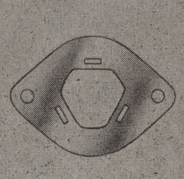
1-3/8" Diameter
BAKELITE Mounting
Plate Part No. MPB-1



1-3/8" Diameter
STEEL Mounting Plate
Part No. MPS-2



1" Diameter
BAKELITE Mounting
Plate Part No. MPB-3



1" Diameter
STEEL Mounting
Plate Part No. MPS-4

Type UMP (continued)

Part Number	Capacity MFD	Working Voltage DC	SIZE Dia.	SIZE Length	List Price
	DUAL UNITS				
UMP-101	1000-1000	15	1 3/8"	3"	$4.40
UMP-551	500-50	5-150	1"	3"	2.30
UMP-555	50-50	50	1"	2"	1.70
UMP-144	40-40	150	1"	2 1/2"	1.90
UMP-153	50-30	150	1"	2 1/2"	2.00
UMP-155	50-50	150	1"	2 1/2"	2.15
UMP-184	80-40	150	1"	3"	2.30
UMP-111	100-100	150	1 3/8"	3"	3.40
UMP-125	125-150	150	1 3/8"	3 1/4"	3.75
UMP-222	200-200	150	1 3/8"	3 1/4"	4.25
UMP-322	20-20	250	1"	2"	1.90
UMP-340	40-40	250	1"	3"	2.55
UMP-344	40-40	350	1 3/8"	3"	3.15
UMP-384	80-50	450-50	1 3/8"	3"	3.40
UMP-428	20-80	450-350	1 3/8"	3"	3.75
UMP-411	10-10	450	1"	2"	1.90
UMP-422	20-20	450	1"	3"	2.55
UMP-444	40-40	450	1 3/8"	3"	3.45
UMP-481	80-10	450	1 3/8"	3"	4.20
	TRIPLE UNITS				
UMP-2225	20-20-20	25	1"	2"	1.95
UMP-1222	20-20-20	150	1"	2"	2.35
UMP-1444	40-40-40	150	1"	3"	2.60
UMP-1422	40-20-20	150	1"	3"	2.40
UMP-1842	80-40-20	150	1"	3"	2.90
UMP-1332	30-30 20	150 25	1"	2"	2.35
UMP-1425	40-20 25	150 25	1"	2"	2.30
UMP-1531	50-30 100	150 25	1"	2 1/2"	2.50
UMP-1825	80-20 20	150 25	1"	3"	2.65

Part Number	Capacity MFD	Working Voltage DC	SIZE Dia.	SIZE Length	List Price
UMP-1441	40-40 100	150 10	1"	3"	$2.75
UMP-1552	50-50 20	150 25	1"	3"	2.65
UMP-3311	30-10-10	350	1"	3"	2.95
UMP-3111	10-10-10	350	1"	2"	2.40
UMP-3151	15-10 20	350 25	1"	2"	2.70
UMP-3312	30-10 20	350 25	1"	2 1/2"	2.85
UMP-4112	10-10 20	450 25	1"	2"	2.40
UMP-4222	20-20 20	450 25	1"	3"	3.05
UMP-4442	40-40 20	450 25	1 3/8"	3"	3.95
UMP-4111	10-10-10	450	1"	2 1/2"	2.60
UMP-4220	20-20-20	450	1 3/8"	2 1/2"	3.60
UMP-4313	30-15 30	450 150	1 3/8"	3"	3.85
UMP-4418	40-10 80	450 150	1 3/8"	3"	4.65
UMP-4410	40-40-10	450	1 3/8"		4.50
UMP-4440	40-40-40	450	1 3/8"	3 1/4"	4.95
UMP-4412	40-40 100	450 200	1 3/8"	3 1/4"	4.95
	QUADRUPLE UNITS				
UMP-14432	40-40-30 20	150 25	1 3/8"	2"	3.10
UMP-18431	80-40-30 100	150 25			3.75
UMP-44312	40-30-10 20	450 25	1 3/8"	3"	4.50
UMP-41111	10-10-10-10	450	1 3/8"	2"	3.35
UMP-42222	20-20-20-20	450	1 3/8"	3"	4.70

NOTE: Outer Insulating sleeves are available upon special order for all of the above can sizes. A metal and bakelite mounting washer is supplied with each unit. Individually packaged in a sturdy, attractive varnished box.

ILLINOIS CONDENSERS

"TIME TESTED QUALITY"

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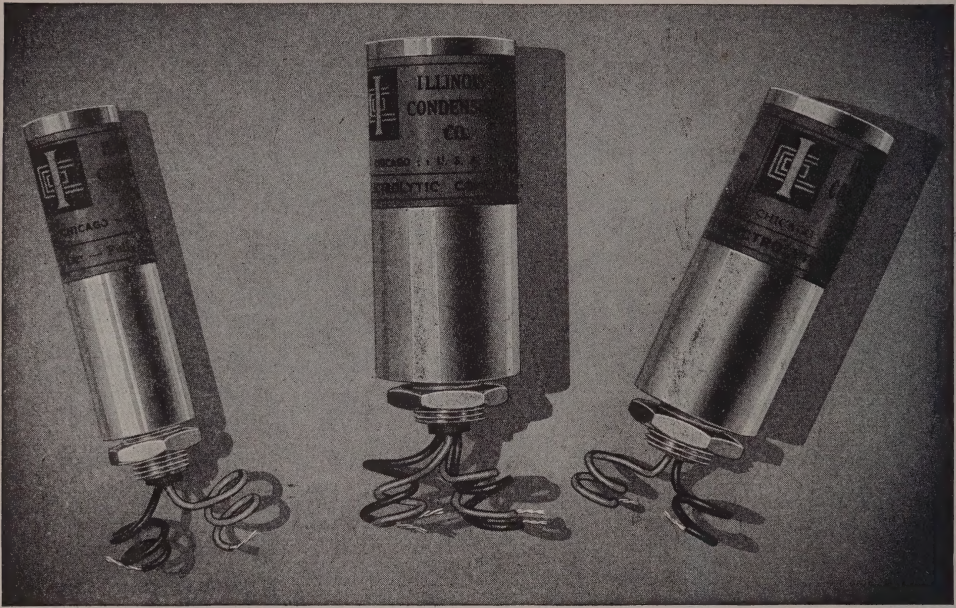


TYPE LN

Inverted Screw Mounting

ALUMINUM CAN CONDENSERS

Type LN aluminum can condensers are manufactured to operate satisfactorily under the severest conditions. Units are completely sealed in an inner impregnated tube then resealed. Correct design has allowed for maximum heat dissipation with resultant ability of the condensers to operate at higher temperatures and higher voltage surges.

Separate negative and positive leads for each section for universal replacement work. Palnut furnished with each condenser, individually packaged in attractive, varnished outer box. These units are ideal for long life and continuous service.

TYPE LN — SINGLE UNITS

Part No.	Cap. Mfd.	Working Volt. D.C.	SIZE		List Price
			Dia.	Length	
LN 80	8	450	1⅜"	3⅜"	$2.20
LN 120	120	450	1⅜"	3⅜"	2.40
LN 16	16	450	1⅜"	3⅜"	2.45
LN 20	20	450	1⅜"	3⅜"	2.75
LN 25	25	450	1⅜"	3⅜"	2.85
LN 30	30	450	1⅜"	3⅜"	3.00
LN 40	40	450	1½"	3½"	3.15
LN 50	50	450	1½"	3½"	3.65
LN 60	60	450	1½"	3½"	3.95
LN 8045	80	450	1½"	3½"	4.90

DUAL SECTION UNITS

Part No.	Cap. Mfd.	Working Volt. D.C.	Dia.	Length	List Price
LN 88	8-8	450	1⅜"	3⅜"	3.00
*LN-D 88	8-8	450	1⅜"	3⅜"	3.75
LN 1010	10-10	450	1⅜"	3½"	3.10
LN 168	16-8	450	1⅜"	3⅜"	3.30
LN 1212	12-12	450	1⅜"	3⅜"	3.20
*LN-D 1212	12-12	450	1½"	3⅜"	3.95
LN 216	16-16	450	1⅜"	3⅜"	3.55
*LN-D 216	16-16	450	1½"	3½"	4.10
LN 22	20-20	450	1½"	3½"	3.80
LN 33	30-30	450	1½"	3½"	4.50
LN 44	40-40	450	1½"	3½"	4.95

*D Dual Negatives

TRIPLE SECTION UNITS

Part No.	Cap. Mfd.	Working Volt. D.C.	SIZE		List Price
			Dia.	Length	
LN 388	8-8-8	450	1½"	3½"	$5.00
LN 311	10-10-10	450	1½"	3½"	5.30
LN 316	16-16-16		1½"	3½"	5.50
LN 320	20-20-20		1½"	3½"	5.80

QUAD SECTION

Part No.	Cap. Mfd.	Working Volt. D.C.	Dia.	Length	List Price
LN 48	8-8-8-8	450	1½"	3½"	4.85
LN 410	10-10-10-10	450	1½"	3½"	5.20

SINGLE & DUAL UNITS — 500 VDC

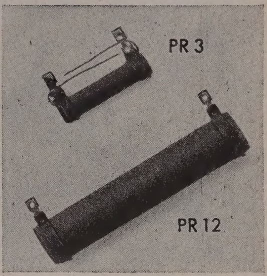
Part No.	Cap. Mfd.	Working Volt. D.C.	Dia.	Length	List Price
LN 850	8	500	1⅜"	3⅜"	2.25
LN 1650	16	500	1⅜"	3⅜"	2.95
LN 8850	8-8	500	1½"	3⅜"	3.35
LN 16850	16-8	500	1½"	3⅜"	3.85

SINGLE UNITS — 600 VDC

Part No.	Cap. Mfd.	Working Volt. D.C.	Dia.	Length	List Price
LN 600	4	600	1⅜"	3⅜"	2.95
LN 8600	8	600	1⅜"	3⅜"	3.15
LN 12600	12	600	1⅜"	3⅜"	3.50
LN 16600	16	600	1½"	3½"	3.75
LN 20600	20	600	1½"	3½"	4.50

WIRT WIRE WOUND FIXED RESISTORS

WIRE WOUND FIXED RESISTORS



To satisfy the most exacting needs of the Radio and Electronic Industries, Wirt Fixed Wire-wound Resistors are regularly furnished in PHENOCOTE protective coatings, developed and steadily improved over a period of many years in the Wirt Laboratories. The resistor wire is space wound on low loss ceramic tubes. The PHENOCOTE covering is an exclusive organic cement coating offering maximum protection to the resistance winding against the detrimental effects of moisture, humidity and electrolysis. Absolutely inert chemically, it will not effect the most delicate windings. It is particularly recommended for fine wire sizes and all applications where the maximum temperature of the unit will not exceed 300° F. These Resistors are universally used in the Radio, Electronic, Instrument, Public Address and Test Equipment fields.

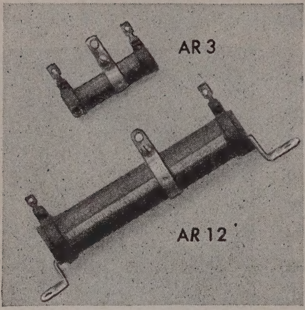
TABLE OF SPECIFICATIONS OF FIXED RESISTORS

Cat. No.	Sizes		Resistance Limits (Ohms)	List Price (Ea.)	Accessories Terminals	Mounting Brackets	Mounting Centers	Packing
	Watts	Phys.						
PR 1	5	⅜"x1"	1 to 10000	$0.53	Soldering Lugs & Wire Leads	None	......	10 to a box
PR 3	10	⅜"x1¾"	1 to 10000	.59	Soldering Lugs & Wire Leads	None	......	10 to a box
			11 to 25000	.65				
PR 4	20	½"x2"	5 to 15000	.91	Soldering Lugs & Wire Leads	None	......	10 to a box
			16000 to 50000	1.11				
			51000 to 100000	1.43				
PR 12	50	¾"x4"	5 to 5000	1.56	Soldering Lugs	2	5"	Individual
			5100 to 25000	1.82				
			26000 to 100000	2.08				
PR 19	100	1⅛"x6½"	5 to 5000	2.15	Soldering Lugs	2	7"	Individual
			5100 to 25000	2.54				
			26000 to 50000	2.86				
			51000 to 75000	3.25				
			76000 to 100000	3.58				
PR 22	160	1⅛"x8½"	5 to 10000	2.86	Soldering Lugs	2	9"	Individual
			11000 to 50000	3.43				
			51000 to 100000	3.86				
PR 23	200	1⅛"x10½"	5 to 10000	3.58	Soldering Lugs	2	11"	Individual
			11000 to 100000	4.29				

When ordering state: Quantity, Catalogue Number and Resistance Value.

WIRT

WIRE WOUND ADJUSTABLE RESISTORS



WIRE WOUND ADJUSTABLE RESISTORS

WIRT Adjustable Resistors are space wound on low loss ceramic tubes to which the resistance wire is bonded, resulting in dependability and long life. Protection of the windings is afforded by the PHENOCOTE covering which is described fully on the preceeding page. One adjustable Slider Band, screw driver type, is furnished as standard. Bakelite knob type bands can be furnished on special order at slightly higher prices as shown below. These bands are made with small contact buttons located on the inside of the band so that a number of taps may be made without shorting out excessive resistance.

TABLE OF SPECIFICATIONS OF ADJUSTABLE RESISTORS

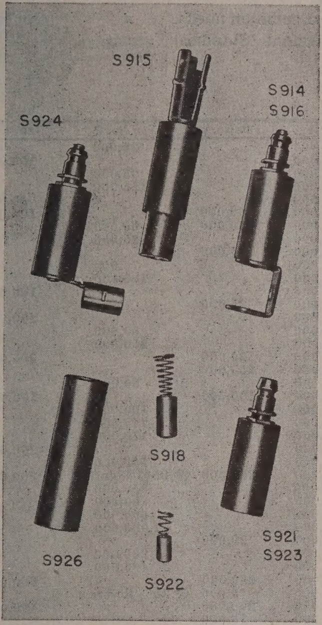
Cat. No.	Sizes		Resistance Limits (Ohms)	List Price (Ea.)	Accessories			Mounting Centers	Packing
	Watts	Phys.			Terminals	Brackets Mounting	Slider Bands		
AR 3	10	⅜″x1¾″	1 to 10000	$0.98	Soldering Lugs	None	1	......	Individual
AR 7	25	¾″x2″	1 to 5000	1.24	Soldering Lugs	2	1	3″	Individual
			6000 to 15000	1.43					
			20000 to 25000	1.56					
AR 12	50	¾″x4″	5 to 5000	1.95	Soldering Lugs	2	1	5″	Individual
			7000 to 25000	2.15					
			30000 to 50000	2.47					
			60000 to 100000	2.86					
AR 15	75	¾″x6″	10 to 5000	2.54	Soldering Lugs	2	1	7″	Individual
			7500 to 25000	2.86					
			30000 to 50000	3.25					
			60000 to 100000	3.58					
AR 19	100	1⅛″x6½″	5 to 10000	2.86	Soldering Lugs	2	1	7″	Individual
			15000 to 50000	3.25					
			75000 to 100000	3.90					
AR 22	160	1⅛″x8½″	5 to 10000	3.25	Soldering Lugs	2	1	9″	Individual
			15000 to 50000	4.15					
			60000 to 100000	4.65					
AR 23	200	1⅛″x10½″	5 to 10000	4.29	Soldering Lugs	2	1	11″	Individual
			15000 to 100000	5.01					

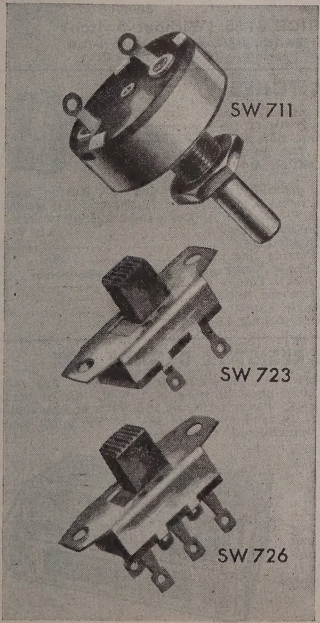
Extra Adjustable Slider Bands are obtainable and priced as follows:

Wattage Size	Screw Driver Type		Bakelite Knob Type
10, 25, 50, 75	$0.26	List Price Each	$0.39
100, 160, 200	.33	List Price Each	.50

When ordering state: Quantity, Catalogue Number and Resistance Value.

WIRT SUPPRESSORS and SWITCHES





AUTO RADIO IGNITION SUPPRESSORS

Wirt Suppressors are made with moulded black bakelite housings. All metal parts are made of rugged unfinished brass. Terminals are securely fastened to casings and sealed with special moisture and heat resisting dielectric cement. Resistor pills are sprayed with zinc and then double impregnated with a special moisture-proofing compound. Resistance value of all standard types is 10000 ohms ±20%; for FV8 types 50000 ohms ±20%. The distributed capacity is less than 1.5 mmf. Resistance values will not change more than 7% after being submerged in water for 100 hours. Test by sparking 1800 times per minute at 10,000 volts for 100 hours produces resistance change of not more than 3%. Wirt Suppressors are impervious to heat, oil, moisture and mild acids, and will not change in resistance more than 10% in 50,000 miles of operation.

Cat. No.	Type	List Price
S914	Bracket—Standard	$0.30 Each
S916	Bracket—For FV-8	.30 Each
S915	Distributor—Slip Fitting	.30 Each
S918	FV-8 Brush—Years 1933-34-35	.30 Each
S922	FV-8 Brush—Years 1936 to 1940	.30 Each
S921	Universal Screw—Standard	.30 Each
S923	Universal Screw—For FV-8	.30 Each
S924	Snap-on Plug	.30 Each
S926	Cable—Screw Fitting	.30 Each

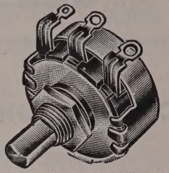
WIRT SLIDE SWITCHES

General: All Wirt Slide Switches are compact and sturdy. Housings are made of steel and are cadmium plated. The physical dimensions of the switches have been standardized, width 35/64", length 1-13/32" and mounting centers 1⅛". Standard buttons are of black bakelite. All contacts and terminals are silver plated. Switches SW723 and SW725 are supplied with a dot which indicates the "On" position. These switches are used in the Radio, Signal, Phonograph and Instrument industries.

Cat. No.	Type	List Price
SW723	SPST Slide Switch, .75A-125V-AC-DC, 2 Terminals	$0.31 Each
SW724	SPDT Slide Switch, .75A-125V-AC-DC, 3 Terminals	.37 Each
SW725	DPST Slide Switch, .50A-125V-AC-DC, 4 Terminals	.44 Each
SW726	DPDT Slide Switch, .50A-125V-AC-DC, 6 Terminals	.55 Each

CLAROSTAT

SERIES "M" COMPOSITION ELEMENT CONTROLS



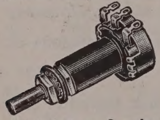
Composition-element affording greatest stability. Clarostat Series A Switch may be added. Series 60-High-Voltage Coupler may be attached for high-voltage operation.

Dia.: 1⅛". Shaft: 2⅛". Soft metal. ⅜-32 brass bushing.

Cat. No.	Ohms	Curve	Suggested Use
M-5-S	500	S	Std. Pot.
M-8-S	1000	S	Std. Pot.
M-11-S	2000	S	Std. Pot.
M-15-S	3000	S	Std. Pot.
M-80-S	4000	S	Std. Pot.
M-19-S	5000	S	Std. Pot.
M-20-U	5000	U	Ant. & C — Bias
M-23-S	7500	S	Std. Pot.
M-27-S	10,000	S	Std. Pot.
M-29-U	10,000	U	Ant. & C — Bias
M-30-V	10,000	V	C Bias Rheo.
M-31-W	10,000	W	Sc. Grid & Phono.
M-81-Z	10,000	Z	Ant. Shunt
M-32-S	15,000	S	Std. Pot.
M-33-U	15,000	U	Ant. & C — Bias
M-34-V	15,000	V	C Bias Rheo.
M-35-W	15,000	W	Sc. Grid & Phono.
M-36-S	20,000	S	Std. Pot.
M-37-U	20,000	U	Ant. & C — Bias
M-40-S	25,000	S	Std. Pot.
M-41-W	25,000	W	Sc. Grid & Phono.
M-72-V	25,000	V	C Bias Rheo.
M-42-S	30,000	S	Std. Pot.
M-43-S	40,000	S	Std. Pot.
M-44-S	50,000	S	Std. Pot.
M-45-W	50,000	W	Sc. Grid & Phono.
M-46-Z	50,000	Z	Auto Grid & Tone
M-47-S	75,000	S	Std. Pot.
M-48-V	75,000	V	C Bias Rheo.
M-49-S	100,000	S	Std. Pot.
M-51-Z	100,000	Z	Audio & Tone
M-52-S	200,000	S	Std. Pot.
M-55-S	250,000	S	Std. Pot.
M-64-Z	250,000	Z	Audio & Tone
M-57-S	300,000	S	Std. Pot.
M-58-S	500,000	S	Std. Pot.
M-59-Y	500,000	Y	Audio Shunt
M-60-Z	500,000	Z	Audio & Tone
M-79-Z	750,000	Z	Audio & Tone
M-61-S	1,000,000	S	Std. Pot.
M-63-Z	1,000,000	Z	Audio & Tone
M-66-Z	2,000,000	Z	Tone & AVC
M-83-S	2,000,000	S	Std. Pot.
M-84-S	2,500,000	S	Std. Pot.
M-67-Z	3,000,000	Z	Tone & AVC
M-68-Z	4,000,000	Z	Tone & AVC
M-85-S	5,000,000	S	Std. Pot.
M-69-Z	5,000,000	Z	Tone & AVC
M-86-S	10,000,000	S	Std. Pot.
M-99-Z	10,000,000	Z	Tone & AVC

LIST PRICE $1.25

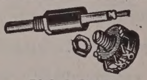
Standard Packing — 10 (ten) per carton



High-Voltage Coupler

Cat. No.		
M-49-S HVC	100 K ohms	S
M-55-S HVC	250 K ohms	S
M-58-S HVC	500 K ohms	S
M-61-S HVC	1 megohm	S
M-83-S HVC	2 megohms	S

List Price $3.10 each



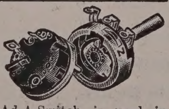
Pick-A-Shaft High-Voltage Coupler

May be used with Clarostat Pick-A-Shaft Controls Types AT and AM, AG and AK.

Cat. No.		List Price
59-186	Spacer and Bushing Assembly	$1.00
RN-3"	Non-Metallic Shaft, (Round)	$0.85

Original "AD-A-SWITCH" Feature for Series "M," "AM," "T," "AT" Controls

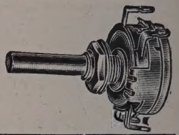
Cat. No.	Wiring	List Price
SW-A	Single-Pole Single-Throw	$0.60
SW-A1	Three-Way, No "Off" position S.P.D.T.	.75
SW-A2	Double-Pole, Single-Throw..	.75
SW-A4	Four-Wire (to control A, B and C voltages)	.75
SW-A5	S.P.S.T. (reverse action)..	.75
SW-A6	S.P.S.T. with dummy lug..	.75



Ad-A-Switch is used in place of usual dust-protection cover, and lugs bend over to hold it in place.

SERIES "T" TAPPED CONTROLS

Tapped for most common needs. Composition-element. Standard units listed.

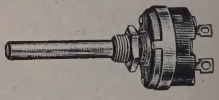


Cat. No.	Ohms	Tap No. 1	Tap No. 2	Tap No. 3
T-25	50,000		25,000	
T-38	200,000			100,000
T-39	250,000		25,000	
T-42	250,000		125,000	
T-43	250,000			50,000
T-44	250,000	60,000		125,000
T-45	250,000	30,000	60,000	
T-60	350,000		25,000	
T-69	350,000	75,000		
T-70	350,000		75,000	
T-78	500,000		100,000	
T-80	500,000			100,000
T-81	500,000	25,000		
T-82	500,000			200,000
T-88	500,000		50,000	
T-90	500,000		250,000	
T-92	500,000	100,000		300,000
T-98	1,000,000	250,000		
T-101	1,000,000		50,000	
T-102	1,000,000	100,000		500,000
T-103	1,000,000		100,000	
T-109	1,000,000		225,000	
T-110	1,000,000		170,000	
T-111	1,000,000			200,000
T-112	1,000,000		500,000	
T-95	1,500,000	250,000	@ 25% Rotation	500,000
T-125	1,500,000		350,000	
T-114	2,000,000		100,000	
T-115	2,000,000		500,000	
T-116	2,000,000		1,000,000	
T-118	2,000,000	20,000		
T-119	2,000,000		200,000	
T-120	2,000,000		400,000	
T-121	2,000,000	250,000		500,000
T-124	2,000,000	5,000	@ 25% Rotation	
T-126	2,000,000	200,000		400,000
T-129	2,000,000	15,000		
T-123	2,500,000	250,000		500,000
T-128	4,000,000		500,000	

LIST PRICE $1.85 (Without Switch)

For Power Switch, see Series SW listed below.
Standard Packing — 10 (ten) per carton

ROTARY SWITCHES



★ Compact, positive contact, bakelite, molded and Underwriters' approved. Rated 1 amp. 250 volt; 3 amp. 125 volt. The physical dimensions of the switch are as follows:
Diameter 1 3/32", body depth 9/16", lug protrusion ¼", locking projection on a 17/32" radius, rotation for actuation 30 degrees. All standard stock numbers have ⅜" bushing, 1½" shaft, and 1 locking projection.

Cat. No.	Switch Description	List Price
8590	Single Pole Single-Throw	$0.60
8591	Single Pole Bussing Lug	.75
8592	Double Pole Single Throw	.75
8593	Single Pole Double Throw	.75
8594	Single Pole Reversed Action	.75
8595	Four Wire Single Throw	.75

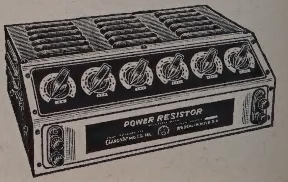
Standard packing 10 (ten) per carton.

POWER RESISTOR DECADE BOX

★ For power resistance measurements under actual load. Any value from 1 ohm to 999,999 ohms in steps of 1 ohm. No resistance breakdown between steps. Power rating of 225 watts and maximum voltage of 1000 volts DC and 660 volts AC. Heavy gauge metal case in frosted gray wrinkle, and etched panel.

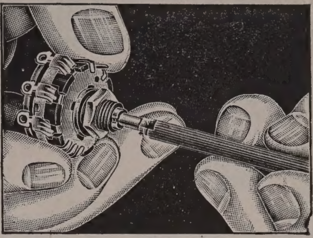
Dimensions: 13 in. long; 8½ in. deep; 5¾ in. high. Weight, 11 lbs. Suggested Uses: Resistance determination. Load Resistance. Meter Multiplier. Calibrating Meters. Providing any desired ohmage as a universal power resistor.

List Price $90.00



CLAROSTAT

SERIES "AM" & "AT" UNIVERSAL PICK-A-SHAFT CONTROLS
Standard and Tapped for Every Service Need



Same controls as Series "M" and Series "T," but including the Pick-A-Shaft feature for versatility with minimum stock.

PICK-A-SHAFT CONTROLS SERIES "AM"

Cat. No.	Ohms	Curve	Suggested Use
AM-5-S	500	S	Std. Pot.
AM-8-S	1,000	S	Std. Pot.
AM-11-S	2,000	S	Std. Pot.
AM-15-S	3,000	S	Std. Pot.
AM-80-S	4,000	S	Std. Pot.
AM-19-S	5,000	S	Std. Pot.
AM-20-U	5,000	U	Ant. & C — Bias
AM-23-S	7,500	S	Std. Pot.
AM-27-S	10,000	S	Std. Pot.
AM-29-U	10,000	U	Ant. & C — Bias
AM-30-V	10,000	V	C Bias Rheo.
AM-31-W	10,000	W	Sc. Grid & Phono.
AM-81-Z	10,000	Z	Ant. Shunt
AM-32-S	15,000	S	Std. Pot.
AM-33-U	15,000	U	Ant. & C — Bias
AM-34-V	15,000	V	C Bias Rheo.
AM-35-W	15,000	W	Sc. Grid & Phono.
AM-36-S	20,000	S	Std. Pot.
AM-37-U	20,000	U	Ant. & C — Bias
AM-40-S	25,000	S	Std. Pot.
AM-41-W	25,000	W	Sc. Grid & Phono.
AM-72-V	25,000	V	C Bias Rheo.
AM-42-S	30,000	S	Std. Pot.
AM-43-S	40,000	S	Std. Pot.
AM-44-S	50,000	S	Std. Pot.
AM-45-W	50,000	W	Sc. Grid & Phono.
AM-46-Z	50,000	Z	Audio & Tone
AM-47-S	75,000	S	Std. Pot.
AM-48-V	75,000	V	C Bias Rheo.
AM-49-S	100,000	S	Std. Pot.
AM-51-Z	100,000	Z	Audio & Tone
AM-52-S	200,000	S	Std. Pot.
AM-55-S	250,000	S	Std. Pot.
AM-64-Z	250,000	Z	Audio & Tone
AM-57-S	300,000	S	Std. Pot.
AM-58-S	500,000	S	Std. Pot.
AM-59-Y	500,000	Y	Audio Shunt
AM-60-Z	500,000	Z	Audio & Tone
AM-79-Z	750,000	Z	Audio & Tone
AM-61-S	1,000,000	S	Std. Pot.
AM-63-Z	1,000,000	Z	Audio & Tone
AM-83-S	2,000,000	S	St. Pot.
AM-66-Z	2,000.000	Z	Tone & AVC
AM-84-S	2,500,000	S	Std. Pot.
AM-67-Z	3,000,000	Z	Tone & AVC
AM-68-Z	4,000,000	Z	Tone & AVC
AM-85-S	5,000,000	S	Std. Pot.
AM-69-Z	5,000,000	Z	Tone & AVC
AM-86-S	10,000,000	S	Std. Pot.
AM-99-Z	10,000,000	Z	Tone & AVC

LIST PRICE **$1.25** (Without Switch)
Standard Packing—10 (ten) per carton.

SERIES "AT" PICK-A-SHAFT CONTROLS

Cat. No.	Ohms	Tap No. 1	Tap No. 2	Tap. No.3
AT-25	50,000		25,000	
AT-38	200,000			100,000
AT-39	250,000		25,000	
AT-42	250,000		125,000	
AT-43	250,000			50,000
AT-44	250,000	60,000		125,000
AT-45	250,000	30,000	60,000	
AT-60	350,000		25,000	
AT-69	350,000	75,000		
AT-70	350,000		75,000	
AT-78	500,000		100,000	
AT-80	500,000			100,000
AT-81	500,000	25,000		
AT-82	500,000			200,000
AT-88	500,000		50,000	
AT-90	500,000		250,000	
AT-92	500,000	100,000		300,000
AT-98	1,000,000	250,000		
AT-101	1,000,000		50,000	
AT-102	1,000,000	100,000		500,000
AT-103	1,000,000		100.000	
AT-109	1,000,000		225,000	
AT-110	1,000.000		170,000	
AT-111	1,000,000			200,000
AT-112	1,000,000		500,000	
AT-95	1,500,000	250,000 @ 25% Rotation		500,000
AT-125	1,500,000		350,000	
AT-114	2,000,000		100,000	
AT-115	2,000,000		500,000	
AT-116	2,000,000		1,000,000	
AT-118	2,000,000	20,000		
AT-119	2,000,000		200,000	
AT-120	2,000,000		400,000	
AT-121	2,000,000	250,000		500,000
AT-124	2,000,000	5,000 @ 25% Rotation		
AT-126	2,000.000	200,000		400,000
AT-129	2,000.000	15,000		
AT-123	2,500,000	250,000		500,000
AT-128	4,000,000		500,000	

LIST PRICE **$1.85** (Without Switch)
Standard Packing—10 (ten) per carton.

DUAL SERIES DC CONTROLS

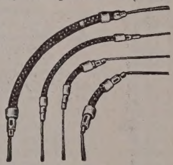
★ The Series DC controls are carbon dual units—two controls of the same resistance values and tapers, connected in tandem for joint operation.

Cat. No.	Panel Unit	Rear Unit	Cat. No.	Panel Unit	Rear Unit
DC-34-S	10,000-S	25,000-S	DC-10-Z	500,000-Z	500,000-Z
DC-23-S	10,000-S	50,000-S	DC-11-Z	1,000,000-Z	1,000,000-Z
DC- 5-S	50,000-S	50,000-S	DC-35-S	1,000,000-S	1,000,000-S
DC- 6-Z	100,000-Z	100,000-Z	DC-36-S	2,000,000-S	2,000,000-S
DC-29-S	250,000-S	250.000-S	DC-37-S	5,000,000-S	5,000,000-S
DC- 8-Z	250,000-Z	250,000-Z			

LIST PRICE $3.10
Standard packing—Individual carton.

GLASOHMS*

★ A resistance wire-winding on a fibre-glass core. Covering of braided glass-fibre. Completely flexible. May be operated very hot as there is nothing to char. Handy and inexpensive.



TYPE FYG — 2-WATT
1″ Fabric Length with 2″ Pigtails
⅛″ dia. core. RMA Color-coded

Cat. No.	Ohms	Cat. No.	Ohms
FYG5	5	FYG350	350
FYG10	10	FYG375	375
FYG15	15	FYG400	400
FYG25	25	FYG500	500
FYG35	35	FYG600	600
FYG40	40	FYG700	700
FYG50	50	FYG750	750
FYG60	60	FYG800	800
FYG75	75	FYG850	850
FYG100	100	FYG900	900
FYG125	125	FYG1000	1000
FYG150	150	FYG1250	1250
FYG200	200	FYG1500	1500
FYG225	225	FYG1600	1600
FYG250	250	FYG1750	1750
FYG300	300	FYG2000	2000

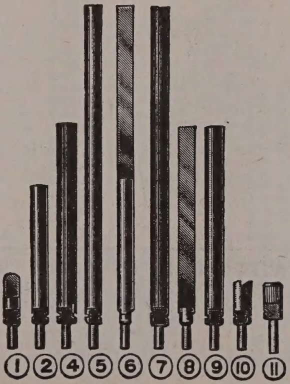
LIST PRICE $0.30
Standard Packing—10 (ten) per carton.

Choice of Pick-A-Shafts

★ A choice of Pick-A-Shafts (shown at right) covers all requirements, as follows:

Cat No.	Description
(1) SS-⅜″ length	(Male) to take female fitting
(2) RS-2	Round shaft, 2″ long
(4) KSS-3	Knurled, split shaft 3″ lg.
(5) RS-5	Round shaft, 5″ long
(6) FS-5	Flatted shaft, 5″ long
(7) KSS-5	Knurled, split shaft, 5″ lg.
(8) FS-3	Flatted shaft, 3″ long
(9) RS-3	Round Shaft, 3″ long
(10) DFS-½	Double flatted Philco Type ½″ long
(11) FKS-¼	Fine knurled slotted shaft ¼″ long

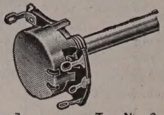
List price of each shaft.............................$0.30
One selected shaft furnished **FREE** with each Pick-A-Shaft control.



CLAROSTAT

SERIES "K" AND "AK" TAPPED 15/16" DIA. CONTROLS

SERIES "K" TAPPED CONTROLS



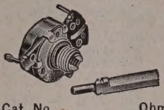
★ 15/16" diameter composition-element controls tapped at most commonly needed values. Factory-equipped with 3" shaft. Takes anyone of Series SWB Ad-A-Switches listed below.

Cat. No.	Ohms	Tap No. 1	Tap No. 3
K38	200,000		100,000
K43	250,000		50,000
K69	350,000	75,000	
K80	500,000		100,000
K81	500,000	25,000	
K82	500,000		200,000
K98	1,000,000	250,000	
K111	1,000,000		200,000
K118	2,000,000	20,000	
K124	2,000,000	5,000	
K129	2,000,000	15,000	

LIST PRICE $1.85

Standard Packing—10 (ten) per carton.

SERIES "AK" TAPPED CONTROLS



★ Same as controls listed at left except offering the added advantage of Clarostat Pick-A-Shaft, in addition to Ad-A-Switch. Takes anyone of 11 shafts listed under Pick-A-Shaft.

Cat. No.	Ohms	Tap No. 1	Tap No. 3
AK38	200,000		100,000
AK43	250,000		50,000
AK69	350,000	75,000	
AK80	500,000		100,000
AK81	500,000	25,000	
AK82	500,000		200,000
AK98	1,000,000	250,000	
AK111	1,000,000		200,000
AK118	2,000,000	20,000	
AK124	2,000,000	5,000	
AK129	2,000,000	15,000	

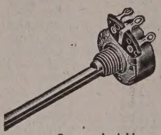
LIST PRICE $1.85

Standard Packing—10 (ten) per carton.

SERIES "G" AND "AG" 15/16" DIA. CONTROLS

SERIES "G" CONTROLS

★ Composition-element controls, 15/16" diameter in all the most commonly needed values. Feature Ad-A-Switch by which any Series SWB switch may be added.



Cat. No.	Ohms	Curve	Suggested Use
G-5-S	500	S	Std. Pot.
G-8-S	1,000	S	Std. Pot.
G-11-S	2,000	S	Std. Pot.
G-15-S	3,000	S	Std. Pot.
G-80-S	4,000	S	Std. Pot.
G-19-S	5,000	S	Std. Pot.
G-23-S	7,500	S	Std. Pot.
G-27-S	10,000	S	Std. Pot.
G-30-V	10,000	V	C Bias Rheo.
G-31-W	10,000	W	Sc. Grid & Phono.
G-81-Z	10,000	Z	Ant. Shunt
G-32-S	15,000	S	Std. Pot.
G-34-V	15,000	V	C Bias Rheo.
G-35-W	15,000	W	Sc. Grid & Phono.
G-36-S	20,000	S	Std. Pot.
G-40-S	25,000	S	Std. Pot.
G-41-W	25,000	W	Sc. Grid & Phono.
G-72-V	25,000	V	C Bias Rheo.
G-42-S	30,000	S	Std. Pot.
G-43-S	40,000	S	Std. Pot.
G-44-S	50,000	S	Std. Pot.
G-45-W	50,000	W	Sc. Grid & Phono.
G-46-Z	50,000	Z	Audio & Tone
G-47-S	75,000	S	Std. Pot.
G-48-V	75,000	V	C Bias Rheo
G-49-S	100,000	S	Std. Pot.
G-51-Z	100,000	Z	Audio & Tone
G-52-S	200,000	S	Std. Pot.
G-55-S	250,000	S	Std. Pot.
G-64-Z	250,000	Z	Audio & Tone
G-57-S	300,000	S	Std. Pot.
G-58-S	500,000	S	Std. Pot.
G-60-Z	500,000	Z	Audio & Tone
G-79-Z	750,000	Z	Audio & Tone
G-61-S	1,000,000	S	Std. Pot.
G-63-Z	1,000,000	Z	Audio & Tone
G-66-Z	2,000,000	Z	Audio & Tone
G-83-S	2,000,000	S	Std. Pot.
G-84-S	2,500,000	S	Std. Pot.
G-67-Z	3,000,000	Z	Audio & Tone
G-68-Z	4,000,000	Z	Audio & Tone
G-69-Z	5,000,000	Z	Audio & Tone
G-85-S	5,000,000	S	Std. Pot.

LIST PRICE $1.25

Standard Packing—10 (ten) per carton.

SERIES "AG" CONTROLS

Same control as listed at left. Features Pick-A-Shaft construction in addition to Ad-A-Switch. 10 shaft types available as listed under Pick-A-Shaft.

Cat. No.	Ohms	Curve	Suggested Use
AG-5-S	500	S	Std. Pot.
AG-8-S	1,000	S	Std. Pot.
AG-11-S	2,000	S	Std. Pot.
AG-15-S	3,000	S	Std. Pot.
AG-80-S	4,000	S	Std. Pot.
AG-19-S	5,000	S	Std. Pot.
AG-23-S	7,500	S	Std. Pot.
AG-27-S	10,000	S	Std. Pot.
AG-30-V	10,000	V	C Bias Rheo.
AG-31-W	10,000	W	Sc. Grid & Phono.
AG-81-Z	10,000	Z	Ant. Shunt
AG-32-S	15,000	S	Std. Pot.
AG-34-V	15,000	V	C.Bias Rheo.
AG-35-W	15,000	W	Sc. Grid & Phono.
AG-36-S	20,000	S	Std. Pot.
AG-40-S	25,000	S	Std. Pot.
AG-41-W	25,000	W	Sc. Grid & Phono.
AG-72-V	25,000	V	C Bias Rheo.
AG-42-S	30,000	S	Std. Pot.
AG-43-S	40,000	S	Std. Pot.
AG-44-S	50,000	S	Std. Pot.
AG-45-W	50,000	W	Sc. Grid & Phono.
AG-46-Z	50,000	Z	Audio & Tone
AG-47-S	75,000	S	St. Pot.
AG-48-V	75,000	V	C Bias Rheo.
AG-49-S	100,000	S	Std. Pot.
AG-51-Z	100,000	Z	Audio & Tone
AG-52-S	200,000	S	Std. Pot.
AG-55-S	250,000	S	Std. Pot.
AG-64-Z	250,000	Z	Audio & Tone
AG-57-S	300,000	S	Std. Pot.
AG-58-S	500,000	S	Std. Pot.
AG-60-Z	500,000	Z	Audio & Tone
AG-79-Z	750,000	Z	Audio & Tone
AG-61-S	1,000,000	S	Std. Pot.
AG-63-Z	1,000,000	Z	Audio & Tone
AG-66-Z	2,000,000	Z	Audio & Tone
AG-83-S	2,000,000	S	Std. Pot.
AG-84-S	2,500,000	S	Std. Pot.
AG-67-Z	3,000,000	Z	Audio & Tone
AG-68-Z	4,000,000	Z	Audio & Tone
AG-69-Z	5,000,000	Z	Audio & Tone
AG-85-S	5,000,000	S	Std. Pot.

LIST PRICE $1.25

Standard Packing—10 (ten) per carton.

SERIES SWB AD-A-SWITCH FOR "G," "AG," "K" AND "AK" CONTROLS

For the first time a switch is offered for installation in the field to popular-sized 15/16" controls. Now the serviceman does not have to stock all the popular controls in duplication—with switches and without switches.

These switches add to all Clarostat Series K, AK, G and AG controls in a matter of seconds for a permanent, excellent assembly. All are rated at 5 amperes at 125 Volts A.C.

AD-A-SWITCH Feature for "G," "AG," "K," "AK" Controls

These Switches are rated 5 Amperes at 125 Volts A.C.

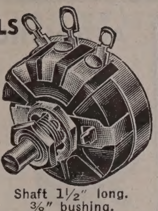
Cat. No.	Wiring	List Price
SWB	Single Pole Single Throw	$0.60
SWB-1	Threeway No "Off" Position S.P.D.T.	.75
SWB-2	Double Pole Single Throw	.75

Standard Packing—10 (ten) per carton.

CLAROSTAT

SERIES 58 WIRE-WOUND CONTROLS

★ Sturdy and reliable, yet capable for delicate control use. Noiseless in operation. Ideal for radio and laboratory work. Switch position at extreme counter-wise direction. Tested at 500 Volts A.C.



Shaft 1½" long. ⅜" bushing.

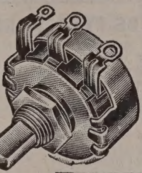
Cat. No.	Res. Ohms	List	Cat. No.	Res. Ohms	List
58-1	1	$1.25	58-15	15	1.25
58-2	2	1.25	58-20	20	1.25
58-4	4	1.25	58-25	25	1.25
58-6	6	1.25	58-30	30	1.25
58-10	10	1.25			

Cat. No.	Res. Ohms	List	Cat. No.	Res. Ohms	List
58-40	40	$1.25	58-3000	3000	$1.25
58-50	50	1.25	58-5000	5000	1.25
58-60	60	1.25	58-7500	7500	1.25
58-75	75	1.25	58-10K	10,000	1.25
58-100	100	1.25	58-15K	15,000	1.60
58-200	200	1.25	58-20K	20,000	1.60
58-300	300	1.25	58-25K	25,000	1.60
58-400	400	1.25	58-30K	30,000	2.25
58-500	500	1.25	58-40K	40,000	2.25
58-750	750	1.25	58-50K	50,000	2.25
58-1000	1000	1.25	10-75K*	75,000	3.50
58-2000	2000	1.25	10-100K*	100,000	3.50

Power switch attached at factory. Designate with "S." S.P.S.T. standard. If other type desired, state so.

SERIES 43 MIDGET WIRE-WOUND CONTROLS

★ Space-saving wire-wound type. Winding on bakelite strip. Rotor sweeps inside of winding. Molded bakelite housing. 1⅛" dia. x 9/16" body depth. ⅞" deep with switch. ⅜" bushing. Switch attached at factory.

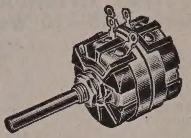


Resistance Ohms	Current-carrying Capacity in Ma.	Type No. Without Switch	Type No. With Switch
5	630	43-5	43S-5
10	450	43-10	43S-10
20	320	43-20	43S-20
25	280	43-25	43S-25
30	260	43-30	43S-30
40	225	43-40	43S-40
50	200	43-50	43S-50
75	165	43-75	43S-75
100	140	43-100	43S-100
150	115	43-150	43S-150
200	100	43-200	43S-200
300	90	43-300	43S-300
400	70	43-400	43S-400
500	65	43-500	43S-500
750	55	43-750	43S-750
1,000	45	43-1000	43S-1000
2,000	31	43-2000	43S-2000
3,000	26	43-3000	43S-3000
4,000	22	43-4000	43S-4000
5,000	20	43-5000	43S-5000
7,500	16	43-7500	43S-7500
10,000	14	43-10000	43S-10000

LIST PRICE $1.25. With switch $1.85
Standard packing — 10 (ten) per carton.

CONSTANT IMPEDANCE CONTROLS

★ Self-compensating volume controls or attenuators known as L-pads and T-pads are essential in eliminating the distortion that arises from the mismatching of impedances in broadcast transmission, sound recording or public address systems. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated equipment in a circuit can be kept within the limits of a constant required value.



These pads have a continuous range from 0.5 to 30 decibels attenuation in 90% of rotation, the last 10% affording infinite attenuation. Employable at either the source or the load in a circuit (see diagrams) these units are readily one-hole mounted. They afford a wide range of uses as mixers, faders, multiple-speaker controls, etc. Such controls can be used as individual volume controls for multiple-speaker systems, without affecting or changing the source impedance.

These units are rated at 2½ watts when used on DC or constant frequency signals. However, they have successfully been used up to 10 watts on audio circuits.

SERIES CIT Wire-Wound T-Pads

Cat. No.	Resistance in Ohms	List Price
CIT-6	6	$4.25
CIT-8	8	4.25
CIT-15	15	4.25
CIT-50	50	4.25
CIT-100	100	4.25
CIT-200	200	4.25
CIT-250	250	4.25
CIT-500	500	4.25
CIT-600	600	4.25
CIT-1000	1000	4.25
CIT-2000	2000	4.25

SERIES CIL Wire-Wound L-Pads

Cat. No.	Resistance in Ohms	List Price
CIL-6	6	$3.75
CIL-8	8	3.75
CIL-15	15	3.75
CIL-50	50	3.75
CIL-100	100	3.75
CIL-200	200	3.75
CIL-250	250	3.75
CIL-500	500	3.75
CIL-600	600	3.75
CIL-1000	1000	3.75
CIL-2000	2000	3.75

GREENOHM JR. WIRE-WOUND RESISTORS

★ Handy, inexpensive, ceramic-cased midget wire-wound resistors for tight spots, especially with point-to-point wiring. These tiny resistors take the place of more cumbersome and costlier bracket-mounted units. This "junior" version of the well-known Greenohm power resistors features a wire winding on fibre-glass core, 1½" axial pigtail leads, and a steatite protective casing sealed with exclusive Greenohm cold-setting inorganic cement. This resistor will not blister, crack, or change shape. Type C7GJ, 1¾" long by 5/16" dia., rated at 7 watts. Smaller Type C4GJ, 1" long by 5/16" dia., rated at 4 watts. In characteristic Greenohm green, with printed values on casing.

Cat. No.	List Price
Type C7GJ (1 to 5000 ohms)	$0.55
Type C4GJ (1 to 1000 ohms)	.55

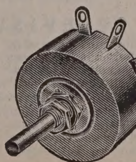
Series PW-25—25 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
PW-25-1	1	5.000	7.500	$5.85
PW-25-2	2	3.536	5.304	5.20
PW-25-3	3	2.887	4.330	5.20
PW-25-6	6	2.041	3.062	5.20
PW-25-8	8	1.768	2.652	5.20
PW-25-10	10	1.581	2.372	5.20
PW-25-15	15	1.291	1.936	5.20
PW-25-25	25	1.000	1.500	5.20
PW-25-35	35	.845	1.268	5.20
PW-25-50	50	.707	1.061	5.20
PW-25-75	75	.577	.866	5.20
PW-25-100	100	.500	.750	5.20
PW-25-125	125	.447	.671	5.20
PW-25-175	175	.378	.567	5.20
PW-25-250	250	.316	.474	5.20
PW-25-350	350	.267	.401	5.20
PW-25-500	500	.224	.335	5.20
PW-25-750	750	.183	.274	5.20
PW-25-1000	1000	.158	.237	5.85
PW-25-1500	1500	.129	.194	5.85
PW-25-2500	2500	.100	.150	5.85
PW-25-3500	3500	.085	.127	6.20
PW-25-5000	5000	.071	.107	6.50

Standard Packing—Individual Carton

POWER RHEOSTATS

★Exceptionally rugged. Trouble-free design. Withstand severe overloading without smoking, burning, charring. Element imbedded in cold-setting cement. Resistance winding supported on insulated metal core for maximum heat conduction and radiation, even at partial rotation settings. Single-hole mounting. Adjustable locking pin firmly anchors unit against bodily rotation. Shaft and bushing insulated from current-carrying arm for safety. 25 and 50 watt sizes.



Series PW-50—50 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
PW-50-0.5	0.5	10.000	15.000	$6.50
PW-50-1	1	7.071	10.607	6.50
PW-50-2	2	5.000	7.500	6.50
PW-50-4	4	3.536	5.304	5.85
PW-50-6	6	2.887	4.330	5.85
PW-50-8	8	2.500	3.750	5.85
PW-50-12	12	2.041	3.062	5.85
PW-50-16	16	1.768	2.652	5.85
PW-50-22	22	1.508	2.261	5.85
PW-50-35	35	1.195	1.793	5.85
PW-50-50	50	1.000	1.500	5.85
PW-50-80	80	.791	1.186	5.85
PW-50-125	125	.632	.949	5.85
PW-50-150	150	.577	.866	5.85
PW-50-225	225	.471	.707	5.85
PW-50-300	300	.408	.612	5.85
PW-50-500	500	.316	.474	5.85
PW-50-800	800	.250	.375	6.20
PW-50-1000	1000	.224	.335	6.20
PW-50-1600	1600	.177	.265	6.20
PW-50-2500	2500	.141	.212	6.20
PW-50-3500	3500	.120	.179	6.50
PW-50-5000	5000	.100	.150	6.50

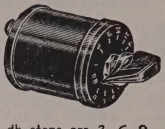
Standard Packing—Individual Carton

CLAROSTAT

CONSTANT IMPEDANCE OUTPUT ATTENUATORS
Series CIB—10 Watts

Cat. No.	Resistance in Ohms
CIB-6	6
CIB-8	8
CIB-15	15
CIB-50	50
CIB-200	200
CIB-250	250
CIB-500	500
CIB-600	600

Net Price $6.50*



db steps are 3, 6, 9, 12, 15, 18, 21, 24 and 30. Absolutely noiseless and distortionless in operation.

★ Developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss, Series CIB attenuators provide linear attenuation with ample power-handling capacity.

These units are rated at 10 watts when used on DC or constant frequency signals. However, they have successfully been used up to 30 watts on audio circuits.

Compact, capable of safely handling the rated wattages at any setting of the dial, these units are recommended as an output level control for power amplifiers or as an input attenuator for individual or group speakers in a public address system. Linear attenuation is provided in steps of 3 decibels up to 30, with final step to infinity.

Unit is furnished in black baked-enamel metal casing, 2" in diameter by 2¾" long, equipped with dial plate and bar knob. Not available with power switch. One-hole mounting ⅜" diameter bushing. Shaft 1" long.

AUTOMATIC LINE VOLTAGE REGULATORS

★ To maintain constant line voltage and thus prevent burning out the tubes of a radio receiver or other tube-using device, this handy unit, operating effectively on 110-volt A.C. or D.C. by simply plugging into the usual socket or outlet, safeguards against line voltage surges or increases even up to 140 volts. At the normal 110-volt, the resistance of the unit is low and the voltage drop across it is negligible. However, as the line voltage increases the resistance of the unit increases proportionately, with a constant increase in voltage drop across it. This automatic voltage control or ballast action insures a steady, practically constant and always safe operating potential.

Dimensions are 1¾" dia. x 1¾" long.
Prongs ⅝" long.
Standard Packing — 10 (ten) per carton

Type No.	Rating Watts	For Use With Sets Consuming	No. of Tubes Used
O	50	Up to 60 watts	4
A	100	60 to 100 watts	5, 6, 7
B	150	100 to 150 watts	8, 9, 10
C	200	150 to 200 watts	11, 12
D	250	200 to 250 watts	2 Type 50
E*	100	60 to 100 watts	

*Note: For use with 220-volt receivers

List Price...... ....$1.75

PICK-A-SHAFT SLIP DRIVE CONTROL (Clutch Type)

Available with your choice of Pick-A-Shaft

SD- 64-Z	250,000	....	$1.25
SD- 60-Z	500,000	....	1.25
SD- 63-Z	1,000,000	....	1.25
SD- 66-Z	2,000,000	....	1.25
SD- 42	250,000	Tapped 125,000	1.85
SD- 78	500,000	" 100,000	1.85
SD- 98	1,000,000	" 250,000	1.85
SD-115	2,000,000	" 500,000	1.85

Standard Resistor Tubes

Cat. No.	Cat. No.
BK-29-B	K-74-B
BK-29-D	K-80-B
BK-32-D	K-82-B
BK-36-B	K-86-B
BK-36-D	K-90-A
BK-36-H	K-90-B
BK-42-B	K-92-A
BK-42-C	K-92-B
BK-49-B	L-42-B
BK-49-C	L-42-C
BK-55-B	L-42-D
BK-67-BJ	L-49-A
BL-42-B	L-49-B
BL-42-D	L-49-C
BM-49-B	L-49-D
BM-55-B	L-49-H
K-26J-218	L-55-B
K-36-D	L-55-CJ
K-42-A	L-55-C
K-42-AJ	L-55-CPR
K-42-B	L-55-D
K-42-C	M-30-H
K-42-D	M-42-B
K-49-A	M-49-B
K-49-B	M-55-B
K-49-C	M-55-H
K-49-D	M-80-B
K-49-H	M-86892-9
K-55-A	10-610
K-55-B	100-37
K-55-C	100-70
K-55-CPR	100-76
K-55-D	100-77
K-55-H	100-79
K-67-A	115-78
K-67-B	5459
K-67-BJ	28602
K-72-B	43X106

List Price..........$1.00
Standard Packing —
10 per carton

TUBE-TYPE WIRE-WOUND RESISTORS

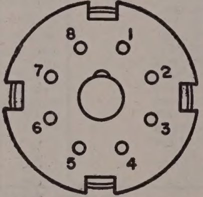
★ Clarostat developed and pioneered the tube-type resistor for voltage-reducing purposes and for supplying needed voltage for pilot lamp operation in AC-DC receivers. Strictly non-inflammable, with the resistance element wound on a mica form firmly secured in the metal tube and connected with the base prongs, the Clarostat construction is notably superior to others.

To simplify servicing of receivers using tube-type resistors, Clarostat has selected the most popular values for so-called Universal numbers serving most replacement needs. Standard resistor tubes of the most popular types are also listed below.

In connection with listings, the following nomenclature applies:
Prefixes: K denotes 6.3 volt 150 ma. No. 40 pilot lamp.
L denotes 6.3 volt 250 ma. No. 46 pilot lamp.
M denotes 6.3 volt 200 ma. No. 51 pilot lamp.

The numeral indicates total voltage drop across resistance unit.

Suffixes designate:
A—No pilot lamp taps.
B—1 pilot lamp tap for 1 lamp.
C —1 pilot lamp tap for 2 lamps.
D —2 pilot lamp taps for 2 lamps.
E —3 pilot lamp taps for 3 lamps.
E1—1 pilot lamp tap for 3 lamps.
F —1 pilot lamp tap for 1 lamp.
G —1 pilot lamp tap for 2 pilot lamps. (Tapped sections isolated from main reducing body.)
H —2 pilot lamp taps for 2 pilot lamps. (Tapped section isolated from main reducing body.)



The letter "J" following any of the suffixes denotes a shorted connection between 2 prongs of the tube, i.e., K-67-BJ, the short is located between Nos. 3 and 4 prongs.

Care must be exercised when replacing any tube whose number ends in "J", as the shorted pins are not always as in above example. Some are betwen Nos. 6 and 7 prongs, and others between 5 and 3.

When replacing any plug-in resistor tube with a Clarostat Universal type, note prongs missing on replaced tube and cut off corresponding prongs on the Universal Replacement tube.

The numeral indicates total voltage drop across resistance unit.

UNIVERSAL RESISTOR TUBES

Universal Tube No.	Replaces AC-DC Tubes Beginning with Letters	Having Numbers From	Ending in Letter
10—23-A	BK, BL, K, L, M	10 to 23	A, B, C, D
10—23-E	BK, BL, K, L, M	10 to 23	E
10—23-F	BK, BL, K, L, M	10 to 23	F, G, H
23—55-A	BK, BL, K, L, M	23 to 55	A, B, C, D
23—55-E	BK, BL, K, L, M	23 to 55	E
23—55-F	BK, BL, K, L, M	23 to 55	F, G, H
60—92-A	BK, BL, K, L, M	60 to 92	A, B, C, D
60—92-E	BK, BL, K, L, M	60 to 92	E
60—92-F	BK, BL, K, L, M	60 to 92	F, G, H
92—105-A	BK, BL, K, L, M	92 to 105	A, B, C, D

List Price...............................$1.50
Standard Packing — 10 (ten) per carton

TELEVISION BALLASTS

B9M16067 for Belmont Television
B9M16534 for Belmont Television
R9M15822 for Belmont Television
17A470303 for Motorola Television
17A485459 for Motorola Television
TBR 102D for Teletone Television
TBR 103D for Teletone Television
TBR 104D for Teletone Television
*397021 for Emerson Television
*397022 for Emerson Television
*397023 for Emerson Television
ST507300 for Stewart-Warner Television
35-37 for Pilot Television

List Price....................$3.00

*These Emerson ballast tubes are used as protective resistors and any internal failure in the circuit may burn them out. Therefore, this unit is expendable.

CLAROSTAT

GREENOHM POWER RESISTORS—FIXED VALUES

SERIES PR-5-F—5-WATT

Dimensions: 5/16″ dia. x 1″ long.

The baby member of the famous Clarostat Greenohm family. Available in standard resistance values from 1 ohm to 7500 ohms (See exact values in listings for Series AC-10-F up to 7500).

All ohmages ....List Price $0.50
Standard Packing — 10 (ten) per carton.

Series AC-10-F—10-Watt

Dimensions: 5/16″ dia. x 1¾″ long

Ohms	Ohms	Ohms	Ohms
1	125	1200	10000
2	150	1250	11000
3	200	1500	12000
4	225	1750	12500
5	250	2000	13500
7.5	300	2250	14500
10	350	2500	15000
12	400	3000	16000
15	450	3500	17500
20	500	4000	18000
25	600	4500	20000
30	700	5000	22500
35	750	6000	25000
40	800	7000	30000
50	900	7500	35000
75	1000	8000	40000
100	1100	8500	50000
		9000	

All ohmages — List Price $0.55
Standard Packing — 10 (ten) per carton

Series AC-20-K—20-Watt

Dimensions: 9/16″ dia. x 2″ long

Ohms	Ohms	Ohms	Ohms
	800	6000	65000
5	850	7000	70000
10	1000	7500	75000
25	1200	8000	80000
50	1250	9000	85000
75	1500	10000	90000
100	1750	12500	95000
150	1850	15000	100000
200	2000	20000	
250	2250	25000	
300	2500	30000	
350	2750	35000	
400	3000	40000	
500	3500	45000	
650	4000	50000	
700	4500	55000	
750	5000	60000	

LIST PRICE:

5 to 15,000 ohms....	$0.65
20,000 to 50,000 ohms....	.85
55,000 to 100,000 ohms....	1.10

Standard Packing — 5 (five) per carton

Series A-25-K—25-Watt

Dimensions: 9/16″ dia. x 2½″ long

Ohms	Ohms	Ohms	Ohms	Ohms
1	150	2250	10000	75000
2	200	2500	12000	80000
3	250	3000	15000	85000
5	300	3500	20000	90000
7.5	400	4000	25000	100000
10	500	4500	30000	
15	750	5000	35000	
20	800	6000	40000	
25	1000	7000	45000	
50	1250	7500	50000	
75	1500	8000	60000	
100	2000	9000	70000	

LIST PRICES:

1 to 5000 ohms	$0.75
6000 to 15000 ohms	.85
20000 to 50000 ohms	1.00
60000 ohms	1.15
70000 ohms	1.25
75000 ohms	1.30
80000 ohms	1.35
85000 ohms	1.50
90000 ohms	1.60
100000 ohms	1.75

Supplied with Mounting Brackets at No Extra Cost
Standard Packing — Individually Boxed

Series K-40-N—40-Watt

Dimensions: ¾″ dia. x 3½″ long

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	125	1000	7500	35000	125000
10	150	1500	8500	40000	150000
15	200	2000	10000	50000	175000
20	250	2500	12500	60000	200000
25	300	3000	15000	70000	
50	400	4000	20000	80000	
75	500	5000	25000	90000	
100	750	6000	30000	100000	

LIST PRICES:

5 to 5000 ohms	$0.90
6000 to 25000 ohms	1.00
30000 to 100000 ohms	1.20
125000 to 150000 ohms	1.40
175000 ohms	1.50
200000 ohms	1.60

Supplied with Mounting Brackets at No Extra Cost

Standard Packing—Individually Boxed

ADJUSTABLE GREENOHM RESISTORS

Series AC-10-FA—10-Watt

Dimensions: 5/16″ dia. x 1¾″ long

Ohms	Ohms	Ohms	Ohms
1	100	1000	6000
2	150	1250	7000
3	200	1500	7500
5	250	2000	8000
7.5	300	2250	8500
10	350	2500	9000
15	400	3000	10000
20	500	3500	
25	600	4000	
50	750	4500	
75	800	5000	

LIST PRICE: All Sizes $0.85

Standard Packing—10 (ten) per carton

Series A-25-KA—25-Watt

Dimensions: 9/16″ dia. x 2½″ long

Ohms	Ohms	Ohms	Ohms
1	100	1500	7500
2	150	2000	8000
3	200	2250	9000
5	250	2500	10000
7.5	300	3000	12000
10	400	3500	15000
15	500	4000	20000
20	750	4500	25000
25	800	5000	50000
50	1000	6000	
75	1250	7000	

LIST PRICES:

1 to 5000 ohms........	**$0.95**
6000 to 15000 ohms........	**1.10**
20000 to 25000 ohms........	**1.25**
50000 ohms	**1.50**

Supplied with Mounting Brackets at No Extra Cost.
Extra Slider Bands......**$0.10 each**
Standard Packing — Individually Boxed

Ohms	Series **K-50-N** ¾″ dia. x 4½″ l. **50-watt**	Series **K-80-N** ¾″ dia. x 6½″ l. **80-watt**	Series **K-100-W** 1⅛″ dia. x 6½″ l. **115-watt**	Series **K-160-W** 1⅛″ dia. x 8½″ l. **160-watt**	Series **K-200-W** 1⅛″ dia. x 10½″ l **200 watt**
5	$1.10	$1.25	$1.75	$2.25	$2.50
10	1.10	1.25	1.75	2.25	2.50
25	1.10	1.25	1.75	2.25	2.50
50	1.10	1.25	1.75	2.25	2.50
75	1.10	1.25	1.75	2.25	2.50
100	1.10	1.25	1.75	2.25	2.50
150	1.10	1.25	1.75	2.25	2.50
200	1.10	1.25	1.75	2.25	2.50
250	1.10	1.25	1.75	2.25	2.50
300	1.10	1.25	1.75	2.25	2.50
400	1.10	1.25	1.75	2.25	2.50
500	1.10	1.25	1.75	2.25	2.50
750	1.10	1.25	1.75	2.25	2.50
1,000	1.10	1.25	1.75	2.25	2.50
1,250	1.10	1.25	1.75	2.25	2.50
1,500	1.10	1.25	1.75	2.25	2.50
2,000	1.10	1.25	1.75	2.25	2.50
2,250	1.10	1.25	1.75	2.25	2.50
2,500	1.10	1.25	1.75	2.25	2.50
3,000	1.10	1.25	1.85	2.25	2.50
3,500	1.10	1.25	1.85	2.25	2.50
4,000	1.10	1.25	1.85	2.25	2.50
4,500	1.10	1.25	1.95	2.25	2.50
5,000	1.10	1.25	1.95	2.25	2.50
6,000	1.35	1.50	1.95	2.25	2.50
7,500	1.35	1.50	1.95	2.25	2.50
8,000	1.35	1.50	1.95	2.25	2.50
9,000	1.35	1.50	1.95	2.25	2.50
10,000	1.35	1.50	1.95	2.25	2.50
12,000	1.35	1.50	1.95	2.30	2.75
12,500	1.35	1.50	1.95	2.35	2.85
15,000	1.35	1.50	1.95	2.65	3.00
20,000	1.35	1.50	1.95	2.65	3.00
25,000	1.35	1.50	1.95	2.65	3.00
30,000	1.70	1.75	2.50	2.65	3.00
35,000	1.70	1.75	2.50	2.65	3.00
40,000	1.70	1.75	2.50	2.65	3.00
50,000	1.70	1.75	2.50	2.65	3.00
60,000	1.70	2.00	2.75	3.00	3.00
70,000	1.70	2.00	2.75	3.00	3.00
75,000	1.70	2.00	2.75	3.00	3.00
80.000	1.70	2.10	2.85	3.00	3.00
100,000	1.70	2.25	3.00	3.00	3.00
125,000	2.00		3.10	3.20	3.75
150,000	2.25		3.25	3.50	3.75
175,000	2.25		3.35		
200,000	3.00		3.75		

All resistors furnished with mounting brackets at no extra cost.
Standard Packing — Individually Boxed.

ADJUSTABLE GREENOHM RESISTORS

Ohms.	Series **K-50-NA** ¾″ dia. x 4½″ l. **50-watt**	Series **K-80-NA** ¾″ dia. x 6½″ l. **80-watt**	Series **K-100-WA** 1⅛″ dia. x 6½″ l. **115-watt**	Series **K-160-WA** 1⅛″ dia. x 8½″ l. **160-watt**	Series **K-200-WA** 1⅛″ dia. x 10½″ l **200 watt**
5	$1.50	$1.75	$2.00	$2.50	$3.00
10	1.50	1.75	2.00	2.50	3.00
15	1.50	1.75	2.00	2.50	3.00
20	1.50	1.75	2.00	2.50	3.00
25	1.50	1.75	2.00	2.50	3.00
50	1.50	1.75	2.00	2.50	3.00
75	1.50	1.75	2.00	2.50	3.00
100	1.50	1.75	2.00	2.50	3.00
150	1.50	1.75	2.00	2.50	3.00
200	1.50	1.75	2.00	2.50	3.00
250	1.50	1.75	2.00	2.50	3.00
300	1.50	1.75	2.00	2.50	3.00
400	1.50	1.75	2.00	2.50	3.00
500	1.50	1.75	2.00	2.50	3.00
750	1.50	1.75	2.00	2.50	3.00
1,000	1.50	1.75	2.00	2.50	3.00
1,250	1.50	1.75	2.00	2.50	3.00
1,500	1.50	1.75	2.00	2.50	3.00
2,000	1.50	1.75	2.00	2.50	3.00
2,500	1.50	1.75	2.00	2.50	3.00
3,500	1.50	1.75	2.25	2.50	3.00
4,000	1.50	1.75	2.25	2.50	3.00
4,500	1.50	1.75	2.25	2.50	3.00
5,000	1.50	1.75	2.25	2.65	3.25
6,000	1.75	2.00	2.25	2.65	3.25
7,000	1.75	2.00	2.25	2.65	3.25
7,500	1.75	2.00	2.25	2.65	3.25
8,000	1.75	2.00	2.25	2.65	3.25
9,000	1.75	2.00	2.25	2.65	3.25
10,000	1.75	2.00	2.25	2.65	3.25
12,000	1.75	2.00	2.25	2.90	3.50
15,000	1.75	2.00	2.25	3.25	3.75
20,000	1.75	2.00	2.25	3.25	3.75
25,000	1.75	2.00	2.25	3.25	3.75
30,000	2.00	2.25	2.75	3.25	3.75
35,000	2.00	2.25	2.75	3.25	3.75
40,000	2.00	2.25	2.75	3.25	3.75
45,000	2.00	2.25	2.75	3.25	3.75
50,000	2.00	2.25	2.75	3.25	3.75
60,000	2.50	2.30	3.00	3.75	3.75
75,000	2.50	2.50	3.00	3.75	3.75
80,000	2.50	2.50	3.50	3.75	4.25
100,000	2.50	2.50	3.50	3.75	4.25
125,000			3.50	4.25	
150,000			3.75	4.25	

MALLORY CONTROLS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 3

Round Shaft Midgetrols

Mallory Cat. No.	List Price
U12	$1.25
U14	1.25
U18	1.25
U19	1.25
U20	1.25
U21	1.25
U22	1.25
U24	1.25
U26	1.25
U28	1.25
U29	1.25
U33	1.25
U34	1.25
U35	1.25
U36	1.25
U39	1.25
U40	1.25
U41	1.25
U42	1.25
U43	1.25
U44	1.25
U45	1.25
U46	1.25
U48	1.25
U50	1.25
U51	1.25
U53	1.25
U54	1.25
U55	1.25
U56	1.25
U57	1.25
U59	1.25
U65	1.25

Single Tapped Midgetrols

Mallory Cat. No.	List Price
UT420	$1.85
UT425	1.85
UT427	1.85
UT429	1.85
UT430	1.85
UT431	1.85
UT438	1.85
UT440	1.85
UT443	1.85
UT448	1.85
UT449	1.85
UT450	1.85
UT451	1.85
UT454	1.85

Double Tapped Midgetrols

Mallory Cat. No.	List Price
UDT283	$1.85
UDT289	1.85
UDT291	1.85
UDT295	1.85
UDT296	1.85

Television and Special Midgetrols

Mallory Cat. No.	List Price
SU14	$1.50
SU20	1.50
SU29	1.50
SU35	1.50
SU41	1.50
SU46	1.50
SU50	1.50

Mallory Page 3

Mallory Cat. No.	List Price
SU54	$1.50
SU56	1.50
SU59	1.50
SU67	1.50

Mallory Page 4

Dual Controls—Front Section

Mallory Cat. No.	List Price
UF13L	$2.00
UF13R	2.00
UF14L	2.00
UF15A	2.00
UF15L	2.00
UF15R	2.00
UF16A	2.00
UF16L	2.00
UF23R	2.00
UF26A	2.00
UF26L	2.00
UF34A	2.00
UF53L	2.00
UF53R	2.00
UF54A	2.00
UF54L	2.00
UF55A	2.00
UF55L	2.00
UF55R	2.00
UF73R	2.00
UF152R	2.00
UF253L	2.00
UF253R	2.00
UF254A	2.00

Dual Controls—Rear Section

Mallory Cat. No.	List Price
UR13L	$1.00
UR13R	1.00
UR14L	1.00
UR14R	1.00
UR15L	1.00
UR15R	1.00
UR16A	1.00
UR16L	1.00
UR23L	1.00
UR23R	1.00
UR26A	1.00
UR26L	1.00
UR53R	1.00
UR54L	1.00
UR55A	1.00
UR55L	1.00
UR56L	1.00
UR152R	1.00
UR253L	1.00
UR254A	1.00
UR254L	1.00

Single Tapped Controls—Front Section

Mallory Cat. No.	List Price
UF16-T25	$2.25
UF16-T35	2.25
UF55-T54	2.25
UF55-T254	2.25

Mallory Page 4

Single Tapped Controls—Rear Section

Mallory Cat. No.	List Price
UR16-T25	$1.25
UR16-T35	1.25
UR16-T254	1.25
UR16-T1253	1.25
UR26-T25	1.25
UR26-T95	1.25
UR55-T54	1.25
UR254-T753	1.25
UR354-T74	1.25

Accessory Parts

Mallory Cat. No.	List Price
DS35	$ .45
DS36	.45
EB158	.60
EB214	.60

Mallory Page 5

Attachable Midgetrol Switches

Mallory Cat. No.	List Price
US26	$ .60
US26T	.75
US27	.75
US28	.75

Special Dual Midgetrol

Mallory Cat. No.	List Price
SUD1253	$3.75

1⅛″ Dia. • Fixed Shaft Controls

Mallory Cat. No.	List Price
MR14	$1.25
MR18	1.25
MR19	1.25
MR20	1.25
MR21	1.25
MR22	1.25
MR24	1.25
MR28	1.25
MR29	1.25
MR33	1.25
MR34	1.25
MR35	1.25
MR36	1.25
MR37	1.25
MR39	1.25
MR40	1.25
MR41	1.25
MR42	1.25
MR44	1.25
MR45	1.25
MR48	1.25
MR50	1.25
MR51	1.25
MR53	1.25
MR55	1.25
MR57	1.25

Mallory Page 5

1⅛″ Dia. • Fixed Knurled Shaft Controls

Mallory Cat. No.	List Price
MK400	$1.25
MK401	1.25
MK402	1.25
MK403	1.25

1⅛″ Dia. • Fixed Shaft • Single Tapped Controls

Mallory Cat. No.	List Price
MRT420	$1.85
MRT425	1.85
MRT426	1.85
MRT427	1.85
MRT428	1.85
MRT430	1.85
MRT431	1.85
MRT436	1.85
MRT438	1.85
MRT440	1.85
MRT443	1.85
MRT445	1.85
MRT446	1.85
MRT447	1.85
MRT448	1.85
MRT449	1.85
MRT450	1.85
MRT451	1.85
MRT454	1.85
MRT460	1.85

Mallory Page 6

1½″ Dia. • Fixed Shaft • Wire-Wound Controls

Mallory Cat. No.	List Price
A	$1.50
A1MP	1.50
A2MP	1.50
A3MP	1.50
A4MP	1.50
A5MP	1.50
A10MP	1.50
A20MP	1.50
A400P	1.50
A550P	1.50
B	1.50
C	1.50
C12	1.50
D	1.50
D7	1.50
D12	1.50
E	1.50
E7	1.50
F	1.50
F7	1.50
G	1.50
G7	1.50
H	1.50
H7	1.50
Q	1.50
R	1.50
S	1.50
T	1.50
U	1.50
UC500	1.50
V	1.50
W	1.50
X	1.50

Mallory Page 6

Universal Dual Controls

Mallory Cat. No.	List Price
CE	$3.10
GE	3.10
GG	3.10
GK	3.10
LM	3.10

Attachable Switches for 1½″ and 1⅝″ Dia. Controls

Mallory Cat. No.	List Price
6-9	$ .60
6T	.75
7	.75
8	.75
13	.75
14	.75

Mallory Page 7

T Pad Attenuators

Mallory Cat. No.	List Price
T2	$4.25
T4	4.25
T6	4.25
T8	4.25
T15	4.25
T50	4.25
T100	4.25
T200	4.25
T250	4.25
T500	4.25
T600	4.25
T1000	4.25
T2000	4.25
T3000	4.25

L Pad Attenuators

Mallory Cat. No.	List Price
L2	$3.75
L4	3.75
L6	3.75
L8	3.75
L15	3.75
L50	3.75
L100	3.75
L200	3.75
L250	3.75
L500	3.75
L600	3.75
L1000	3.75
L2000	3.75
L3000	3.75

2 Watt Wire-Wound TV and Industrial Potentiometers

Mallory Cat. No.	List Price
R20L	$1.25
R20CT	1.85
R25L	1.25
R30L	1.25
R30CT	1.85
R50L	1.25
R250L	1.25
R1000L	1.40
R1500L	1.40
R2500L	1.40
R5000L	1.40

Mallory Page 7

2 Watt Wire-Wound Potentiometers and Rheostats

Mallory Cat. No.	List Price
C1MP	$1.75
C3MP	1.75
C5MP	2.00
C6MP	2.00
C10MP	2.00
C15MP	2.00
C6P	1.50
C10P	1.50
C15P	1.50
C20P	1.50
C30P	1.50
C40P	1.50
C50P	1.50
C100P	1.50
C200P	1.50
C400P	1.50
C6R	1.25
C10R	1.25
C15R	1.25
C20R	1.25
C30R	1.25
C40R	1.25
C50R	1.25
C100R	1.25

Mallory Page 8

4 Watt Wire-Wound Potentiometers and Rheostats

Mallory Cat. No.	List Price
M1MP	$1.75
M2MP	1.75
M3MP	1.75
M4MP	1.75
M5MP	1.75
M10MP	2.00
M15MP	2.00
M20MP	2.00
M25MP	2.00
M50MP	2.40
M70MP	2.40
M1P	1.50
M3P	1.50
M6P	1.50
M10P	1.50
M15P	1.50
M20P	1.50
M25P	1.50
M30P	1.50
M40P	1.50
M50P	1.50
M60P	1.50
M75P	1.50
M100P	1.50
M200P	1.50
M400P	1.50
M500P	1.50
M600P	1.50
M05R	1.25
M1R	1.25
M2R	1.25
M3R	1.25
M4R	1.25
M6R	1.25
M10R	1.25
M15R	1.25
M20R	1.25
M25R	1.25
M30R	1.25
M40R	1.25
M50R	1.25
M60R	1.25
M75R	1.25
M100R	1.25

P.R. MALLORY & CO. Inc. MALLORY CONTROLS AND RESISTORS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Page 8

Center Tapped Potentiometers

Mallory Cat. No.	List Price
MT10P	$2.25
MT20P	2.25
MT30P	2.25

7 Watt • Wire-Wound Potentiometers

Mallory Cat. No.	List Price
E5MP	$3.50
E10MP	3.50
E20MP	3.50
E25MP	3.90
E50MP	3.90
E75MP	3.90
E100MP	3.90
E125MP	3.90
E150MP	3.90

Yardohm Resistance Kits

Mallory Cat. No.	List Price
YO-1	$ .75
YO-5	.75
YO-10	.75
YO-25	.75
YO-50	.75
YO-100	.75
YO-250	.75
YO-500	.75

Mallory Page 9

Shafts • Couplers • Bushings

Mallory Cat. No.	List Price
EB247	$ .25
EC240	.30
EC257	.30
UB241	.95 per 10

Wrench for Volume Control Nuts

Mallory Cat. No.	List Price
178	$ .25

Adjustable Mounting Brackets

Mallory Cat. No.	List Price
RB248	$ .25
RB249	.25
RB254	.25

Hexagon Shoulder Nuts

Mallory Cat. No.	List Price
255	$ .20
A11260-2	.30
A11260-12	.25

Mallory Page 10

Universal Extension Shafts

Mallory Cat. No.	List Price
RS242	$ .40
RS243	.40
RS244	.40
RS245	.45

Accessories

Mallory Cat. No.	List Price
UA-1	.25 per 10
UA-2	.25 per 10
UE-50	.25
UP-10	.20

Universal Flexible Coupling Shafts

Mallory Cat. No.	List Price
FS250	$ .75
FS251	.75
FS252	.75
FS253	.75

Dial Plates for Controls, Rheostats, Potentiometers

Mallory Cat. No.	List Price
369	$ .25
391	.15
393	.25
395	.25
396	.25
397	.25
398	.25
399	.25

Mallory Page 11

5-Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
HHJ1 to HHJ1000	$ .67
HHJ1100 to HHJ5000	.75

10 Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
1HJ1 to 1HJ1000	$ .75
1HJ1100 to 1HJ5000	.80
1HJ6000 to 1HJ10000	.92
1HJ11000 to 1HJ20000	1.03
1HJ22500 to 1HJ50000	1.11

Mallory Page 11

20 Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
2HJ5 to 2HJ1000	$ .95
2HJ1250 to 2HJ5000	.97
2HJ6000 to 2HJ10000	1.12
2HJ12500 to 2HJ20000	1.20
2HJ25000 to 2HJ40000	1.37
2HJ50000	1.50
2HJ75000 to 2HJ100000	1.75

50 Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
5HJ10 to 5HJ1000	$1.75
5HJ1500 to 5HJ5000	1.75
5HJ7500 to 5HJ10000	1.92
5HJ12500 to 5HJ20000	2.12
5HJ25000 to 5HJ40000	2.33
5HJ50000	2.58
5HJ75000	2.92
5HJ100000	3.20

100 Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
10HJ25 to 10HJ1000	$2.48
10HJ1500 to 10HJ5000	2.53
10HJ7500 to 10HJ10000	2.70
10HJ15000 to 10HJ20000	2.97
10HJ25000 to 10HJ40000	3.26
10HJ50000	3.37
10HJ75000	3.58
10HJ100000	3.80

Mallory Page 11

200 Watt • Fixed Vitreous Enamel Resistors

Mallory Cat. No.	List Price
20HJ25 to 20HJ1000	$3.29
20HJ1500 to 20HJ5000	3.34
20HJ7500 to 20HJ10000	3.54
20HJ20000	3.75
20HJ30000 to 20HJ40000	3.90
20HJ50000	4.03
20HJ75000	4.25
20HJ100000	4.53

10 Watt • Adjustable Vitreous Enamel Resistors

Mallory Cat. No.	List Price
1AV1 to 1AV1000	$1.47
1AV1250 to 1AV5000	1.53
1AV6000 to 1AV10000	1.63

25 Watt • Adjustable Vitreous Enamel Resistors

Mallory Cat. No.	List Price
2AV1 to 2AV1000	$1.84
2AV1250 to 2AV5000	1.88
2AV6000 to 2AV10000	2.03
2AV12000 to 2AV20000	2.08
2AV25000	2.28

50 Watt • Adjustable Vitreous Enamel Resistors

Mallory Cat. No.	List Price
5AV5 to 5AV1000	$2.37
5AV1500 to 5AV5000	2.47
5AV7500 to 5AV10000	2.63
5AV12000 to 5AV20000	2.83
5AV25000 to 5AV40000	3.08
5AV50000	3.31

Mallory Page 11

80 Watt • Adjustable Vitreous Enamel Resistors

Mallory Cat. No.	List Price
8AV10 to 8AV1000	$2.70
8AV1500 to 8AV5000	2.84
8AV7500 to 8AV10000	2.97
8AV15000 to 8AV20000	3.20
8AV25000 to 8AV40000	3.46
8AV50000 to 8AV60000	3.55
8AV75000 to 8AV80000	3.90
8AV100000	4.30

100 Watt • Adjustable Vitreous Enamel Resistors

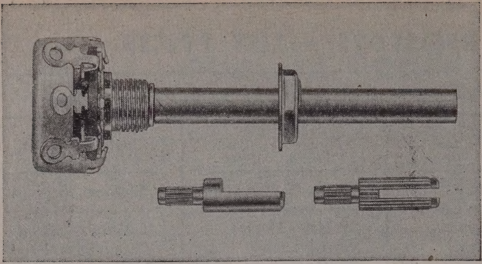
Mallory Cat. No.	List Price
10AV50 to 10AV1000	$3.55
10AV2000 to 10AV5000	3.67
10AV7500 to 10AV10000	3.87
10AV15000 to 10AV20000	4.12
10AV25000 to 10AV40000	4.37
10AV50000	4.57
10AV75000	4.75

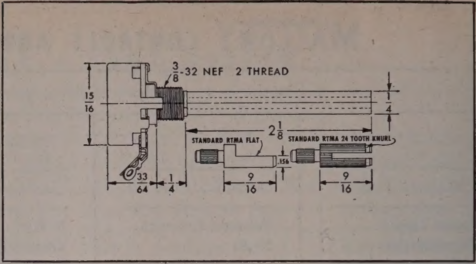
200 Watt • Adjustable Vitreous Enamel Resistors

Mallory Cat. No.	List Price
20AV50 to 20AV1000	$4.37
20AV1500 to 20AV5000	4.45
20AV10000	4.70
20AV20000	4.92
20AV25000 to 20AV30000	5.03
20AV50000	5.17
20AV75000	5.42

Extra Adjustable Clips

Mallory Cat. No.	List Price
No. 1V	$ .37
No. 3V	.37
No. 6V	.47





THE MALLORY MIDGETROL*

Round Shaft Midgetrol

APPLICATION—Recommended for replacement or as an original part, in the audio, tone and similar control circuits of standard home radios, audio radio sets, audio amplifiers, television sets and industrial electronic equipment.

DESCRIPTION—A high quality round shaft carbon control (15/16″ in diameter) to service radio sets requiring small parts. Available in a full line of resistances, tapers, and taps. The special resistance element has ample safety factor for current-carrying ability. New type contact makes control smoothest and quietest on market by laboratory tests. AC-DC accessory power switches, types US26, US26T, US27 and US28 may be quickly and permanently attached to this round shaft Midgetrol without modifying or disturbing the mechanical or electrical characteristics of the control in any manner.

SHAFT DESCRIPTION—Features a new round shaft which is easily cut to any required length by the serviceman. The shaft is machined to the exact dimensions necessary to meet replacement requirements normally encountered by the serviceman.

ACCESSORIES—Two steel shaft and knob adaptors for knurled and push-on knobs, one hex nut.

PACKAGING—One Midgetrol, accessories and instruction sheet per display carton.

Catalog Number	Resistance	Taper*
U-12	5M	1
U-14	5M	4
U-18	10M	1
U-19	10M	2
U-20	10M	4
U-21	15M	1
U-22	15M	2
U-24	20M	1
U-26	20M	4
U-28	25M	2
U-29	25M	4
U-33	50M	1
U-34	50M	2
U-35	50M	4
U-36	75M	1
U-39	100M	1
U-40	100M	2
U-41	100M	4
U-42	150M	1
U-43	200M	4
U-44	250M	1
U-45	250M	2
U-46	250M	4
U-48	500M	1
U-50	500M	4
U-51	750M	1
U-53	1 Meg.	1
U-54	1 Meg.	4
U-55	2 Meg.	1
U-56	2 Meg.	4
U-57	3 Meg.	1
U-59	3 Meg.	4
U-65	5 Meg.	1

*Taper 1—modified logarithmic left hand. For audio use; Taper 2—right hand logarithmic; Taper 4—linear.

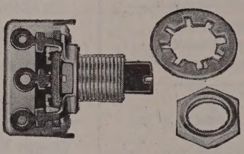
Single Tapped Midgetrols

Catalog Number	Resistance	Tap At
UT-420	250M	50M
UT-425	350M	70M
UT-429	500M	50M
UT-427	500M	100M
UT-430	500M	150M
UT-431	500M	225M
UT-440	1 Meg.	200M
UT-438	1 Meg.	300M
UT-443	1 Meg.	450M
UT-450	2 Meg.	125M
UT-448	2 Meg.	250M
UT-454	2 Meg.	400M
UT-449	2 Meg.	600M
UT-451	2 Meg.	900M

Double Tapped Midgetrols

Catalog Number	Overall Resistance	Tap Resistance	
		Tap 1	Tap 2
UDT-283	500M	100M	200M
UDT-289	1 Meg.	250M	500M
UDT-291	1.5 Meg.	225M	500M
UDT-295	2.25 Meg.	250M	500M
UDT-296	2.25 Meg.	500M	1 Meg.

Television and Special Application Midgetrols



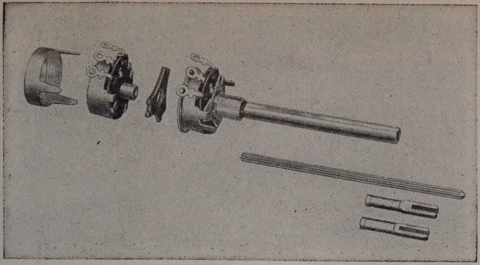
● Special Mallory Midgetrols for use as exact replacements. These Midgetrols meet exact physical and electrical requirements for special applications. Except for the shaft, these Midgetrols are of the same basic construction as the standard Midgetrol. A fixed, knurled, and slotted bakelite shaft protrudes ¼″ beyond the bushing.

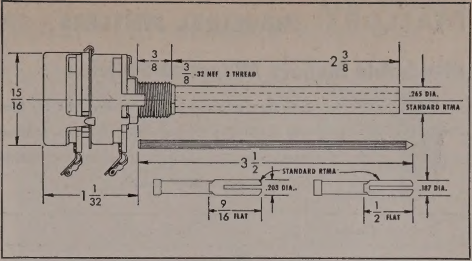
Catalog Number	Resistance	Taper*
SU-14	5M	4
SU-20	10M	4
SU-29	25M	4
SU-35	50M	4
SU-41	100M	4
SU-46	250M	4
SU-50	500M	4
SU-54	1 Meg.	4
SU-56	2 Meg.	4
SU-59	3 Meg.	4
SU-67	5 Meg.	4

*Taper 4—linear.

Not all catalog numbers are currently available with the round shaft. Material shortages have prevented complete conversion at one time. During the period of this change over, the Mallory Company reserves the option to offer, sell and ship either flat shaft or round shaft types.

* REG. U.S. PAT. OFF.





DUAL CONCENTRIC MIDGETROL

APPLICATION—Designed specifically to duplicate original equipment controls quickly, easily and economically.

DESCRIPTION—Both the front and rear sections used in making Mallory Dual Concentric controls measure ¹⁵⁄₁₆″ diameter. Front and rear sections are available in a wide range of popular resistances, tapers and taps. By assembling one front and one rear section a complete and fool-proof dual concentric control is easily and quickly made, without special tools or soldering, servicing over 90% of all television and automobile radio sets. The assembled control exactly duplicates the original equipment control with no eccentricity, mechanical binding between inner and outer shafts or wobble between control sections. Standard Midgetrol AC-DC switches, US26, US27, and US28 may be used with the dual concentric Midgetrol without modification. See Page 5. The mounting depth behind the panel for the dual Midgetrol without switch is approximately 1⅛″. With AC-DC switch attached, it is 1⅝″ overall.

SHAFT—DESCRIPTION—Special attention has been given to the elimination of binding or eccentricity between the inner and outer shafts by use of a special bearing surface located on the inner shaft knob ends. The relationship between the extremities of the outer shaft and inner shaft end has been so designed to practically eliminate the necessity of modifying inner shaft end.

ACCESSORIES—Hardware and fittings supplied with each front section include one inner shaft, one bakelite spacer, one coupling cup, and two shaft ends patterned to fit .187 and .202 RTMA standard flatted or split knobs. Rear sections are purchased and packaged separately in individual cartons.

Other Accessories which may be needed occasionally for special set servicing include: DS-35, DS-36, EB-158, EB-214. See this page.

PACKAGING—One front control section plus accessories and complete instructions per display carton. Rear sections packaged individually in display cartons.

More than 10,000 different dual concentric controls can be built from Mallory Midgetrol parts—see switch and shaft recommendations listed by part number in the Second Edition Mallory Television Service Encyclopedia.

You can further increase the flexibility of your Mallory Midgetrols by using the Universal Extension Shafts and Couplers shown on pages 9 and 10 of this catalog.

Dual Controls

Front Section			Rear Section		
Catalog Number	Resistance Ohms	Taper*	Catalog Number	Resistance Ohms	Taper*
UF13R	1000	2	**UR13R**	1000	2
UF13L	1000	4	**UR13L**	1000	4
UF152R	1500	2	**UR152R**	1500	2
UF23R	2000	2	**UR23R**	2000	2
UF53R	5000	2	**UR23L**	2000	4
UF53L	5000	4	**UR53R**	5000	2
UF73R	7000	2	**UR14R**	10M	2
UF14L	10M	4	**UR14L**	10M	4
UF253R	25M	2	**UR253L**	25M	4
UF253L	25M	4	**UR54L**	50M	4
UF34A	30M	1	**UR15R**	100M	2
UF54A	50M	1	**UR15L**	100M	4
UF54L	50M	4	**UR254A**	250M	1
UF15A	100M	1	**UR254L**	250M	4
UF15R	100M	2	**UR55A**	500M	1
UF15L	100M	4	**UR55L**	500M	4
UF254A	250M	1	**UR16A**	1 Meg.	1
UF55A	500M	1	**UR16L**	1 Meg.	4
UF55R	500M	2	**UR26A**	2 Meg.	1
UF55L	500M	4	**UR26L**	2 Meg.	4
UF16A	1 Meg.	1	**UR56L**	5 Meg.	4
UF16L	1 Meg.	4			
UF26A	2 Meg.	1			
UF26L	2 Meg.	4			

*Taper 1—modified logarithmic left hand. For audio use; Taper 2—right hand logarithmic; Taper 4—linear.

Single Tapped Controls

Front Section			Rear Section		
Catalog Number	Resistance Ohms	Tapped At	Catalog Number	Resistance Ohms	Tapped At
UF55-T54	500M	50M	**UR254-T753**	250M	75M
UF55-T254	500M	250M	**UR354-T74**	350M	70M
UF16-T25	1 Meg.	200M	**UR55-T54**	500M	50M
UF16-T35	1 Meg.	300M	**UR16-T1253**	1 Meg.	125M
			UR16-T25	1 Meg.	200M
			UR16-T254	1 Meg.	250M
			UR16-T35	1 Meg.	300M
			UR26-T25	2 Meg.	200M
			UR26-T95	2 Meg.	900M

Accessory Parts

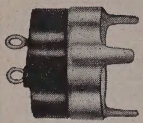
DS-35—Flatted split knurl shaft end. Special for Zenith.

DS-36—Special 3″ shaft for coupling a front and rear section together to make a single-shaft dual control for oscilloscope and other push-pull amplifier service.

EB-158—Special Bushing ⁷⁄₁₆″—28 thread, 1¹¹⁄₁₆″ long with ⅜″ milled double flat.

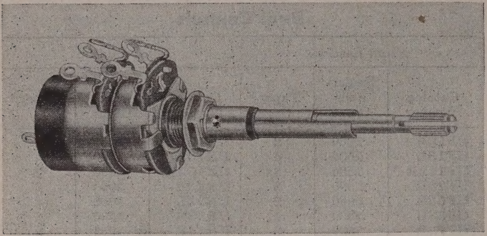
EB-214—Special Bushing ½″—28 thread, 2³⁄₁₆″ long with .430 milled flat.

Attachable Mallory Midgetrol Switches



Entirely designed and manufactured by Mallory especially for use with 1 5/16″ Dia. Mallory Midgetrols. Can easily and quickly be attached *without disassembling control.*

Catalog Number	Description
US-26	Single pole—single throw
US-26T	Single pole—single throw Has dummy terminal
US-27	Double pole—single throw
US-28	Single pole—double throw



Special Dual Midgetrol

● Type SUD-1253 is an exact replacement for use in Zenith radio model 28F20, having a concentric shaft with knurled and slotted end. Furnished complete with AC switch.

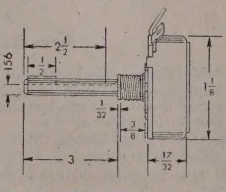
Catalog Number	Resistance Front	Resistance Rear
SUD-1253	5M	1 Meg.

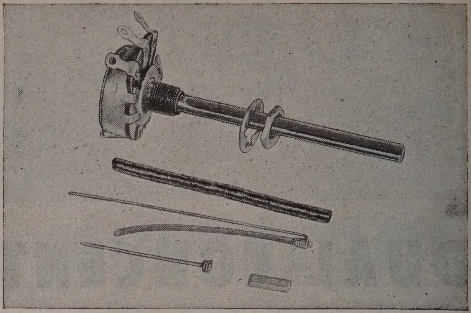
MALLORY TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems.

Contains page after page of information profusely illustrated. It's worth far more than its price. Your Mallory Distributor has a copy—order from him.

Dimensions of Types MR, MK and MRT Fixed Shaft Controls





1⅛″ Dia. · Fixed Shaft Controls

APPLICATION—For control of volume with tone compensation in audio circuits.

DESCRIPTION—1⅛″ carbon control, available in a wide range of resistances and tapers. Type MRT is a single, accurately located tap, control. Uses Mallory's special resistance element insuring a long, quiet life.

SHAFT DESCRIPTION—An accurately finished channel shaft is permanently attached; measures 3″ from lock ring. Type MK has knurled shaft for use in replacing original controls of this shaft construction.

ACCESSORIES—One special Pal-nut, and one shim furnished with each control. An external adjustable resistor is furnished where required, as listed below for type MR controls. AC switches are available as a special item.

PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance	Taper*	Catalog Number	Ohms Resistance	Taper*
MR14§	5M	4	**MR39**	100M	1
MR18§	10M	1			
MR19§	10M	2	**MR40**	100M	2
MR20§	10M	4	**MR41**	100M	4
MR21§	15M	1	**MR42**	150M	1
MR22§	15M	2	**MR44**	250M	1
MR24§	20M	1	**MR45**	250M	2
MR28§	25M	2	**MR48**	500M	1
MR29§	25M	4	**MR50**	500M	4
MR33	50M	1	**MR51**	750M	1
MR34§	50M	2	**MR53**	1 Meg.	1
MR35	50M	4	**MR55**	2 Meg.	1
MR36	75M	1	**MR57**	3 Meg.	1
MR37	75M	2			

§External adjustable resistor included

*Taper 1—modified logarithmic left hand. For audio use; Taper 2—right hand logarithmic; Taper 4—linear.

1⅛″ Dia. · Fixed Knurled Shaft Controls

Catalog Number	Ohms Resistance	Taper*
MK400	250M	1
MK401	500M	1
MK402	1 Meg.	1
MK403	2 Meg.	1

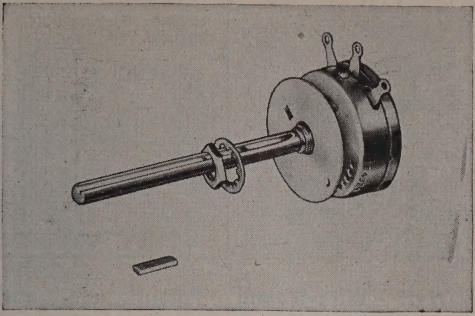
*Taper 1—modified logarithmic left hand.

1⅛″ Dia. · Fixed Shaft · Single Tapped Controls

Catalog Number	Overall Resistance	Tap Resistance	Catalog Number	Overall Resistance	Tap Resistance
MRT420	250M	50M	**MRT460**	1 Meg.	500M
MRT425	350M	70M			
MRT428	500M	5M	**MRT445**	2 Meg.	5M
MRT426	500M	15M	**MRT446**	2 Meg.	15M
MRT427	500M	100M	**MRT447**	2 Meg.	60M
MRT430	500M	150M	**MRT450**	2 Meg.	125M
MRT431	500M	225M	**MRT448**	2 Meg.	250M
MRT436	1 Meg.	125M	**MRT454**	2 Meg.	400M
MRT440	1 Meg.	200M	**MRT449**	2 Meg.	600M
MRT438	1 Meg.	300M	**MRT451**	2 Meg.	900M
MRT443	1 Meg.	450M			

Note: MR, MK and MRT types will be discontinued when present stocks are exhausted.

MALLORY WIRE-WOUND CONTROLS • ATTACHABLE SWITCHES



1⅝″ Dia. · Fixed Shaft · Wire-Wound Controls

APPLICATION—Used as bias controls and voltage dividers in bridge circuits and test instruments.

DESCRIPTION—Rugged resistance strip and contactor assemblies are completely enclosed in a dust-proof case. Will carry 4 watts of power.

SHAFT DESCRIPTION—Furnished with a fixed channel-type shaft, measuring 3″ from lock ring.

ACCESSORIES—Mallory Dial Plate No. 396 is available for use with these controls. One special Pal-nut and one shim furnished with each control. An external variable resistor is furnished where required, as indicated below. Has adjustable stop plate for bias feature, as indicated below. AC switches available as a special item. (See this page.)

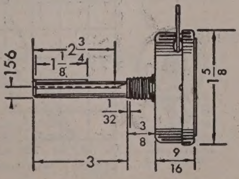
PACKAGING—One control, plus accessories and complete instructions per display carton.

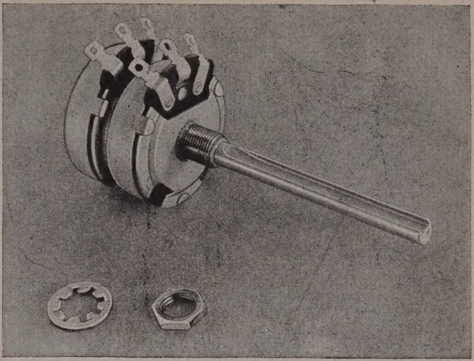
Catalog Number	Ohms Resistance	Taper	Catalog Number	Ohms Resistance	Taper
Q	2	4	**D12** §	3000	1
R	6	4	**D** §	3000	2
S	10	4	**A3MP** §	3000	4
T	20	4	**D7** §	3000	7
U	30	4	**A4MP** §	4000	4
V	60	4	**E** §	5000	2
W	100	4	**A5MP** §	5000	4
X	200	4	**E7** §	5000	7
A400P	400	4	**F** §	7500	2
A	500	1	**F7** §	7500	7
A550P	550	4	**G** §	10000	2
B	1000	1	**A10MP** §	10000	4
UC500	1000	2	**G7** §	10000	7
A1MP	1000	4	**H** §	15000	2
C12 §	2000	1	**H7** §	15000	7
C §	2000	2	**A20MP** §	20000	4
A2MP §	2000	4			

§Have exclusive Mallory adjustable bias feature, providing 500 ohms in 100 ohm steps in all values over 1,000 ohms.

Dimensions—1⅝″ Dia. Wire-Wound Controls

NOTE: Controls having taper numbers 1, 2 and 7 are intended primarily for replacement in radio receivers. Be sure to check the taper curve and its effect (see chart on page 7) before ordering for other uses.





(Type LL Illustrated)

Universal Dual Controls

APPLICATION—See "General Use" column below.

DESCRIPTION—Consists of two wire-wound or carbon controls driven by a single shaft.

SHAFT DESCRIPTION—Furnished with fixed channel shaft; measuring 2½″ from lock ring.

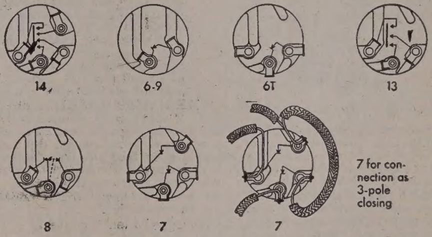
ACCESSORIES—One special Pal-nut furnished with each control. AC switches available as a special item. (See this page.)

PACKAGING—One control, plus accessories and complete instructions per display carton.

Cat. No.	Ohms Resistance		Taper		Type Element		General Use
	Front	Rear	Front	Rear	Front	Rear	
CE	2M	5M	I	I	W. W.	W. W.	Ant. Shunt and Bias
GE	10M	5M	VII	IV	W. W.	W. W.	Ant. Shunt Bias or Screen
GG	10M	10M	VII	IV	W. W.	W. W.	Ant. Shunt Bias or Screen
GK*	10M	50M	I	IV	Carbon	Carbon	Ant. Shunt Bias or Screen
LM*	100M	250M	I	I	Carbon	Carbon	Audio Shunt, Tone, Screen or RF Shunt

*Will be discontinued from line when present stocks are exhausted.

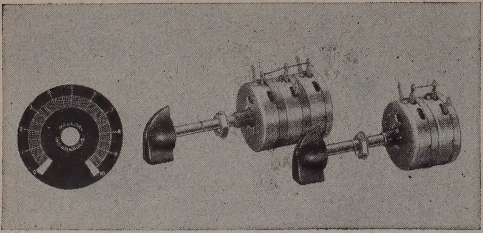
Attachable Switches (1½″ and 1⅝″ Dia. Controls)



For use with standard Universal Controls, Carbon and Wire-Wound types, TRP Tapped Controls, and Universal Dual Controls.

Cat. No. **6-9**—Single-Pole—Single-Throw
***6T**—Single-Pole—Single-Throw
7—Double-Pole—Single-Throw
8—Single-Pole—Double-Throw
13—Three-Pole—Single-Throw Shorting
14—Four-Pole—Single-Throw Shorting

*Has dummy terminal identified by copper rivet. Packaged one per display carton.



T and L Pad Attenuators

APPLICATION—For controlling the level of low impedance audio circuits and for volume control of microphones, talking picture amplifiers, and many varied sound amplifying and audio distribution systems.

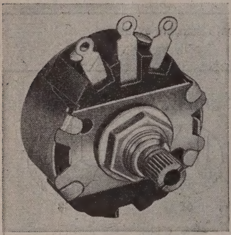
DESCRIPTION—A high quality "T" and "L" pad that may be used with audio amplifiers having a peak audio rating of 15 watts. These attenuators have a continuous DC dissipation rating of 4 watts in any position. Bushing ⅜″ Dia. by ⅜″ long.

SHAFT DESCRIPTION—2″ long shaft, grooved at popular lengths for easy cutting.

ACCESSORIES—No. 366 Bar Knob, No. 395 Dial Plate with matched rotation, one nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

"T" Pad Attenuators	"L" Pad Attenuators	Ohms Impedance
Catalog Number	Catalog Number	
T2	**L2**	2
T4	**L4**	4
T6	**L6**	6
T8	**L8**	8
T15	**L15**	15
T50	**L50**	50
T100	**L100**	100
T200	**L200**	200
T250	**L250**	250
T500	**L500**	500
T600	**L600**	600
T1000	**L1000**	1000
T2000	**L2000**	2000
T3000	**L3000**	3000



2 Watt · Wire-wound TV and Industrial Potentiometer

APPLICATION—Designed especially for replacement of positioning, hold, focus, etc. controls of TV sets requiring a 2 watt unit. Also is ideal for voltage divider and bias applications in electronic instruments of all kinds. Insulated contact arm type.

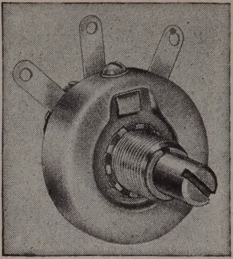
DESCRIPTION—High quality 2 watt wire-wound potentiometer equipped with dust-proof molded phenolic case measuring only 1 5/16″ overall diameter. Is equipped with special dual contactor mechanism to assure extended noise-free life. Has 1500 volt AC insulation between resistance element and chassis. All controls listed have No. 4 linear taper. (See taper chart on this page.)

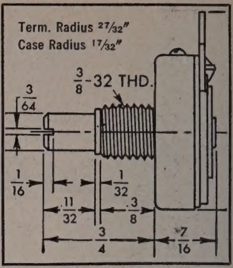
SHAFT DESCRIPTION—Thumb knurled, screw driver slotted stub shaft is provided. Bushing is standard ⅜″.

ACCESSORIES—One Pal-nut furnished with each control.

PACKAGING—One control per display carton.

Catalog Number	Ohms Resistance	Taper
R20L	20	4
R20CT	20	4
R25L	25	4
R30L	30	4
R30CT	30	4
R50L	50	4
R250L	250	4
R1000L	1000	4
R1500L	1500	4
R2500L	2500	4
R5000L	5000	4





2 Watt · Wire-Wound · Potentiometers and Rheostats

APPLICATION—For use in test and special instruments, bias control and bridge circuits, etc.

DESCRIPTION—1 1/16″ diameter small resistor that will dissipate 2 watts over the entire element for continuous operation. No. 4 linear taper. Contact arm is grounded. Total rotation 284°; effective electrical rotation 266°.

SHAFT DESCRIPTION—A short shaft with a milled screw-driver slot is provided for quick and easy adjustment. Shaft will also take standard knobs.

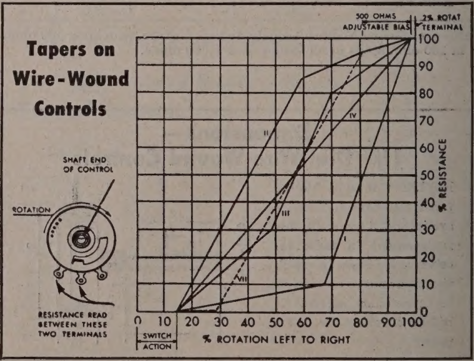
ACCESSORIES—Dial Plate No. 393 is available for use with these controls. One hex nut furnished with each control.

PACKAGING—One control, plus accessories per display carton.

Potentiometer Catalog Number	Rheostat* Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
C6P	**C6R**	6	.58
C10P	**C10R**	10	.45
C15P	**C15R**	15	.37
C20P	**C20R**	20	.32
C30P	**C30R**	30	.26
C40P	**C40R**	40	.22
C50P	**C50R**	50	.2
C100P	**C100R**	100	.14
C200P		200	.1
C400P		400	.07
C1MP		1M	.045
C3MP		3M	.025
C5MP		5M	.02
C6MP		6M	.018
C10MP		10M	.014
C15MP		15M	.011

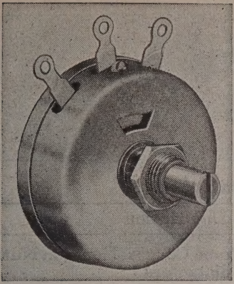
*"Open" or "off" position counter-clockwise.

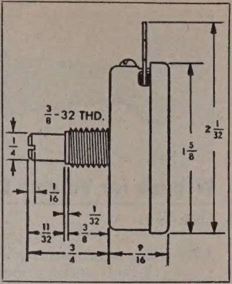
Tapers on Wire-Wound Controls



Mallory Page 7 (See Mallory Page 1 for List Prices)

MALLORY WIRE-WOUND POTENTIOMETERS · RESISTANCE KITS





4 Watt · Wire-Wound Potentiometers and Rheostats

APPLICATION—Used on bias controls and voltage dividers in bridge circuits and test instruments.

DESCRIPTION—Precision wire-wound potentiometers and rheostats with a 4-watt rating for use in instruments where reliability is paramount. Rugged construction. Rheostats feature "off" position (no connection) type of construction, saving the cost of a switch. Furnished with insulated contact arm. Potentiometers have three terminals. Rheostats have two terminals. Total rotation 294°; effective electrical rotation 279°. No. 4 Linear Taper. "MT" type controls listed below are center tapped and are for TV set replacement.

SHAFT DESCRIPTION—A short shaft is provided with a slot for easy screw-driver adjustment. Shafts will take standard knobs.

ACCESSORIES—No. 395 Dial Plate is available for use with these controls. One hex nut furnished with each control.

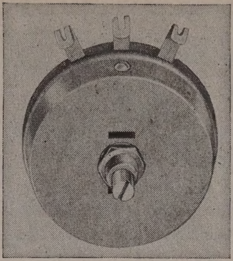
PACKAGING—One control, plus accessories per display carton.

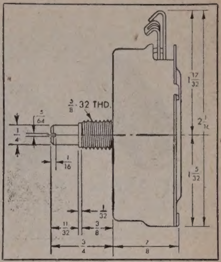
Potentiometer Catalog Number	Rheostat* Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
	M05R	½	2.80
M1P	**M1R**	1	2.00
	M2R	2	1.4
M3P	**M3R**	3	1.15
	M4R	4	1.00
M6P	**M6R**	6	.82
M10P	**M10R**	10	.63
M15P	**M15R**	15	.52
M20P	**M20R**	20	.45
M25P	**M25R**	25	.40
M30P	**M30R**	30	.37
M40P	**M40R**	40	.32
M50P	**M50R**	50	.28
M60P	**M60R**	60	.26
M75P	**M75R**	75	.23
M100P	**M100R**	100	.20
M200P		200	.14
M400P		400	.10
M500P		500	.09
M600P		600	.082
M1MP		1M	.063
M2MP		2M	.045
M3MP		3M	.037
M4MP		4M	.032
M5MP		5M	.028
M10MP		10M	.020
M15MP		15M	.016
M20MP		20M	.014
M25MP		25M	.013
M50MP		50M	.009
M70MP		70M	.0075

*"Open" or "Off" position counter-clockwise.

Center Tapped Potentiometers

Potentiometer Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
MT10P	10	.63
MT20P	20	.45
MT30P	30	.37





7 Watt · Wire-Wound Potentiometers

APPLICATION—Suitable for precision instruments such as resistance bridges and where a control of medium currents or voltages is required.

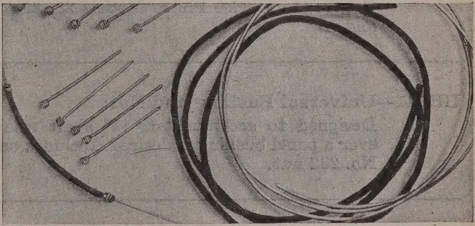
DESCRIPTION—Supplied with grounded contact arm. 310° total rotation; 299° effective electrical rotation. Will dissipate 7 watts. No. 4 linear taper.

SHAFT DESCRIPTION—A short shaft with a milled screw-driver slot is provided for easy adjustment. Shafts will also take standard knobs.

ACCESSORIES—No. 399 Dial Plate is available for use with these controls. One hex nut is furnished with each control.

PACKAGING—One control, plus accessories per display carton.

Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
E5MP	5M	.042
E10MP	10M	.03
E20MP	20M	.021
E25MP	25M	.019
E50MP	50M	.0135
E75MP	75M	.011
E100MP	100M	.0095
E125MP	125M	.0085
E150MP	150M	.0078



Yard-Ohm Resistance Kits

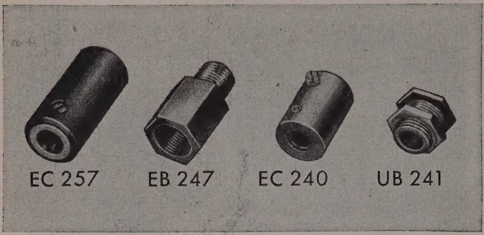
● Each Yard-Ohm Resistance Kit consists of all necessary materials to construct flexible resistors of a wide range of values. The Yard-Ohm Kit provides a real solution to the odd-value resistor problem. In addition to replacement applications, resistors made from the Yard-Ohm Kit are ideal for meter shunts, and for use wherever a high quality flexible resistor is desired.

Each Mallory Yard-Ohm Kit consists of the following: 1 yard spiral wound resistance wire; 1 yard insulated braid; 24 spiral wire leads. The kit is available in eight resistance values.

Dissipation—all types: ½ watt per inch.

Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes	Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes
YO-1	1	.707	**YO-50**	50	.100
YO-5	5	.315	**YO-100**	100	.071
YO-10	10	.223	**YO-250**	250	.044
YO-25	25	.141	**YO-500**	500	.031

MALLORY CONTROL HARDWARE



Shafts · Couplers · Bushings

Cat. No. Description

EC240—Universal Combination Extension Shaft Coupling and Reducer:
Will couple two ¼″ shafts or one ¼″ shaft and one ³⁄₁₆″ shaft.

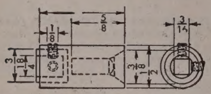
Universal Insulated Shaft Couplers:
Designed to connect fixed shaft controls to remote drive couplings popular in automotive radio equipment.

EC257—Square Insert Insacup (Motorola type).

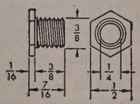
EB247—Universal Extension Bushing:
Designed to screw on the present bushing of Mallory controls and switches, so that the body of the control or switch will be held ⅝″ away from the mounting surface. For example, it is used with the correct Universal Control to service Philco Models 28, 29, 45 and 45C.

UB241—Universal Bushing and Nut:
Designed to accommodate ¼″ shaft wherever a panel bushing is desired. Includes one No. 232 nut.

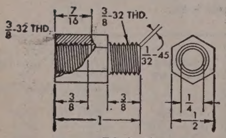
DIMENSIONS—SHAFT COUPLERS AND BUSHINGS



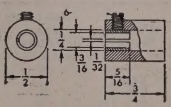
EC 257



UB 241



EB 247

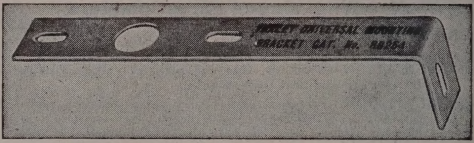


EC 240

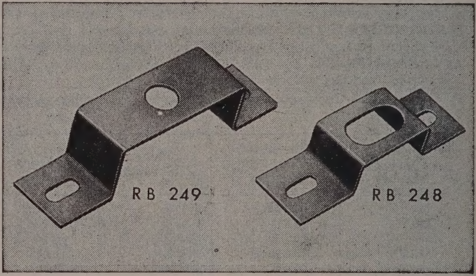
MALLORY
MALLORY

Wrench for Volume Control Nuts

Cat. No.	Description
178	For all standard Volume Control Hexagon Nuts, ½-inch and ⁹⁄₁₆-inch diameters.

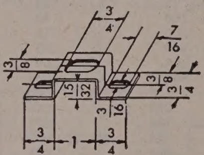


RB 254

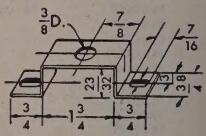


Adjustable Mounting Brackets

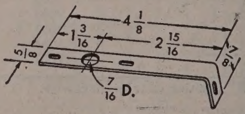
Cat. No.	Description
RB248	1¾″ Mounting Centers
RB249	2½″ Mounting Centers
RB254	Universal



RB248



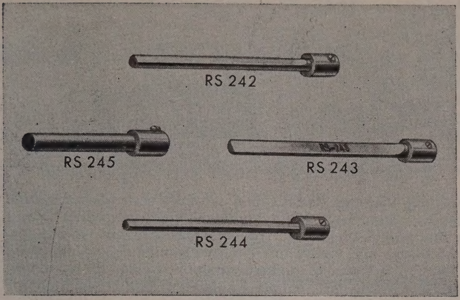
RB249



RB 254

Hexagon Shoulder Nuts

Cat. No.	Description
255	For ¼″ Panels
A11260-12	For ½″ Panels
A11260-2	For ¾″ Panels

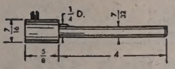


Universal Extension Shafts

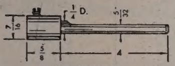
Cat. No.	Description
RS242*	4″ long x ¼″ dia. x 1/32″ flat
RS243*	4″ long x ¼″ dia. x 3/32″ flat
RS244*	4″ long x 3/16″ dia. x 1/64″ flat
RS245*	2″ long x ¼″ dia. with 3/32″ slot

*Packed 5 to Envelope.

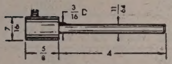
SHAFT DIMENSIONS



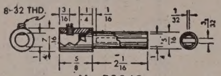
No. RS 242



No. RS 243



No. RS 244



No. RS 245

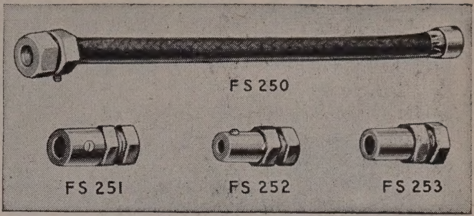
Accessories

UE-50 Shaft—Extends shaft length on each Mallory Midgetrol an additional 4″ with each extension. Two self-tapping screws furnished with each extension.

UA-1 U-Clip—To adapt flat shaft to set-screw and push-on knobs.

UP-10 Pulley—Fits over the Mallory Midgetrol flat shaft to permit its use as an idler for the dial cord where necessary.

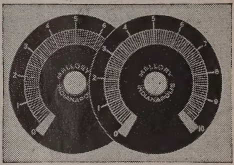
UA-2 Spring Clip—To adapt flat shaft to knurled knobs.



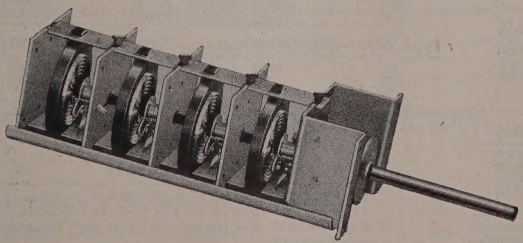
Universal Flexible Coupling Shafts

Cat. No.	Description
FS250	For Universal replacement of all flexible wire shafts, coupling to ¼″ solid shafts.
FS251	Shaft Coupling has 7/32″ hole, ½″ deep, with transverse pin, and is for use (with the correct Mallory control) as a replacement for Philco Models 805, 806, 808, 809 and PHD and PHXD, Studebaker AC266, Pierce-Arrow MT-3, Reo RT-3, etc.
FS252	Shaft Coupling has 5/32″ hole, approximately ½″ deep, and has 2 set screws opposite each other. It is used as a replacement for Philco Model D, Nash AC-989 (Code 122).
FS253	Shaft Coupling has ¼″ dia. hole, ½″ deep, equipped with 2 screws at 90 degrees. This is to be used with the correct Mallory Control as a replacement for Chevrolet No. 364441.

Dial Plates For Controls, Rheostats and Potentiometers



Cat. No.	Marking	For Type of Control	Dia.
369	0 to 100	All Rheostats and Potentiometers (compromise scale).....	2¼″
391	Increase Volume	All Rheostats and Potentiometers.....................	1½″
393	0 to 10	For "C" Type Rheostats and Potentiometers............	2¼″
395	0 to 10	For Standard Wire-Wound Controls with plain cover; also "M" Type Rheostats and Potentiometers..............	2¼″
396	0 to 10	For Standard Wire-Wound Controls with switch type cover..	2¼″
397	0 to 10	For Standard Carbon Controls with plain cover...........	2¼″
398	0 to 10	For Standard Carbon Controls with switch type cover......	2¼″
399	0 to 10	For "E" Type Potentiometers.	2¼″

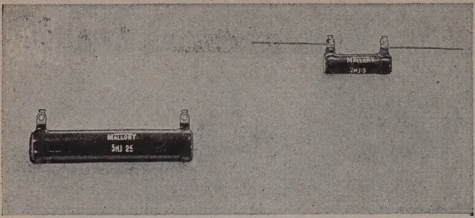


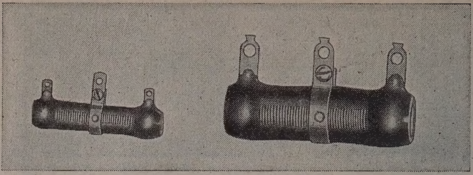
THE MALLORY INDUCTUNER*

A continuously and infinitely variable inductance unit that supplies the need for a method of tuning the wide range of frequencies covered by the television-FM band. Provides unequaled simplicity, performance, and stability in service. For more complete information turn to Page 10, Mallory Special Components section, of this catalog.

Inductuner*—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163644, 2,163645, 2,163646, 2,163647, 2,260877, 2,377789, 2,377790, 2,399060, 2,405890, 2,443020, 2,443822. Other patents applied for.

MALLORY VITREOUS ENAMEL RESISTORS





● Mallory vitreous enamelled resistors, available in both fixed and adjustable styles, are fabricated from the finest of materials to assure long, stable operation in industrial, electrical and electronic applications. Each step in the manufacture of a Mallory Vitreous Resistor is a carefully controlled scientific procedure assuring a highly uniform quality product. From the fine porcelain core, to the resistance element, to the terminal bands, and finally to the vitreous enamel coating, every precaution is taken to make a superior resistor for your use.

Listings below are standard values usually available for immediate delivery. Inquiries are invited from industrial resistor users for non-standard values not listed below.

Types HHJ, 1HJ and 2HJ are furnished with wire lead mounting. All other types are furnished with mounting feet.

FIXED RESISTORS

Type HHJ—5 Watt Rating—Tube Size 5/16″ x 1″

Resistance Ohms	Resistance Ohms	Resistance Ohms	Resistance Ohms	Resistance Ohms
1	20	200	800	2500
1.5	25	250	900	3000
2	30	300	1000	3500
3	35	350	1100	4000
4	40	400	1200	4500
5	50	450	1250	5000
7.5	75	500	1500	
10	100	600	1750	
12	125	700	2000	
15	150	750	2250	

Type 1HJ—10 Watt Rating—Tube Size 5/16″ x 1¾″

1	50	700	3500	14300
2	75	750	4000	15000
3	100	800	4500	16000
4	125	900	5000	17500
5	150	1000	6000	18000
7.5	200	1100	7000	20000
10	225	1200	7500	22500
12	250	1250	8000	25000
15	300	1500	8500	30000*
20	350	1750	10000	35000*
25	400	2000	11000	40000*
30	450	2250	12000	45000*
35	500	2500	12500	50000*
40	600	3000	13500	

Type 2HJ—20 Watt Rating—Tube Size ½″ x 2″

5	200	1500	4000	20000
10	250	1750	4500	25000
15	300	2000	5000	30000
25	400	2250	6000	35000
50	500	2500	7500	40000*
75	750	2750	10000	50000*
100	1000	3000	12500	75000*
150	1250	3500	15000	100000*

Type 5HJ—50 Watt Rating—Tube Size ¾″ x 4½″

10	500	2500	15000	50000
25	750	5000	20000	75000
50	1000	7500	25000	100000
100	1500	10000	30000	
250	2000	12500	40000	

Type 10HJ—100 Watt Rating—Tube Size 1⅛″ x 6½″

25	250	2000	15000	50000
50	500	2500	20000	75000
75	750	5000	25000	100000
100	1000	7500	30000	
150	1500	10000	40000	

Type 20HJ—200 Watt Rating—Tube Size 1⅛″ x 10½″

25	500	2000	7500	40000
50	750	2500	10000	50000
75	1000	3000	20000	75000
100	1500	5000	30000	100000
250				

*We stock these high resistance values only in the more economical low temperature enamel coating because operating voltages normally encountered rarely exceed the values listed.

ADJUSTABLE RESISTORS

Type 1AV—10 Watt Rating—Tube Size 5/16″ x 1¾″

Resistance Ohms	Resistance Ohms	Resistance Ohms	Resistance Ohms
1	75	750	4000
2	100	800	4500
3	150	1000	5000
5	200	1250	6000
7.5	250	1500	7000
10	300	2000	7500
15	350	2250	8000
20	400	2500	8500
25	500	3000	9000
50	600	3500	10000

Type 2AV—25 Watt Rating—Tube Size ⅝″ x 2½″

1	100	1000	5000
3	150	1250	6000
5	200	1500	7500
10	250	2000	10000
15	300	2500	12000
25	400	3000	15000
50	500	3500	20000
75	750	4000	25000

Type 5AV—50 Watt Rating—Tube Size ⅝″ x 4½″

5	250	2500	20000
10	300	3000	25000
25	400	4000	30000
50	500	5000	40000
75	750	7500	50000
100	1000	10000	
150	1500	12000	
200	2000	15000	

Type 8AV—80 Watt Rating—Tube Size ⅝″ x 6½″

10	400	3500	30000
15	500	5000	40000
25	750	7500	50000
50	1000	10000	60000
100	1500	15000	75000
250	2000	20000	80000
300	2500	25000	100000

Type 10AV—100 Watt Rating—Tube Size 1⅛″ x 6½″

50	2500	10000	35000
100	3000	15000	40000
500	4000	20000	50000
1000	5000	25000	75000
2000	7500	30000	

Type 20AV—200 Watt Rating—Tube Size 1⅛″ x 10½″

50	1500	10000	50000
100	2000	20000	75000
500	2500	25000	
1000	5000	30000	

All adjustable types furnished with one adjustable clip, bolt and nut.

Extra Adjustable Clips

Type No. 1V—For 10-Watt Variohms*
Type No. 3V—For 25, 50, and 80-Watt Variohms
Type No. 6V—For 100 and 200-Watt 1⅛″ Variohms
*Reg.U.S.Pat.Off.

WHEN ORDERING GIVE TYPE NUMBER AND RESISTANCE RATING. EXAMPLE: HHJ1

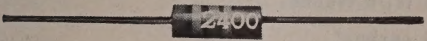
Composition and Wire Wound RESISTORS

CONTINENTAL CARBON INC. RADIO *Certified* COMPONENTS

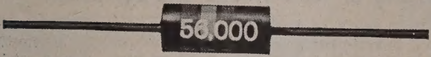
"CARBOMITE" M-TYPE

Composition Resistors

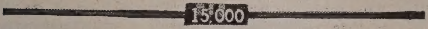
(Actual size as Illustrated)



M1-1 WATT



M2-2 WATT



M½-½ WATT

- **Meet JAN-R-11 Army-Navy Specification**
- **Low Noise Level; Low Voltage Coefficient**
- **Stamped With Value**
- **Extra Small Size**
- **High Insulation 1000 volt Breakdown**

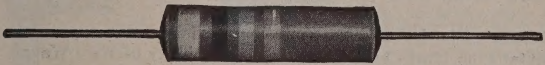
Continental's New "CARBOMITE" bakelite insulated carbon composition resistors are now the standard of Electronic components used in the Radio and Electronic Industries. They meet all specifications of the joint Army-Navy-Jan-R-11 including the toughest of all tests the "Salt water immersion cycling." The "CARBOMITE" M type resistor consists of a solid molded carbon core, outer molded bakelite insulated shell and molded in leads. These resistors being well insulated can be mounted side by side or against any metal surface without shorting or grounding. They are recommended where space limits and insulating quality require a rugged reliable and small resistor capable of withstanding severe service. The lead wires are straight and are tinned with a tin composition heavy enough to give instant soldering with the touch of the heated soldering iron tip. The resistor values are easily identified by the bright non-rubbing off color code bands and the white ink stamped numbers of the value on the body of the resistor.

The M2-2 watt, M1-1 watt and the M½-½ watt are made in all the standard preferred RMA values and packed in quantities of 10 or 50 of each value to the box. Order in these quantities or multiples thereof.

Type	Size	List Price 5%	Tolerance 10%
M½	⅜" x 9/64" Dia.	$0.33	$0.17
M1	9/16" x 7/32" Dia.	.50	.25
M2	11/16" x 5/16" Dia.	.66	.33

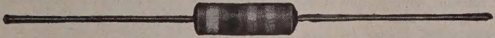
"WM" TYPE

Wire Wound Resistors



WM2 • 2 WATT

WM1 • 1 WATT



WM½ • ½ WATT

WM⅓ • ⅓ WATT

- **Resistance Wire Molded in Bakelite**
- **Axial Leads—Insulated.**
- **Color Coded—RMA Standard**
- **Very Stable—Low Values**

Continental's type WM resistors consist of evenly spaced resistance wire encased in a protective bakelite molded shell and are designed so as to preclude the possibility of shorting between turns. The ends of the resistance wire are firmly affixed to the tinned copper terminals. Resistance values below 12 ohms have soldered connections, and values above 12 ohms have pressure type contacts, thus insuring both electrical and mechanical connections. The minimum size wire used is 0.0015 inch.

Type WM resistors are recommended for use in circuits requiring resistance values not ordinarily available in the conventional carbon composition style. They are color coded in accordance with RMA standards.

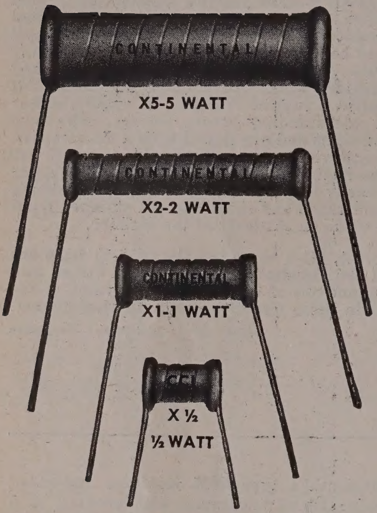
	Rating					
	Normal	Overload				
Type	Watt	Watt	Voltage Limits		Insulation	Tolerance
WM-⅓	⅓	½	2.0	2.5	Bakelite	5-10-20%
WM-½	½	¾	3.5	4.5	Bakelite	5-10-20%
WM-1	1	1½	9.0	11.0	Bakelite	5-10-20%
WM-2	2	2½	17.3	19.5	Bakelite	5-10-20%

			Resistance Range		List Prices	
Type	Wattage	Diameter	Ohms	Leads	5%	10%
WM-⅓	⅓	7/16" x ⅛"	.47 to 12	1½ x .028	$.33	$.17
WM-½	½	⅝" x 7/32"	.47 to 800	1½ x .032	.33	.17
WM-1	1	1" x 9/32"	.47 to 1500	1½ x .032	.50	.25
WM-2	2	1 7/16" x ⅜"	.47 to 2500	1½ x .032	.66	.33

PRECISION RESISTORS

"Nobleloy" X-Type Resistors

Trade Mark Reg.



- **Not Wire Wound**
- **Not carbon!**
- **Stability of Wire Wound and Equivalent**

After several years of research work CONTINENTAL engineers have developed a new resistor involving the metal film principle, having the accuracy of a wire wound unit. Absolutely no carbon whatever is used in the fabrication of these resistors. The metallic resistance film is formed on the surface of a low loss ceramic tube using a patented pyrochemic process.

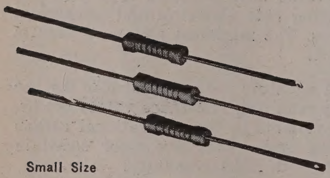
The metal film thus formed is hermetically sealed by a layer of vitreous enamel specially developed and patented by CONTINENTAL. The ceramic tube with its associated film is then spiralled to give a long resistance path and to accurately calibrate the unit to value.

Since the ceramic tubes are hollow they allow a larger surface for heat radiation, thus permitting the resistor to withstand overloads of 200% or better.

The copper-tinned lead terminals are soldered to extremely low resistance metal contact films which in turn are integral with the resistance film, thereby reducing contact resistance to a minimum. This type of construction produces a resistor unit having not only excellent resistance stability but also a negligible noise characteristic.

"NOBLELOY" TYPE NF METAL FILM RESISTORS

Trade Mark



Small Size

- Accurate Fixed Non-Wire Wound
- Metal Film (Not Carbon)
- Axial Leads
- Stability of Wire Wound

A miniature type precision resistor for use in applications calling for initial accuracy and good stability has been developed for the Components and Material branch of the Signal Corps Labs., Fort Monmouth, New Jersey, under contract. This resistor, designated as Continental type NF, employs a Nobleloy film resistance element deposited on a low loss ceramic carrier. The film is protected by a layer of vitreous enamel thus insuring protection against unusual atmospheric conditions. The axial type leads are securely fastened to the ends of the resistor thus assuring positive contact. The resistor is calibrated to value by means of spiralled grooves cut into the film to increase the resistance path. The NF resistor, having good stable characteristics, is particularly adaptable to circuits requiring close tolerance, and is recommended for uses where paired composition resistors are now used.

Type	Wattage	Size	Values	Recommended Voltage	Max. Voltage	List Prices 1%	5%
X-½	½ Watt	9/32″ x ⅝″	½ ohm to 5 meghom	500	700	$1.00	$ .85
X-1	1 Watt	9/32″ x 1″	1 ohm to 10 meghom	700	1000	1.00	.85
X-2	2 Watt	9/32″ x 1¾″	2 ohm to 20 meghom	1000	1500	1.20	1.05
X-5	5 Watt	½″ x 2″	3 ohm to 30 meghom	1250	2000	1.40	1.25

No. 18 tinned copper leads 1½″ long.

Type	Wattage	Dimensions A	B	C	Resistance Range Min.	Max.	Voltage Rec.	Max.	List Price 1%	5%
NF½	½ Watt	15/32″	.155″	.130″	1 Ohm	1 Megohm	200V	350V	$1.00	$ .85

No. 20 tinned copper leads 1½″ long.

SUPPRESSORS SUPPRESSORS

ALL SPARK PLUG SUPPRESSORS AND DISTRIBUTOR SUPPRESSORS EACH LIST PRICE $0.30

CONTINENTAL SUPPRESSORS have been subjected to years of laboratory development and actual road service. They effectively remove noise interference from spark discharge at the plugs and high-tension distributor—yet do not in any way affect the motor car ignition system.

They have mechanical strength to stand the most severe service. The resistance value of 10,000 ohms has been scientifically determined. Sparking across the terminals is eliminated by careful shaping of the electrodes and cases.

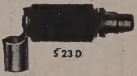
SPARK PLUG SUPPRESSORS

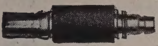
S19

S19A

S27

S21


S23D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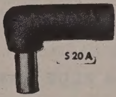
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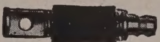
S27D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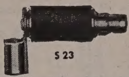
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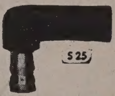
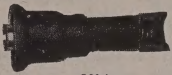
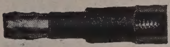

S25

DISTRIBUTOR SUPPRESSORS

C11


T20A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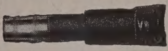
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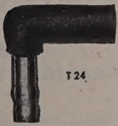
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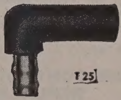

T25

FORD DISTRIBUTOR SUPPRESSOR

Brush

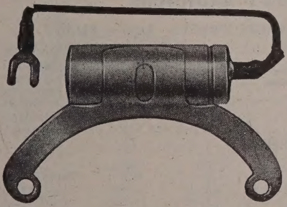
Sleeve

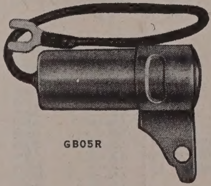
T-17: Brush and Sleeve Supplied Together **Distributor Type Brush Suppressor** of the right resistance to suppress interference from the spark at the rotor.
Universal Type: the brush can be inserted in the bakelite sleeve to fit models using the larger size brush.

SUPPRESSORS

Type No.	List Price Each
S-19, S-19D,	$0.30
S-21, S-21D,	30
S-23, S-23D,	.30
S-27, S-27D,	.30
S-25, S-19A,	.30
C-11, T-24,	.30
T-20, T-13,	.30
T-17, T-20A,	.30

GB05

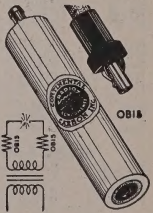

GB05F


GB05R

GENERATOR CONDENSERS

Type	Application	Capacity	Size	List Price
GB05	Generator and coil	.5 mfd.	2⅛" x ¾"	$0.75
GB05F	Ford V-8 coil 1936 Models	.5 mfd.	2⅛" x ¾"	1.00
GB05R	Ford Generator and coil Latest Models	.5 mfd.	2⅛" x ¾"	1.00

OIL BURNER SUPPRESSOR



Filternoys Suppressor OB15, carbon element type, intended for use only with the high tension spark ignition of oil or gas burning heating systems. Must be connected in series with each line to the spark gap. Size of the suppressor 3½" x ¾" diameter. Universal connections at both ends for solderless contact.

OB15............List Price $1.80

Centralab **CRL** **Centralab**

FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

CONTROLS

BLUE SHAFT RADIOHMS

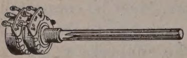
The newest, most widely accepted line of 15/16" modern carbon type controls. Switch types are factory assembled and tested, for smoothest action and instant usefulness. Distinctive blue, anodized aluminum shafts, 3" long with universal fluted full length mill. Rating ½ watt. Type BSK units have 2⅛" brass split knurl shafts. Switches are universal DPST, easily wired for SPST or 3 wire usage.

Cat. No. Plain	Cat. No. with Switch	Ohms Max. Resis.	Taper	List Price Plain	List Switch Type
B-4	B-4-S	500	C1	$1.25	$1.75
B-5	B-5-S	1000	C1	1.25	1.75
B-6	B-6-S	2000	C1	1.25	1.75
B-7	B-7-S	2500	C1	1.25	1.75
B-8	B-8-S	3000	C1	1.25	1.75
B-10	B-10-S	5000	C1	1.25	1.75
B-11	B-11-S	5000	C2	1.25	1.75
B-12	B-12-S	5000	C5	1.25	1.75
B-14	B-14-S	10000	C1	1.25	1.75
B-15	B-15-S	10000	C2	1.25	1.75
B-16	B-16-S	10000	C6	1.25	1.75
B-17	B-17-S	10000	C5	1.25	1.75
B-20	B-20-S	15000	C6	1.25	1.75
B-22	B-22-S	20000	C1	1.25	1.75
B-24	B-24-S	20000	C6	1.25	1.75
B-26	B-26-S	25000	C1	1.25	1.72
B-27	B-27-S	25000	C5	1.25	1.75
B-28	B-28-S	25000	C6	1.25	1.75
B-31	B-31-S	50000	C1	1.25	1.75
B-32	B-32-S	50000	C2	1.25	1.75
B-35	B-35-S	75000	C1	1.25	1.75
B-40	B-40-S	100000	C1	1.25	1.75
B-41	B-41-S	100000	C2	1.25	1.75
B-44	B-44-S	150000	C2	1.25	1.75
B-46	B-46-S	200000	C1	1.25	1.75
B-50	B-50-S	250000	C1	1.25	1.75
B-51	B-51-S	250000	C2	1.25	1.75
B-52	B-52-S	250000	C5	1.25	1.75
BT-53	BT-53-S	250K-T125K	C11	1.85	2.35
BT-55	BT-55-S	250K-T75K	C13	1.85	2.35
BT-57	BT-57-S	350K-T70K	C12	1.85	2.35
B-59	B-59-S	500000	C1	1.25	1.75
B-60	B-60-S	500000	C2	1.00	1.50
B-61	B-61-S	500000	C5	1.25	1.75
BT-65	BT-65-S	500K-7250K	C11	1.85	2.35
BT-66	BT-66-S	500K-T100K	C12	1.85	2.35
BT-67	BT-67-S	500K-T150K	C13	1.85	2.35
B-68	B-68-S	1 Meg.	C5	1.25	1.75
B-69	B-69-S	1 Meg.	C1	1.25	1.75
B-70	B-70-S	1 Meg.	C2	1.00	1.50
BT-71	BT-71-S	1 Meg.-T500K	C11	1.85	2.35
BT-72	BT-72-S	1 Meg.-T200K	C12	1.85	2.35
BT-73	BT-73-S	1 Meg.-T300K	C13	1.85	2.35
BT-74	BT-74-S	1 Meg.-T500K	C16	1.85	2.35
B-75	B-75-S	2 Megs.	C1	1.25	1.75
B-76	B-76-S	2 Megs.	C2	1.25	1.75
B-77	B-77-S	2 Megs.	C5	1.25	1.75
BT-78	BT-78-S	2 Megs.-T1 Meg.	C11	1.85	2.35
BT-79	BT-79-S	2 Megs.-T400K	C12	1.85	2.35
BT-80	BT-80-S	2 Megs.-T600K	C13	1.85	2.35
BT-81	BT-81-S	2 Megs.-T200K	C15	1.85	2.35
BT-82	BT-82-S	2 Megs.-T1 Meg.	C16	1.85	2.35
B-83	B-83-S	2.5 Megs.	C1	1.25	1.75
B-84	B-84-S	3 Megs.	C1	1.25	1.75
B-85	B-85-S	3 Megs.	C2	1.25	1.75
B-86	B-86-S	4 Megs.	C1	1.25	1.75
B-87	B-87-S	5 Megs.	C1	1.25	1.75
B-98	B-98-S	10 Megs.	C1	1.25	1.75

MODELS BSK—With 2⅛" Split Knurl Shafts

BSK-60	BSK-60-S	500000	C2	1.10	1.60
BSK-70	BSK-70-S	1 Meg.	C2	1.10	1.60
BTSK-66	BTSK-66-S	500K-T100K	C12	1.85	2.35
BTSK-72	BTSK-72-S	1 Meg.-T200K	C12	1.85	2.35

MODEL BB TWIN RADIOHMS



Two B Radiohms mounted in tandem on a single shaft which operates both units. No switch types available. Rating: ½ watt. 3" fluted shaft.

BB-100	10000	25000	C4	C3	$2.50
BB-101	10000	50000	C2	C1	2.50
BB-102	100000	100000	C2	C2	2.50
BB-103	250000	250000	C2	C2	2.50
BB-104	500000	500000	C2	C2	2.50
BB-105*	50000	500000	C3	C3	2.50

* Special Unit for the Gallagher audio oscillator—See June, 1951 "Radio & Television News" pg. 62.

HANDY PLASTI-PAKS
12 UNITS—MODELS B AND BSK IN PLASTIC BOXES

The widely used half megohm and one megohm "audio" taper controls made available in hinged lid plastic boxes. There is no additional charge for this convenient container, handy for many uses.

BP-1 PAK—Contains 12 Cat. No. B-60 Plain Controls, ½ meg., C2 or audio taper. List Price.. **$12.00**

BP-2 PAK—Contains 12 Cat. No. B-70 Plain Controls, 1 meg., C2 or audio taper. List Price.. **12.00**

BP-3 PAK—Contains 12 Cat. No. B-60-S Switch type Controls, ½ meg., C2 or audio taper. List Price...................... **18.00**

BP-4 PAK—Contains 12 Cat. No. B-70-S Switch type Controls, 1 meg., C2 or audio taper. List price...................... **18.00**

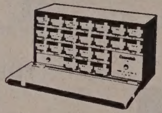
BP-5 PAK—Contains 12 Cat. No. BSK-60 Controls, ½ meg., C2 or audio taper, Split Knurl Shafts. List Price............ **13.20**

BP-6 PAK—Contains 12 Cat. No. BSK-70 Controls, 1 Meg., C2 or audio taper, Split Knurl Shafts. List Price............ **13.20**

BP-7 PAK—Contains 12 Cat. No. BSK-60S Switch type Controls, ½ meg., C2 taper, Split Knurl Shafts. List Price............ **19.20**

BP-8 PAK—Contains 12 Cat. No. BSK-70-S Switch type Controls, 1 meg., C2 taper, Split Knurl Shafts. List Price............ **19.20**

B-A AND B-B BLUE SHAFT RADIOHM KITS



Two kit assortments of 22 controls each, packaged in a neat sturdy metal cabinet. Designed primarily for the user who wants to have controls "on hand" when he needs them.

B-A KIT—22 Half and One Meg. Controls

An assortment of plain and switch type half and one meg. controls, as follows: 3 B-60 ½ meg.; 5 B-60-S ½ meg. switch type; 2 B-70 1 meg. plain; 3 B-70-S 1 meg. switch type; 2 BSK-60 ½ meg. plain Split Knurl Shaft; 3 BSK-60-S ½ meg. switch type; Split Knurl Shaft; 2 BSK-70, 1 meg., plain-Shaft Knurl Shaft; 2 BSK-70-S, 1 meg. switch tyep—Split Knurl Shaft; Metal Cabinet.
Cat. No. B-A. List Price.. **$29.40**

B-B KIT 22 Assorted Controls

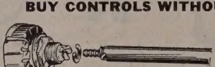
Ten different types, the fastest moving controls. 1 B-31; 1 B-31S; 1 B-40; 1 B-40-S; 1 B-51; 1 B-51-S; 1 B-59; 1 B-59-S; 1 B-60; 2 B-60-S; 1 BT-67; 1 BT-67-S; 1 B-70; 2 B-70-S; 1 BT-73; 1 BT-73-S; 1 B-76; 1 B-76-S; 1 BT-80; 1 BT-80-S; Metal Cabinet.
Cat. No. B-B. List Price.. **$35.60**

CUSTOM CONTROLS FOR TV-RADIO REPLACEMENT

Centralab listing of "Ready to Use" Customs now contain 250 units, plus 28 Custom Wire Wound Controls. There is NO assembly, NO time wasted building a unit. They are factory tested and inspected to original manufacturers specifications. Ask for your copies of CRL Special Control Bulletin and TV Control Guide (price 25 cents).

ADASHAFT RADIOHMS

BUY CONTROLS WITHOUT SHAFTS—ADD-A-SHAFT



The basic control unit is furnished without a shaft. Select the required shaft from the wide assortment available, offering both flexibility and economy. Shafts can be almost instantly locked into the control. Switches are listed on facing page.

BE SURE TO ORDER SHAFTS.

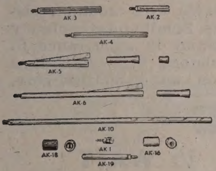
Cat. No.	Ohms Resis.	Taper	List Price
AN-5	1000	C1	$1.10
AN-6	2000	C1	1.10
AN-7	2500	C1	1.10
AN-10	5000	C1	1.10
AN-11	5000	C2	1.10
AN-12	5000	C5	1.10
AN-13	6500	C1	1.10
AN-14	10000	C1	1.10
AN-22	20000	C1	1.10
AN-23	20000	C5	1.10
AN-26	25000	C1	1.10
AN-27	25000	C5	1.10
AN-31	50000	C1	1.10
AN-32	50000	C2	1.10
AN-40	100000	C1	1.10
AN-41	100000	C2	1.10
AN-50	250000	C1	1.10
AN-51	250000	C2	1.10
AN-52	250000	C5	1.10

Cat. No.	Ohms. Resis.	Taper	List Price
AN-59	500000	C1	$1.10
AN-60	500000	C2	.95
AN-61	500000	C5	1.10
ANT-66	500K-T100K	C12	1.70
AN-68	1 Meg.	C5	1.10
AN-69	1 Meg.	C1	1.10
AN-70	1 Meg.	C2	.95
ANT-73	1 Meg-T300K	C13	1.70
AN-75	2 Megs.	C1	1.10
AN-76	2 Megs.	C2	1.10
AN-77	2 Megs.	C5	1.10
ANT-78	2 Meg-T1 Meg	C11	1.70
ANT-80	2 Meg-T600K	C13	1.70
AN-83	2.5 Megs.	C1	1.10
AN-84	3 Megs.	C1	1.10
AN-86	4 Megs.	C1	1.10
AN-87	5 Megs.	C1	1.10
AN-98	10 Megs.	C1	1.10

CONTROLS

ADASHAFT SHAFTS AND COUPLERS

Order separately as required—fit easily, are solid and true.



AK-1 Fingertip Knurl with Screwdriver Slot, ⅜″ F.E.O.B.	$0.15
AK-2 1⁹⁄₁₆″ with .078″ slot	.20
AK-3 3″ Universal Fluted Mill	.15
AK-4 3⅞″ Split Knurl	.25
AK-5 3″ Auto Type with Funnel	.55
AK-6 6″ Auto Type with Funnel	.65
AK-10 10″ with Flat Mill	.30
AK-16 Coupler—¼″ to ¼″ or ¼″ to ³⁄₁₆″	.40
AK-18 Insulated Coupler—slotted auto type	.30
SK-19 Insulating Nylon—2¹⁄₁₆″ F.E.O.B. with slot	.55

MODEL "N" RADIOHMS

Standard 1³⁄₃₂″ Diameter Single Controls

Popular, medium size control, carbon type. Plain, no switch construction. Attachable switches listed beneath control listings. Rating; ½ watt. 3″ Shaft. Fluted Univeral mill.

Cat. No.	Ohms Resis.	Taper	List Price	Cat. No.	Ohms Resis.	Taper	List Price
N-158	1000	C1	$1.25	NT-120	500K-T150K	C13	$1.85
N-106	5000	C1	1.25	NT-149	500K-T250K	C11	1.85
N-107	10000	C1	1.25	N-104	1 Meg.	C2	1.00
N-112	20000	C6	1.25	NT-150	1 Meg-T200K	C12	1.85
N-113	25000	C1	1.25	NT-121	1 Meg-T300K	C13	1.85
N-114	50000	C1	1.25	N-155	2 Megs.	C2	1.25
N-115	50000	C2	1.25	NT-151	2 Megs-T200K	C15	1.85
N-116	100000	C1	1.25	NT-152	2 Megs-T400K	C12	1.85
N-117	100000	C2	1.25	NT-122	2 Megs-T600K	C13	1.85
N-102	250000	C2	1.25	NT-153	2 Megs-T 1 Meg	C11	1.85
N-118	500000	C1	1.25	N-177	5 Megs	C1	1.25
N-103	500000	C2	1.00	N-178	10 Megs	C1	1.25

MODEL "NK" SINGLE CONTROLS—SPLIT KNURL SHAFTS

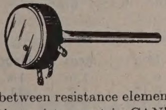
NK-140	500000	C2	1.10	NK-141	1 Meg.	C2	$1.10

SWITCHES FOR MODELS "N", "NK", AND "AN" CONTROLS

These switch units replace the back covers on controls, fit firmly and are positive in action. Rating: 3 amps., 125 V.A.C.; 1 amp., 250 V.A.C. Approved by Underwriters Laboratories.

Cat. No.	Switching	List Price	Cat. No.	Switching	List Price
K-155	SPST	$0.50	K-158	Four Point	$0.65
K-156	SPDT	.65	K-169	SPST & Lug	.65
K-157	DPST	.65			

MODEL "A" 1 WATT PATENTED NON-RUBBING CONTACT CONTROLS



Wall type resistor element provides one third longer effective resistor length assuring low noise level, closer taper tolerance, double load carrying ability. Patented non-rubbing contact eliminates all friction between resistance element and contacting member assuring accuracy . . . the resistance strip CAN'T wear out.

Cat. No.	Ohms Resis.	Taper	List Price	Cat. No.	Ohms Resis.	Taper	List Price
A-100	500	1	$1.75	A-123	100000	6	$1.75
A-101	10000	1	1.75	A-127	250000	6	1.75
A-102	2000	1	1.75	A-128	500000	1	1.75
A-105	5000	1	1.75	A-130	500000	6	1.75
A-108	10000	1	1.75	A-132	1 Meg.	6	1.75
A-115	25000	1	1.75	A-133	2 Meg.	6	1.75
A-118	50000	1	1.75	A-134	3 Meg.	6	1.75
A-119	50000	6	1.75	A-149	5 Meg.	6	1.75
A-122	100000	1	1.75	A-150	10 Meg.	6	1.75

SWITCHES FOR MODEL "A" AND "V" CONTROLS

Attachable switch "covers" are rated 8 amps. at 12 V.D.C., 3 amps. 125 V.A.C., 1 amp. 250 V.A.C.

Cat. No.	Type	List Price
K-10	SPST	$0.60
K-11	SPDT	.75
K-12	DPST	.75

MODEL "V" AND "VK" WIREWOUND RADIOHMS 3 WATT LINEAR TAPER

Model "V" smooth action wirewound controls, are regularly furnished without switches. Attachable switches are available, as listed in Column 1. 1⁷⁄₁₆″ diameter, ⁹⁄₁₆″ depth behind mounting surface. Shafts: "V"; 3″ fluted mill; "VK"; ⅜″ fingertip knurl and slot. "VK" series not adaptable to switch type.

Cat. No. "V"	Cat. No. "VK"	Ohms Resis.	List Price	Cat. No. "V"	Cat. No. "VK"	Ohms Resis.	List Price
V-100	......	2	$1.85	V-123	VK-123	200	$1.85
V-102	......	4	1.85	V-125	VK-125	300	1.85
V-104	......	6	1.85	V-126	VK-126	400	1.85
V-106	......	8	1.85	V-127	VK-127	500	1.85
V-108	......	10	1.85	V-128	......	750	1.85
V-109	......	15	1.85	V-129	VK-129	1000	1.85
V-110	VK-110	20	1.85	V-130	VK-130	1500	1.85
V-111	VK-111	25	1.85	V-131	VK-131	2000	1.85
V-112	VK-112	30	1.85	V-132	VK-132	2500	1.85
V-114	......	40	1.85	V-133	VK-133	3000	1.85
V-116	VK-116	50	1.85	V-134	VK-134	4000	1.85
V-117	VK-117	60	1.85	V-135	VK-135	5000	1.85
V-118	......	75	1.85	V-136	......	7500	1.85
V-121	VK-121	100	1.85	V-137	VK-137	10000	1.85

MODEL "SVT" CENTER TAPPED WIREWOUND RADIOHMS

Tapped at 50% rotation—otherwise similar electrically to Model "V" Wirewounds. Linear Taper. Furnished with ⅜″ fingertip knurl and screwdriver slot shaft. Units are not adaptable to switches.

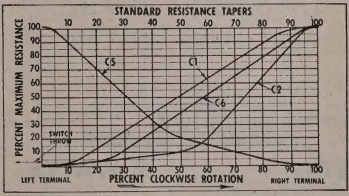
Cat. No.	Ohms Resis.	Tap Resis.	List Price
SVT-901	20	10	$2.45
SVT-902	30	15	2.45
SVT-903	40	20	2.45
SVT-904	50	25	2.45

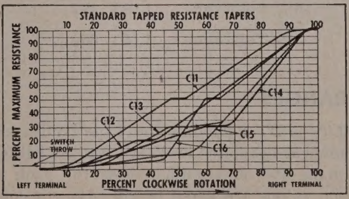
MODEL "SVP" FOUR WATT WIREWOUNDS LINEAR TAPER

Model "SVP" controls are rated at four watts max., and will handle the higher wattages called for in various focus and contrast TV applications. 1²⁵⁄₃₂″ dia., ³¹⁄₃₂″ deep. Furnished in 3 shaft styles in various resistances. Not available in switch types.

Column 1—SVP-982 to SVP-990—⅜″ Fingertip knurl and slot shaft
Column 2—SVP-991 to SVP-996—2⅛″ full length split knurl shaft
Column 3—SVP-997 to SVP-999—3″ full length mill shaft

Ohms Resis.	Cat. No. ⅜″ Shaft	List Price	Cat. No. Sp. Knurl	List Price	Cat. No. 3″ Shaft	List Price
25	SVP-982	$2.25	....	....	....	....
100	SVP-983	2.25	....	....	....	....
200	SVP-984	2.25	....	....	SVP-997	2.25
400	....	....	SVP-991	2.35	....	....
500	SVP-985	2.25	....	....	....	....
600	....	....	SVP-992	2.35	....	....
750	SVP-986	2.25	....	....	....	....
1000	....	....	SVP-993	2.35	....	....
1500	....	....	SVP-994	2.35	....	....
2000	....	....	....	....	SVP-998	2.25
2200	SVP-987	2.25	....	....	....	....
2500	SVP-988	2.25	....	....	....	....
5000	SVP-989	2.25	....	....	SVP-999	2.25
7500	SVP-990	2.25	....	....	....	....
10000	....	....	SVP-995	2.35	....	....
20000	....	....	SVP-996	2.35	....	....





INSULATED RESISTORS

Preferred for Performance

IRC

ADVANCED TYPE BT

INSULATED COMPOSITION RESISTORS

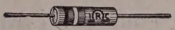
IRC Advanced Type BT Resistors are supplied in 4 miniature units from ⅓ to 2 watts. They are particularly suited to television requirements. Extremely low operating temperature and excellent power dissipation are assured. All types, except BTR, are clearly stamped with value and wattage, plus color code.

BTR **⅓ WATT**

13/32″ x 3/32″—82 ohms to 22 meg.—250 volts max.

10% Tolerance — **LIST 17¢**

5% Tolerance — **LIST 33¢**



BTS **½ WATT**

13/32″ x ⅛″—82 ohms to 22 meg.—350 volts max.

10% Tolerance — **LIST 17¢**

5% Tolerance — **LIST 33¢**

BTA **1 WATT**

23/32″ x ¼″—100 ohms to 22 meg.—500 volts max.

10% Tolerance — **LIST 25¢**

5% Tolerance — **LIST 50¢**

BTB **2 WATTS**

1¼″ x ¼″—330 ohms at 22 meg.—500 volts max.

10% Tolerance — **LIST 33¢**

5% Tolerance — **LIST 66¢**

RTMA RANGES

Advanced Type BT Resistors and Type BW Insulated Wire Wounds are supplied in RTMA Ranges subject to the minimum and maximum values for each type. These stock values are listed in the adjacent column.

TYPE BW

INSULATED WIRE WOUND RESISTORS

Exceptionally stable, inexpensive wire wound resistors for low range requirements. Small and completely insulated, Type BW's are similar in appearance to IRC insulated composition resistors. Wire resistance element is tightly wound on an insulated core.

BW-½ **½ WATT**

⅝″ x 3/16″—0.27 to 820 ohms

10% Tolerance ....**LIST 17¢**

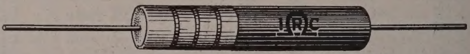
5% Tolerance (10 ohms and above)..............**LIST 33¢**

BW-1 **1 WATT**

1¼″ x ¼″—0.47 to 4700 ohms

10% Tolerance ....**LIST 25¢**

5% Tolerance (10 ohms and above)............**LIST 50¢**



BW-2 **2 WATTS**

1¾″ x 21/64″—1.0 to 8,200 ohms

10% Tolerance ....**LIST 33¢**

5% Tolerance (10 ohms and above)............**LIST 66¢**

VALUES AVAILABLE AT ±10% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
—	1.0	10	100	1,000	10,000	0.1	1.0	10
—	1.2	12	120	1,200	12,000	0.12	1.2	12
—	1.5	15	150	1,500	15,000	0.15	1.5	15
—	1.8	18	180	1,800	18,000	0.18	1.8	18
—	2.2	22	220	2,200	22,000	0.22	2.2	22
0.27	2.7	27	270	2,700	27,000	0.27	2.7	—
0.33	3.3	33		330	33,000	0.33	3.3	—
0.39	3.9	39	390	3,900	39,000	0.39	3.9	—
0.47	4.7	47	470	4,700	47,000	0.47	4.7	—
0.56	5.6	56	560	5,600	56,000	0.56	5.6	—
0.68	6.8	68	680	6,800	68,000	0.68	6.8	—
0.82	8.2	82	820	8,200	82,000	0.82	8.2	—

VALUES AVAILABLE AT ±5% TOLERANCE

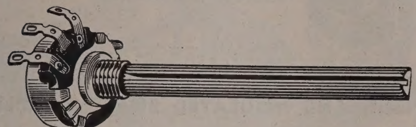
Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
10	100	1,000	10,000	0.1	1.0	10
11	110	1,100	11,000	0.11	1.1	11
12	120	1,200	12,000	0.12	1.2	12
13	130	1,300	13,000	0.13	1.3	13
15	150	1,500	15,000	0.15	1.5	15
16	160	1,600	16,000	0.16	1.6	16
18	180	1,800	18,000	0.18	1.8	18
20	200	2,000	20,000	0.20	2.0	20
22	220	2,200	22,000	0.22	2.2	22
24	240	2,400	24,000	0.24	2.4	—
27	270	2,700	27,000	0.27	2.7	—
30	300	3,000	30,000	0.30	3.0	—
33	330	3,300	33,000	0.33	3.3	—
36	360	3,600	36,000	0.36	3.6	—
39	390	3,900	39,000	0.39	3.9	—
43	430	4,300	43,000	0.43	4.3	—
47	470	4,700	47,000	0.47	4.7	—
51	510	5,100	51,000	0.51	5.1	—
56	560	5,600	56,000	0.56	5.6	—
62	620	6,200	62,000	0.62	6.2	—
68	680	6,800	68,000	0.68	6.8	—
75	750	7,500	75,000	0.75	7.5	—
82	820	8,200	82,000	0.82	8.2	—
91	910	9,100	91,000	0.91	9.1	—

IRC

VOLUME CONTROLS

Preferred for Performance

NEW TYPE Q



RADIO TECHNICIAN'S VOLUME CONTROL

A new volume control engineered to meet the needs of modern radio and TV replacement. Compact 15/16″ design is augmented with shorter bushing, only ¼″ in length. This tiny control will meet all small set requirements, and yet is capable of handling large receiver replacements. "Cushioned turn" rotation and quiet element combine to provide a modern control of the highest quality.

KNOB MASTER FIXED SHAFT. This is the standard Q shaft. It is a FIXED shaft, and handles most knob requirements. Knurled, flatted and slotted, it fits knurled and spring-type push-on knobs or set-screw knobs. 3″ long with ample cross-section to prevent bending.

INTERCHANGEABLE FIXED SHAFTS. Quick replacement of standard fixed shaft to fit any of 13 Interchangeable Fixed Shafts provides ready conversion to "specials." This revolutionary feature is made easy by the new IRC Resilient Retainer Ring. These special FIXED Shafts offer all of the advantages of Tap-in Shafts with the added security of fixed shafts. Widest replacement coverage is made possible with a minimum stock. These special shafts are illustrated and explained on the following page.

5 STANDARD TAPERS

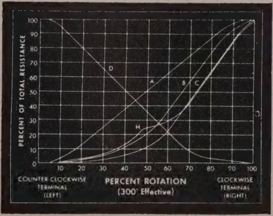
A—Used as potentiometer or rheostat in any circuit where uniform resistance change is required.

B—A semi-logarithmic curve used as tone control or audio circuit control.

C—A logarithmic curve. Used as audio circuit control or antenna shunt control.

D—Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is of prime importance in controlling volume.

H—A tapped logarithmic curve used as audio level control for automatic bass compensation.



59 VALUES FOR COMPLETE COVERAGE

RESISTANCE OHMS	TAP	IRC STOCK No.	TAPER	USUAL USE
500	—	Q 11-103	A	4, 18—L
1K	—	Q 11-108	A	4—L
2K	—	Q 11-110	A	4, 16—L
2.5K	—	Q 13-111	C	O
3K	—	Q 11-112	A	L
5K	—	Q 11-114	A	1. 4, 8, 13, 16, 17—L
7.5K	—	Q 11-115	A	4—L
10K	—	Q 11-116*	A	4, 16—B, L
10K	—	Q 13-116	C	A
10K	—	Q 14-116*	D	D
20K	—	Q 11-119	A	8, 9—L
20K	—	Q 16-119*	Spec.	B
25K	—	Q 11-120	A	3, 4, 8, 9, 10, 11, 12—L
25K	—	Q 14-120*	D	K
30K	—	Q 11-121	A	4, 9, 10—L
50K	—	Q 11-123	A	3, 9—L
50K	—	Q 13-123	C	N
50K	—	Q 14-123*	D	B
0.1 meg	—	Q 11-128	A	2, 3, 15, 17—L
0.1 meg	—	Q 13-128	C	E, N
0.25 meg	—	Q 11-130	A	3, 6, 9, 17—L
0.25 meg	—	Q 13-130	C	E, N
0.25 meg	0.125 meg	Q 13-130X	Spec.	F
0.25 meg	60K	Q 18-130X	H	G
0.25 meg	60K-0.12 meg	Q 18-130XX	Spec.	H
0.35 meg	—	Q 13-132	C	E, N
0.35 meg	35K	Q 17-132X	Spec.	G
0.35 meg	75K	Q 18-132X	H	G
0.5 meg	—	Q 11-133	A	3, 4, 9, 12, 15, 17—L
0.5 meg	—	Q 13-133	C	E, N
0.5 meg	0.125 meg	Q 13-133X	H	G
0.5 meg	—	Q 14-133	D	M
0.5 meg	25K	Q 17-133X	Spec.	G
0.5 meg	50K	Q 18-133X	Spec.	G
0.5 meg	0.25 meg	Q 19-133X	Spec.	G
0.5 meg	0.1 meg-0.2 meg	Q 18-133XX	Spec.	H
1.0 meg	—	Q 11-137	A	3, 12, 15, 16—L
1.0 meg	—	Q 13-137	C	E, N
1.0 meg	0.25 meg	Q 13-137X	H	H
1.0 meg	—	Q 14-137	D	N
1.0 meg	35K	Q 17-137X	Spec.	G
1.0 meg	50K-0.1 meg	Q 17-137XX	Spec.	H
1.0 meg	0.1 meg	Q 18-137X	Spec.	G
1.0 meg	0.25 meg-0.5 meg	Q 18-137XX	Spec.	H
1.0 meg	0.5 meg	Q 19-137X	Spec.	G
1.0 meg	0.5 meg	QVC-539X	Spec.	J
1.5 meg	—	Q 11-138	A	15
2.0 meg	—	Q 11-139	A	4, 5, 6, 7, 12, 14, 15, 17—L
2.0 meg	—	Q 13-139	C	E, N
2.0 meg	0.5 meg	Q 13-139X	H	G
2.0 meg	0.5 meg-1.0 meg	Q 13-139XX	Spec.	H
2.0 meg	0.15 meg	Q 17-139X	Spec.	G
2.0 meg	1.0 meg	Q 18-139X	Spec.	G
2.0 meg	0.25 meg-0.5 meg	Q 18-139XX	Spec.	H
2.0 meg	50K	Q 19-139X	Spec.	G
2.5 meg	—	Q 11-239	A	5, 6, 17—L
3.0 meg	—	Q 11-140	A	5, 7, 14—L
3.0 meg	—	Q 13-140	C	E
5.0 meg	—	Q 11-141	A	5, 7, 14, 15, 16, 17, 18—L
10.0 meg	—	Q 11-143	A	6, 16, 18—L

TELEVISION USES

1—A. G. C. Automatic Gain Control
2—A.F.C. Automatic Freq. Control
3—Brightners Control
4—Contrast Control
5—Focus Control
6—Height Control
7—Horizontal Centering Control
8—Horizontal Drive Control
9—Horizontal Hold Control (Sync.)
10—Horizontal Linearity Control
11—Horizontal Peaking Control
12—Horizontal Size Control
13—Sensitivity Control
14—Vertical Centering Control
15—Vertical Hold Control (Sync.)
16—Vertical Linearity Control
17—Vertical Size Control
18—Width Control

RADIO USES

A—Antenna Control
B—Antenna Grid Bias Control
C—Antenna Grid Bias of 1 tube
D—Antenna Grid Bias of 2 tubes
E—Audio Volume Control
F—Audio Control with AVC Tap
G—Audio Control with Tone Tap
H—Audio Control with Two Tone Taps
J—Fader Control
K—Grid Bias Control
L—Potentiometer Voltage Divider
M—R. F. Plate Control
N—Tone Control
O—Panel Section for L & T Pads

*—These controls are supplied with 270 ohm BW-½ (½ watt) insulated wire wound resistor.

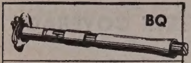
STOCK NUMBERS. IRC stock numbers are the same as used on D and DS controls—only the prefix letter is changed to Q.

VOLUME CONTROLS

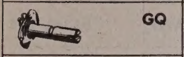
Preferred for Performance

IRC

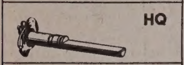
13 INTERCHANGEABLE FIXED SHAFTS


BQ

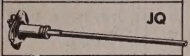
Slotted or tongued. For remote control cables. 3½″ long. ¼″ dia. **LIST 45¢**


GQ

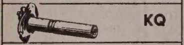
Slotted with hole in bottom. For Philco sets. 1$\frac{1}{16}$″ long. ¼″ dia. **LIST 30¢**


HQ

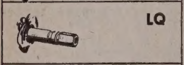
Flatted, with groove for dial plate. For Delco, RCA, Sears-Roebuck and Westinghouse. $\frac{3}{16}$″ deep flat. $\frac{3}{64}$″ deep groove. 1$\frac{11}{16}$″ long. ¼″ dia. **LIST 30¢**


JQ

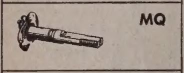
⅛″ dia. with .105″ flat. For certain Zenith models. 4⅛″ long **LIST 45¢**


KQ

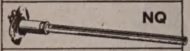
¼″ round with 2 concentric holes in end. For Motorola sets. 1⅜″ long. **LIST 30¢**


LQ

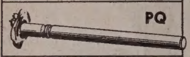
For certain Belmont and Montgomery-Ward sets. $\frac{1}{32}$″ deep flat. $\frac{1}{32}$″ deep groove. 1″ long. ¼″ dia. **LIST 35¢**


MQ

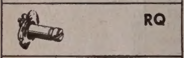
Double-flat, threaded for ⅜″ on end. For Belmont, Montgomery-Ward and Wells-Gardner sets. 2 concentric holes in end. 1½″ long....**LIST 45¢**


NQ

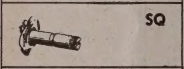
$\frac{3}{16}$″ flatted and slotted. Slot milled length of shaft except for thin web. 4″ long..............................**LIST 45¢**


PQ

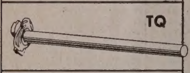
¼″ full-round. 3″ long. For ¼″ or ⅜″ bushings. ⅜″ bushing incl. **LIST 35¢**


RQ

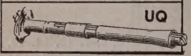
Very short screw-driver slot shaft. Slot, $\frac{3}{64}$″ x $\frac{1}{16}$″. ½″ long. ¼″ dia. ⅜″ bushing included..........**LIST 35¢**


SQ

Finger knurl and screw-driver slot. Knurled at end for ⅛″. Screw-driver slot in end, $\frac{3}{64}$″ x $\frac{1}{16}$″ deep. ¼″ dia. ¾″ long..........................**LIST 30¢**


TQ

Insulated shaft for television. 3″ long. ¼″ dia. CANNOT BE USED WITH SWITCH..................**LIST 60¢**

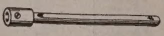

UQ

Identical to BQ with addition of friction-clutch-drive arm. For remote control auto radios............**LIST 60¢**

IRC Interchangeable Fixed Shafts are individually packaged with instructions and extra Resilient Retainer Ring.

EXTENSION SHAFTS

These attach to regular shafts, extending length to any needed size. Frequently make possible use of standard controls for "special" job.



TYPE	DIMENSION	LIST
441	4″ x ¼″ dia. x $\frac{1}{32}$″ flat	40¢
442	4″ x ¼″ dia. x $\frac{3}{32}$″ flat	40¢
443	4″ x $\frac{3}{16}$″ dia. x $\frac{1}{64}$″ flat	40¢
444	8″ x ¼″ dia. x $\frac{3}{32}$″ flat for 4″ length	40¢

SLEEVE BUSHINGS

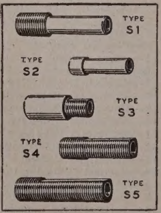
Type S1—For use with standard controls.

Type S2—To provide bearing for switching mechanism.

Type S3—For use with standard controls to set control back from chassis or mounting bracket. 1½″—½″ dia. for 1″ unthd.—⅜″ dia. for ½″, ⅜″—32 thd.—.344 flat.

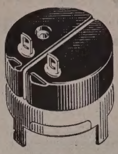
Type S4—For use with standard controls to provide $\frac{7}{16}$″ dia. bushing. 1⅝″—thd. $\frac{7}{16}$″—28 full length—.375 dbl flat.

Type S5—For use with standard controls to provide ½″ dia. bushing. 2¼″—½″—28 thread full length—.437 flat.



Type	List	Type	List
S1	45¢	S3, S4, S5	60¢
S2	30¢		

NEW IRC SWITCHES



Designed and made by IRC, new Type 76 Switch is available in 2 types: 76-1 is Single Pole Single Throw, and 76-2 is Double Pole Single Throw. Quickly attached to Q Control.

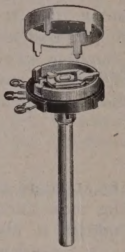
TYPE	LIST
76-1 S.P.S.T.	60¢
76-2 D.P.S.T.	60¢

*Available May 1950

PLAIN AND INSULATED SHAFT COUPLERS

Type	List
C2—Insulated coupler for use with square type Motorola shaft	30¢
C3—Plain coupler for ¼″ shafts; insert allows coupling of ¼″ shaft to $\frac{3}{16}$″ shaft	30¢

TYPES W & WK WIRE WOUND CONTROLS



TYPE W—A dependable wire wound control of uniform resistance change for power requirements up to 2 watts. Tight, uniform windings assure utmost accuracy. Diameter 1¼″; depth behind panel $\frac{9}{16}$″; shaft length 3″ from control face; ¼″ full round shaft. Illustration shows cover removed, although covers are supplied on controls.

TYPE WK—Type WK Control is identical to Type W Control except that it is equipped with IRC Knob Master Shaft for fitting to both knurled and flatted knobs used in Television Sets. Type W Switches may be used on Type WK Controls. Bushing is ¼″ long. Shaft is 3″ long from mounting face.

Type W and WK Control—Plain..........**List $1.25**

IRC Control No.	Resistance Ohms	Max. Current (Amps.)	IRC Control No.	Resistance Ohms	Max. Current (Amps.)
W-2	2	1.000	W-300	300	.083
W-3	3	.815	W-400	400	.071
W-5	5	.630	W-500	500	.063
W-6	6	.560	W-750	750	.052
W-8	8	.500	W-1000	1000	.045
W-10	10	.450	WK-1000	1000	.045
W-15	15	.370	WK-1500	1500	.036
W-20	20	.320	W-2000	2000	.032
W-25	25	.285	WK-2000	2000	.032
W-30	30	.260	WK-2500	2500	.028
W-40	40	.225	W-3000	3000	.026
W-50	50	.200	WK-3000	3000	.026
W-60	60	.183	W-4000	4000	.022
W-75	75	.164	W-5000	5000	.020
W-100	100	.142	W-7500	7500	.016
W-200	200	.100	W-10000	10000	.014
WK-250	250	.089			

TELEVISION CENTERING CONTROLS

Type W Wire Wound controls with Center Tap are widely used as Television Centering Controls.

W10X5 10 ohms—center tapped at 5 ohms
W20X10 20 ohms—center tapped at 10 ohms
W30X15 30 ohms—center tapped at 15 ohms
W50X25 50 ohms—center tapped at 25 ohms

Type W Control Center Tapped for TV............List $1.85

TYPE W SWITCHES

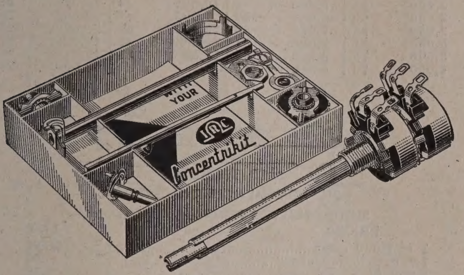
For Type W Controls

	LIST
No. 51—S.P.S.T.	$0.60
No. 52—D.P.S.T.	.75
No. 53—S.P.D.T.	.75
No. 54—Three Point	.75
No. 55—Four Point	.75
No. 56—S.P.D.T. at clockwise position	.75
No. 57—S.P.S.T., with dummy lug	.75

IRC VOLUME CONTROLS

Preferred for Performance

Concentrikit
FOR CONCENTRIC DUALS

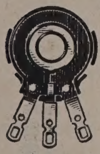


New IRC CONCENTRIKIT is a set of specially designed parts with which radio technicians can assemble a great variety of concentric dual controls. The great majority of all concentric dual controls in auto radios, home receivers and TV sets can be readily replaced with CONCENTRIKIT. Searches and waits for exact duplicates are eliminated, and shop inventories reduced.

Each CONCENTRIKIT contains 11 IRC universal parts. These are factory-packed as shown above. Step-by-step assembly instructions are included in each kit. In addition to basic parts in the kit, 2 IRC Base-Elements and 1 Shaft End are required. Shown in the column below, these are purchased separately—thus you save, by buying only the parts needed.

Type K1 CONCENTRIKIT..............................LIST $2.75

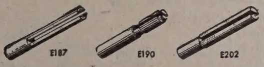
BASE-ELEMENTS FOR CONCENTRIKIT



Two IRC Base-Element Assemblies are required for each concentric dual. These are available in a wide assortment of resistance values, tapers and taps, as shown in the next column. IRC Base-Elements are a revolutionary advance in concentric dual replacement. Each unit is a complete blue molded base with element, terminals and collector ring installed. No loose parts.

	LIST
Base-Element—Plain	**$ .50**
Base-Element—Tapped	**1.10**

SHAFT ENDS



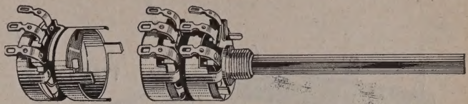
Three special Inner Shaft Ends are furnished for use with CONCENTRIKIT. These give coverage of the 10 concentric dual knob types. **LIST 42¢ each**

NEW TV CONTROL MANUAL

IRC
REPLACEMENT MANUAL

IRC's new up-to-date TV Control Manual is scheduled for release in April. Includes comprehensive listing of replacements for vast majority of TV sets. Also lists complete replacement detail on concentric dual controls—including not only TV but also home radio and auto sets as far back as they have been used. Features complete section on use of Concentrikit, providing many tips and short cuts on its use. Order this valuable IRC TV Control Manual (Form S086A) from your IRC Distributor. **NET $0.50**

Multisections
FOR STANDARD DUALS



IRC MULTISECTIONS are complete control sections that can be added like a switch to any Q Control. With these units the Radio Technician is provided an endless variety of dual and triple or even quadruple controls. Duals assembled from IRC MULTISECTIONS will accommodate Type 76 switches. Available in a selection of 20 values, as shown in following table. Each MULTISECTION adds $\frac{19}{32}$" to basic control.

STOCK VALUES OF IRC MULTISECTIONS

RESISTANCE IN OHMS	TAPER	IRC STOCK NO.
500	A	M11-103
1K	A	M11-108
2K	A	M11-110
5K	A	M11-114
10K	A	M11-116
25K	A	M11-120
50K	A	M11-123
0.1 meg	A	M11-128
0.1 meg	C	M13-128
0.25 meg	A	M11-130
0.25 meg	C	M13-130
0.5 meg	A	M11-133
0.5 meg	C	M13-133
1.0 meg	A	M11-137
1.0 meg	C	M13-137
2.0 meg	A	M11-139
2.0 meg	C	M13-139
3.0 meg	C	M13-140
5.0 meg	A	M11-141
10.0 meg	A	M11-143

MULTISECTIONS............LIST $1.25 each

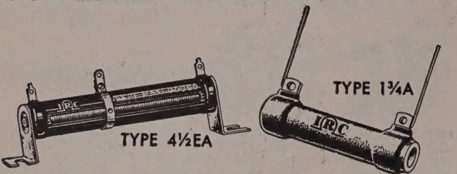
IRC BASE-ELEMENT ASSEMBLIES FOR CONCENTRIKIT

RESISTANCE	STOCK No.	TAPER	TAPS
1K	B11-108	A	
2K	B17-110	Spec.	
3K	B11-112	A	
5K	B11-114	A	
5K	B17-114	Spec.	
7.5K	B11-115	A	
10K	B11-116	A	
10K	B17-116	Spec.	
20K	B11-119	A	
25K	B11-120	A	
30K	B11-121	A	
50K	B11-123	A	
.1 meg	B11-128	A	
.25 meg	B11-130	A	
.25 meg	B13-130	C	
.25 meg	B13-130X	Spec.	.125 meg
.25 meg	B18-130X	H	60K
.35 meg	B13-132	C	
.35 meg	B17-132X	Spec.	35K
.35 meg	B18-132X	H	75K
.5 meg	B11-133	A	
.5 meg	B13-133	C	
.5 meg	B13-133X	H	.125 meg
.5 meg	B18-133X	Spec.	50K
.5 meg	B19-133X	Spec.	.25 meg
1.0 meg	B11-137	A	
1.0 meg	B13-137	C	
1.0 meg	B13-137X	H	.25 meg
1.0 meg	B17-137	Spec.	
1.0 meg	B18-137XX	Spec.	.25 and .5 meg
1.0 meg	B19-137X	Spec.	.5 meg
1.5 meg	B11-138	A	
2.0 meg	B11-139	A	
2.0 meg	B13-139	C	
2.0 meg	B13-139X	H	.5 meg
2.0 meg	B17-139	Spec.	
2.0 meg	B18-139X	Spec.	1.0 meg
2.0 meg	B18-139XX	Spec.	.25 and .5 meg
5.0 meg	B12-141	Spec.	

POWER RESISTORS

Preferred for Performance

IRC FIXED AND ADJUSTABLE POWER WIRE WOUND RESISTORS



IRC Power Wire Wounds are rugged resistors specially engineered for dependable heavy duty performance. They are full size, thus continuous operation at full rated power can be maintained. Derating is unnecessary. Special dark, rough coating is noted for its rapid heat dissipation, and protection against humidity. Operating temperatures are lower, thus assuring long life.

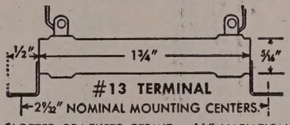
All terminals are hot tin dipped for easy soldering. 10 and 20 watt sizes use combination lead and lug terminal from which lugs may be cut for tight space applications. Clear, permanent markings show type, size, watts and resistance. Tolerances: Fixed Types—standard ± 5% for 50 ohms and over, ± 10% below 50 ohms. Adjustable Types—standard ± 10%.

FIXED TYPES

TYPE 1¾A—10 WATTS

formerly type AB

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	100	316	1,000	100	7,500	36
1.5	2580	125	283	1,100	95	8,000	35
2	2235	150	258	1,200	91	8,500	34
3	1825	200	223	1,250	89	9,000	33
4	1580	225	211	1,450	83	10,000	31
5	1410	250	200	1,500	81	11,000	30
7.5	1150	300	182	1,750	75	12,000	28
10	1000	350	169	2,000	70	12,500	28
12	913	400	158	2,250	66	13,500	27
15	816	450	149	2,500	63	14,300	26
20	707	500	141	3,000	57	15,000	25
25	632	600	129	3,500	53	16,000	25
30	577	700	119	4,000	50	17,500	23
35	535	750	115	4,500	47	18,000	23
40	500	800	111	5,000	44	20,000	22
50	447	900	105	6,000	40	22,500	21
75	365			7,000	37	25,000	20



SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.75
1,100 to 5,000 ohms	.80
6,000 to 10,000 ohms	.92
11,000 to 20,000 ohms	1.03
22,500 to 25,000 ohms	1.08
ZO Brackets (not included with resistor)	.12

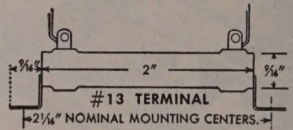
TYPE 2D—20 WATTS

formerly type DG

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	4470	100	447	500	200	1,200	129
5	2000	150	365	650	175	1,250	126
10	1415	200	316	700	169	1,500	115
25	894	250	282	750	163	1,750	107
50	633	300	258	800	158	1,850	104
75	517	350	238	850	153	2,000	100
		400	223	1,000	141		

TYPE 2D—20 WATTS (Cont'd)

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
2,250	94	4,500	66	9,000	47	20,000	31
2,400	91	5,000	63	10,000	44	25,000	28
2,500	89	6,000	57	11,000	42	30,000	25
2,750	85	7,000	53	12,000	40	35,000	23
3,000	81	7,500	51	12,500	40	40,000	22
3,500	75	8,000	50	15,000	36	45,000	21
4,000	70	8,500	48			50,000	20



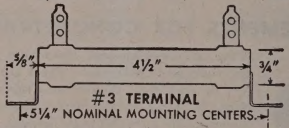
SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.95
1,200 to 5,000 ohms	.97
6,000 to 10,000 ohms	1.12
11,000 to 20,000 ohms	1.20
25,000 to 40,000 ohms	1.37
45,000 to 50,000 ohms	1.58
Z1 Brackets (not included with resistor)	.12

TYPE 4½E—50 WATTS

formerly type EP

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	100	707	3,000	129	12,500	63
2	5000	150	577	4,000	111	15,000	57
3	4080	200	500	5,000	100	20,000	50
4	3535	250	447	6,000	91	25,000	44
5	3160	500	316	7,000	84	30,000	40
10	2235	750	258	7,500	81	35,000	37
25	1415	800	250	8,000	79	40,000	35
50	1000	1,000	223	10,000	70	50,000	31
75	816	1,500	182	12,000	64	60,000	28
		2,000	158			75,000	25
		2,500	141			0.1 meg	22



SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

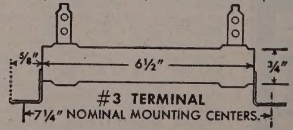
PRICES	LIST
1 to 4 ohms	$2.25
5 to 1,000 ohms	1.63
1,500 to 5,000 ohms	1.75
6,000 to 10,000 ohms	1.92
12,000 to 20,000 ohms	2.08
25,000 to 40,000 ohms	2.33
50,000 to 60,000 ohms	2.58
75,000 ohms	2.90
0.1 megohm	3.20

Z2 Brackets included with resistor.

TYPE 6½E—75 WATTS

formerly type ES

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
5	3870	500	387	5,000	122	25,000	54
10	2740	750	316	6,000	111	30,000	50
25	1730	1,000	274	7,500	100	40,000	43
50	1220	1,500	223	8,000	96	50,000	38
100	865	2,000	193	10,000	86	60,000	35
200	612	2,500	173	15,000	70	75,000	31
250	548	3,000	158	20,000	61	0.1 meg	27
		4,000	137				



SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

POWER RESISTORS

Preferred for Performance

IRC

TYPE 6½E—75 WATTS (Cont'd)

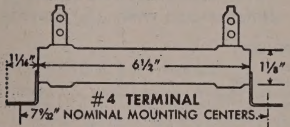
PRICES	LIST
5 to 1,000 ohms	$2.00
1,500 to 5,000 ohms	2.08
6,000 to 10,000 ohms	2.25
15,000 to 20,000 ohms	2.45
25,000 to 40,000 ohms	2.78
50,000 to 60,000 ohms	2.87
75,000 ohms	3.22
0.1 megohm	3.58

Z2 Brackets included with resistor.

TYPE 6½H—100 WATTS

formerly type HA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	50	1,414	1,250	282	7,500	115
2	7,070	75	1,155	1,500	258	10,000	100
3	5,770	100	1,000	2,000	223	15,000	81
4	5,000	125	895	2,500	200	20,000	70
5	4,470	150	816	3,000	182	25,000	63
10	3,160	250	632	5,000	141	30,000	57
25	2,000	500	447			40,000	50
		750	365			50,000	44
		1,000	316			60,000	40
						75,000	36
						0.1 meg	31



SLOTTED BRACKETS PERMIT ±1⁄16″ VARIATION.

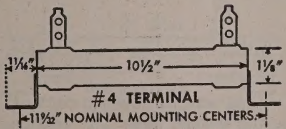
PRICES	LIST
1 to 4 ohms	$3.37
5 to 1,000 ohms	2.42
1,250 to 5,000 ohms	2.53
7,500 to 10,000 ohms	2.70
15,000 to 20,000 ohms	2.97
25,000 to 40,000 ohms	3.20
50,000 to 60,000 ohms	3.37
75,000 ohms	3.58
0.1 megohm	3.80

Z3 Brackets included with resistor.

TYPE 10½H—200 WATTS

formerly type HO

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	75	1,630	1,500	365	20,000	100
2	10,000	100	1,414	2,000	316	25,000	89
3	8,160	150	1,150	2,500	283	30,000	81
4	7,070	250	895	3,000	258	40,000	70
5	6,320	500	632	5,000	200	50,000	63
10	4,470	750	516	7,500	163	60,000	57
25	2,830	1,000	447	10,000	141	75,000	51
50	2,000			15,000	115	0.1 meg	44



SLOTTED BRACKETS PERMIT ±1⁄16″ VARIATION.

PRICES	LIST
1 to 5 ohms	$4.53
10 to 1,000 ohms	3.22
1,500 to 5,000 ohms	3.30
7,500 to 10,000 ohms	3.53
15,000 to 20,000 ohms	3.77
25,000 to 40,000 ohms	3.90
50,000 to 60,000 ohms	4.03
75,000 ohms	4.25
0.1 megohm	4.53

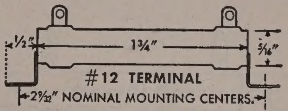
Z3 Brackets included with resistor.

ADJUSTABLE TYPES

TYPE 1¾AA—10 WATTS

formerly type ABA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	50	447	750	115	3,000	57
2	2235	75	365	800	111	3,500	53
3	1825	100	316	1,250	89	4,000	50
5	1410	150	258	1,000	100	4,500	47
7.5	1150	200	223	1,450	83	5,000	44
10	1000	250	200	1,500	81	6,000	40
15	816	300	182	2,000	70	7,000	37
20	707	350	169	2,250	66	7,500	36
25	632	400	158	2,500	63	8,000	35
		500	141			8,500	34
		600	129			9,000	33
						10,000	31



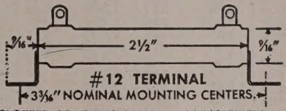
SLOTTED BRACKETS PERMIT ±⅛″ VARIATION.

PRICES	LIST
1 to 1,000 ohms	$1.47
1,250 to 5,000 ohms	1.53
6,000 to 10,000 ohms	1.63
Z0 Brackets (not included with resistor)	.12

TYPE 2½DA—25 WATTS

formerly type DHA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	5000	50	707	1,000	158	4,500	74
2	3530	75	577	1,250	141	5,000	70
3	2880	100	500	1,500	129	6,000	64
5	2230	150	408	2,000	111	7,000	59
7.5	1825	200	353	2,250	105	7,500	57
10	1580	250	316	2,500	100	8,000	55
15	1290	300	289	3,000	91	9,000	52
20	1117	400	250	3,500	84	10,000	50
25	1000	500	223	4,000	79	12,000	45
		750	182			15,000	40
		800	176			20,000	35
						25,000	31



SLOTTED BRACKETS PERMIT ±⅛″ VARIATION.

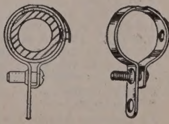
PRICES	LIST
1 to 1,000 ohms	$1.87
1,250 to 5,000 ohms	1.88
6,000 to 10,000 ohms	2.03
12,000 to 20,000 ohms	2.08
25,000 ohms	2.28

Z1 Brackets included with resistor.

TYPE X BANDS

Adjustable Bands designated as Type X feature stainless steel spring with silver contact button. Cannot corrode—constant pressure is assured. Type 1¾AA Resistor because of its small size is furnished with a special adjustable band.

Resistor	Band	List
1¾AA	special "A"	20¢
2½DA	X2	25¢
4½EA, 6½EA	X3	25¢
6½HA, 10½HA	X4	42¢



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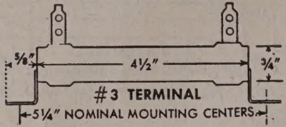
IRC POWER RESISTORS

Preferred for Performance

TYPE 4½EA—50 WATTS

formerly type EPA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	150	577	2,500	141	9,000	74
2	5000	200	500	3,000	129	10,000	70
3	4080	250	447	3,500	119	12,000	64
4	3535	300	408	4,000	111	15,000	57
5	3160	400	353	4,500	105	20,000	50
10	2235	500	316	5,000	100	25,000	44
25	1415	750	258	6,000	91	30,000	40
50	1000	800	250	7,000	84	40,000	35
75	816	1,000	223	7,500	81	50,000	31
100	707	1,250	200	8,000	79	60,000	28
		1,500	182			75,000	25
		2,000	158			80,000	25
		2,250	149			0.1 meg	22



SLOTTED BRACKETS PERMIT ±3⁄16" VARIATION.

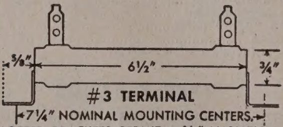
PRICES	LIST
1 to 4 ohms	$3.00
5 to 1,000 ohms	2.37
1,250 to 5,000 ohms	2.47
6,000 to 10,000 ohms	2.63
12,000 to 20,000 ohms	2.83
25,000 to 40,000 ohms	3.08
50,000 to 60,000 ohms	3.30
75,000 to 80,000 ohms	3.67
0.1 megohm	3.92

Z2 Brackets included with resistor.

TYPE 6½EA—75 WATTS

formerly type ESA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	8650	300	500	3,500	146	15,000	70
2	6120	400	432	4,000	137	20,000	61
3	5000	500	387	4,500	129	25,000	54
4	4330	750	316	5,000	122	30,000	50
5	3870	800	305	6,000	111	35,000	46
10	2740	1,000	274	7,000	103	40,000	43
15	2280	1,250	245	7,500	100	45,000	40
25	1730	1,500	223	8,000	96	50,000	38
50	1220	2,000	193	9,000	91	60,000	35
100	865	2,250	182	10,000	86	80,000	30
200	612	2,500	173	12,000	79	0.1 meg	27
250	548	3,000	158				



SLOTTED BRACKETS PERMIT ±3⁄16" VARIATION.

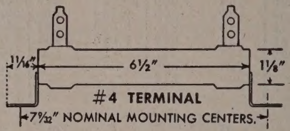
PRICES	LIST
1 to 4 ohms	$3.53
5 to 1,000 ohms	2.75
1,250 to 5,000 ohms	2.83
6,000 to 10,000 ohms	3.00
12,000 to 20,000 ohms	3.20
25,000 to 40,000 ohms	3.53
45,000 to 60,000 ohms	3.62
80,000 ohms	3.97
0.1 megohm	4.33

Z2 Brackets included with resistor.

TYPE 6½HA—100 WATTS

formerly type HAA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	200	707	3,000	182	25,000	63
2	7,070	250	632	4,000	158	30,000	57
3	5,770	400	500	5,000	141	40,000	50
4	5,000	500	447	6,000	129	50,000	44
5	4,470	750	365	7,500	115	60,000	40
10	3,160	1,000	316	8,000	111	75,000	36
25	2,000	1,500	258	10,000	100	0.1 meg	31
50	1,414	2,000	223	15,000	81		
100	1,000	2,500	200	20,000	70		



SLOTTED BRACKETS PERMIT ±1⁄16" VARIATION.

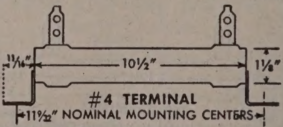
PRICES	LIST
1 to 4 ohms	$4.53
5 to 1,000 ohms	3.58
1,500 to 5,000 ohms	3.67
6,000 to 10,000 ohms	3.87
15,000 to 20,000 ohms	4.12
25,000 to 40,000 ohms	4.37
50,000 to 60,000 ohms	4.53
75,000 ohms	4.75
0.1 megohm	4.95

Z3 Brackets included with resistor.

TYPE 10½HA—200 WATTS

formerly type HOA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	25	2,830	2,000	316	20,000	100
2	10,000	50	2,000	2,500	283	25,000	89
3	8,160	100	1,414	3,000	258	30,000	81
4	7,070	250	895	5,000	200	40,000	70
5	6,320	500	632	10,000	141	50,000	63
10	4,470	1,000	447	15,000	115	60,000	57
		1,500	365			75,000	51
						0.1 meg	44



SLOTTED BRACKETS PERMIT ±1⁄16" VARIATION.

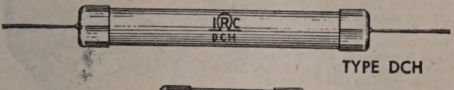
PRICES	LIST
1 to 5 ohms	$5.67
10 to 1,000 ohms	4.37
1,500 to 5,000 ohms	4.45
10,000 ohms	4.70
15,000 to 20,000 ohms	4.92
25,000 to 40,000 ohms	5.03
50,000 to 60,000 ohms	5.17
75,000 ohms	5.42
0.1 megohm	5.67

Z3 Brackets included with resistor.

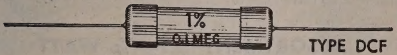
RESISTORS

Preferred for Performance

CLOSE TOLERANCE PRECISTORS



TYPE DCH



TYPE DCF

New IRC PRECISTORS are deposited carbon precision resistors offering a unique combination of close tolerance, stability and economy. Pure crystalline carbon is bonded to selected ceramic cores producing a resistor ideally suited to the requirements of instrumentation, advanced electronics and critical television circuits. Guaranteed accuracy ± 1%. Relation between accuracy and load as follows.

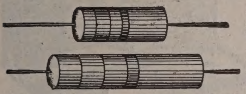
Precistor Tube

TO MAINTAIN ORIGINAL VALUE OF PRECISTOR WITHIN	LIMIT LOAD ON PRECISTOR TO	
	DCF	DCH
1%	¼ watt	½ watt
2%	½ watt	1 watt
5%	1 watt	2 watt

STANDARD VALUES

Range Ohms	List	Range Ohms	List	Range Megohms	List	Range Megohms	List
TYPE DCF		3,000	$1.25	0.10	$1.25	4.00	$1.25
200	1.25	4,000	1.25	0.15	1.25	5.00	1.50
250	1.25	5,000	1.25	0.20	1.25	**TYPE DCH**	
300	1.25	10,000	1.25	0.25	1.25	0.5	$1.50
400	1.25	15,000	1.25	0.30	1.25	1.0	1.50
500	1.25	20,000	1.25	0.40	1.25	1.5	1.50
1,000	1.25	25,000	1.25	0.50	1.25	2.0	1.50
1,500	1.25	30,000	1.25	1.00	1.25	3.0	1.50
2,000	1.25	40,000	1.25	1.50	1.25	4.0	1.50
2,500	1.25	50,000	1.25	2.00	1.25	5.0	2.00
				2.50	1.25	10.0	2.50
				3.00	1.25	15.0	2.50
						20.0	3.00

INSULATED CHOKES



IRC Insulated Chokes are available in two sizes designated as types CLA and CL-1. Both types are fully insulated in molded phenolic housings for full protection against high humidity. The insulated housing also guards the winding from abrasion and physical damage, and prevents any possibility of shorting to chassis. Color coded for easy identification.

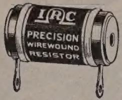
The wide range of size and characteristic combinations available permits accurate replacement with respect to space and electrical requirements.

TYPE CLA	LIST 35c each
TYPE CL-1	LIST 35c each

TYPE CLA

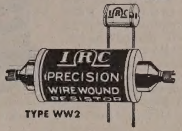
Inductance (Microhenrys)	Approx. "Q" at 12 Megacyles (higher at higher frequencies)	D.C. Resistance (Ohms)	Approx. Self Resonant Frequency (Megacycles)	Current Rating Milliamperes (1)*	(2)*
0.47 ± 15%	26	0.22 ± 30%	300	890	1510
0.56 ± 15%	25	0.31 ± 30%	280	750	1270
0.68 ± 15%	25	0.44 ± 30%	260	630	1070
0.82 ± 15%	24	0.59 ± 30%	240	540	920
1.0 ± 10%	24	0.80 ± 30%	210	470	790
1.2 ± 10%	23	0.85 ± 20%	190	450	770
1.5 ± 10%	23	1.2 ± 20%	160	380	650
1.8 ± 10%	22	1.6 ± 20%	150	330	560
2.2 ± 10%	22	1.8 ± 20%	130	310	530
2.7 ± 10%	22	2.2 ± 10%	120	280	480
3.3 ± 10%	21	3.0 ± 10%	110	240	390

WIRE WOUND PRECISIONS



TYPES WW3, WW4, WW5

TYPE WW10



TYPE WW2

IRC Precision Wire Wound Resistors are scientifically designed and constructed of the highest quality materials to combine the utmost in accuracy and dependability. Winding forms are of non-hygroscopic ceramic having high insulation qualities, high mechanical strength, and low-coefficient of expansion.

Minimum temperature coefficient of .0025% per degree C. is standard on all IRC Wire Wound Precisions at no extra cost.

1% accuracy is standard. For closer tolerances add to prices below: 10% for ½% tolerance; 15% for ¼% tolerance; 25% for 1/10 of 1% tolerance.

SPECIFICATIONS

TYPE	WATTAGE	DIMENSIONS	TERMINALS*
WW3	1.0	9/16″ x 9/16″	Lugs
WW4	1.0	9/16″ x 1″	Lugs
WW5	1.0	¾″ x 1¼″	Lugs
WW2	1.5	⅞″ x 2 15/16″	Binding Posts
WW10	0.15	13/32″ x 9/32″	Leads Only

*Lugs on WW2, or wire leads on WW3, WW4, WW5 are available on special order at no extra cost.

Standard Values	Types† WW-3 WW-4 WW-5 List Ea.	Type WW-2 List Each
0.1, 0.2, 1 ohm	$2.10	....
5, 10, 25, 50, 100, 200, 250. 300	2.03	....
500, 1M, 1.5M, 2M, 2.5M ohms	2.03	....
3M, 5M, 7.5M, 10M	2.10	....
12.5M, 15M ohms	2.10	....
20M, 22.5M, 25M, 30M	2.28	....
40M, 50M	2.28	....
60M, 75M ohms	2.70	....
0.1 Meg.	2.94	....
0.125 and 0.15 Meg.	3.37	....
0.175 and 0.2 Meg.	3.83	....
0.225 and 0.25 Meg.	4.20	....
0.3 Meg.	4.57	....
0.4 Meg.	5.63	....
0.5 Meg.	6.00	....
0.6 Meg.	7.61	$8.40
0.75 Meg.	9.00	9.18
0.9 Meg.	10.38	10.80
1.0 Meg.	11.22	11.58
1.5 Meg.	....	18.42
2.0 Meg.	....	24.00
2.5 Meg.	....	29.03

Standard Values	Type WW-10 List Each
10, 25, 50. 100, 200, 250, 300 ohms	$1.70
500, 1M, 1.5M, 2M, 2.5M ohms	1.70
3M, 3.5M, 4M, 5M, 7.5M, 10M, 12.5M, 15M	1.78
20M, 25M, 30M, 40M. 50M ohms	1.97
60M, 75M ohms	2.13
0.1 megohm	2.30
0.125, 0.15 megohm	2.70

†NOTE: Minimum stock range: WW3—1 ohm; WW5—0.6 megohm. Maximum stock range: WW3—0.15 meg.; WW4—0.5 meg.

TYPE CL-1

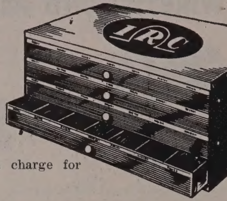
Inductance (Microhenrys)	Approx. "Q" at 12 Megacycles (higher at higher frequencies)	D.C. Resistance (Ohms)	Approx. Self Resonant Frequency (Megacycles)	Current Rating Milliamperes (1)*	(2)*
0.47 ± 15%	30	0.14 ± 30%	220	1460	2310
0.56 ± 15%	30	0.20 ± 30%	210	1220	1940
0.68 ± 15%	30	0.22 ± 30%	200	1170	1850
0.82 ± 15%	30	0.27 ± 30%	190	1050	1670
1.0 ± 10%	30	0.41 ± 30%	180	850	1350
1.2 ± 10%	30	0.51 ± 20%	170	770	1210
1.5 ± 10%	29	0.72 ± 20%	160	650	1020
1.8 ± 10%	29	0.77 ± 20%	150	620	990
2.2 ± 10%	29	1.1 ± 20%	140	520	820
2.7 ± 10%	28	1.5 ± 20%	130	450	710
3.3 ± 10%	28	2.0 ± 20%	120	390	610
3.9 ± 10%	27	2.6 ± 10%	110	340	540
4.7 ± 10%	26	2.8 ± 10%	95	330	520
5.6 ± 10%	24	4.0 ± 10%	85	270	430
6.8 ± 10%	22	5.6 ± 10%	75	230	370
8.2 ± 10%	21	6.1 ± 10%	70	220	350
10.0 ± 10%	20	8.2 ± 10%	65	190	300

(1)*Current which will cause resistance to increase approximately 10% due to temperature coefficient of copper wire.
(2)*Current which will cause resistance to increase approximately 25% due to temperature coefficient of copper wire.

IRC KITS AND CABINETS

Preferred for Performance

ALL-METAL RESIST-O-CABINET



In large steel cabinets, 3 new IRC RESIST-O-CABINETS provide the perfect way to buy and stock resistors. Four drawer cabinets have 28 identified compartments. Blue, yellow and silver finish adds attractiveness to shop. Drawers are non-spill and cabinets can be stacked. Measure 5⅜″ x 5 15/16″ x 10⅞″. No extra charge for cabinet.

ASSORTMENT #4—½ WATT

100 ½ watt BW and BTS Resistors including values most widely found in television. **List $17.00**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	5	4,700 ohms*	5	0.22 meg*
3	100 ohms	5	10,000 ohms*	6	0.27 meg*
2	220 ohms	3	22,000 ohms*	3	0.33 meg*
2	270 ohms	3	27,000 ohms*	6	0.47 meg*
3	470 ohms*	3	33,000 ohms*	6	1.0 meg*
6	1,000 ohms*	6	47,000 ohms*	5	2.2 meg*
2	1,500 ohms	2	56,000 ohms*	2	3.3 meg
2	2,200 ohms*	2	68,000 ohms*	3	4.7 meg*
2	2,700 ohms*	6	0.1 meg*	2	10.0 meg
3	3,300 ohms*				

ASSORTMENT #5—1 WATT

83 1 watt BW and BTA Resistors including values most widely found in television. **List $20.75**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	2	3,300 ohms*	5	0.1 meg*
2	100 ohms	3	4,700 ohms*	2	0.15 meg
2	150 ohms	5	10,000 ohms*	2	0.22 meg
2	220 ohms	2	15,000 ohms*	5	0.27 meg
2	270 ohms	3	22,000 ohms*	5	0.47 meg
2	470 ohms	5	27,000 ohms*	5	1.0 meg*
5	1,000 ohms*	2	33,000 ohms*	2	2.2 meg
2	1,500 ohms	2	39,000 ohms*	2	4.7 meg
3	2,200 ohms	5	47,000 ohms*		
2	2,700 ohms	2	68,000 ohms*		

ASSORTMENT #6—COMBINATION

91 Insulated Resistors and Type DCF Close-Tolerance Precistors, including popular television ranges **List $25.04**

RANGE	½ WATT	1 WATT	2 WATT	DCF
47 ohms	1	1	1	—
100 ohms	1	1	1	—
150 ohms	1	1	—	—
220 ohms	1	1	—	—
270 ohms	1	1	—	—
470 ohms	1*	1	1	—
1,000 ohms	3*	2*	—	1
1,500 ohms	1	1	—	—
2,200 ohms	1*	1	—	—
2,700 ohms	1*	1	—	—
3,300 ohms	1*	1*	—	—
4,700 ohms	2*	1*	1	—
10,000 ohms	2*	2*	1*	1
15,000 ohms	1	1*	—	—
22,000 ohms	1*	1*	1*	—
27,000 ohms	1*	2*	—	—
33,000 ohms	1*	1*	—	—
39,000 ohms	1	1*	—	—
47,000 ohms	3*	2*	1*	—
68,000 ohms	1*	1*	—	—
0.1 meg	3*	2*	—	1
0.15 meg	1	1	—	—
0.22 meg	2*	1	—	—
0.27 meg	3*	1	—	—
0.47 meg	3*	2	—	—
1.0 meg	3*	2*	—	1
2.2 meg	2*	1	—	—
4.7 meg	1*	1	—	—
5.0 meg	—	—	—	1

*—Popular television ranges.

IRC CHOKE CABINETS

Handy bench supply of Insulated Chokes in 4 drawer metal cabinet. Each value in an identified compartment. Contains 140 chokes in popular values and 2 sizes. No extra charge for cabinet. **List $49.00**

NEW RESIST-O-KITS

Flat, pocket-size metal kit of ½ or 1 watt BT Insulated Composition Resistors is ideal for service calls or small bench stocks. All-steel and attractively lithographed in blue and yellow. Measures 11/16″ x 3⅞″ x 6⅝″. Ten compartments prevent ranges from mixing, and lid snaps securely shut. Ranges are clearly marked on each resistor in kit. This handy kit is furnished at no extra charge.

ASSORTMENT #7—½ WATT

45 BTS ½ watt Resistors including ranges widely found in television.

List $7.65

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	3	0.22 meg*
3	4,700 ohms*	5	0.27 meg*
4	10,000 ohms*	6	0.47 meg*
5	47,000 ohms*	5	1.0 meg*
6	0.1 meg*	4	2.2 meg*

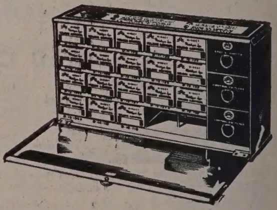
ASSORTMENT #8—1 WATT

30 BTA 1 watt Resistors including ranges widely found in television. **List $7.50**

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	4	47,000 ohms*
2	2,200 ohms*	4	0.1 meg*
2	4,700 ohms*	2	0.27 meg
3	10,000 ohms*	4	0.47 meg
2	27,000 ohms*	8	1.0 meg

*—Popular television ranges.

VOLUME CONTROL CABINET



IRC Volume Control Cabinets are stocked with 18 new Type Q Controls, plus switches and special shafts. This stock handles over 90% of all AM, FM and TV control replacements. Beautiful blue, yellow and silver metal cabinet measures 4½″ x 7⅜″ x 14½″ with identified compartments and 3 drawers for shafts, switches and spare parts. Hinged front cover. No extra charge is made for metal cabinet. **List $30.90**

Quantity	Q Control No.	Resistance Value	Quantity	Q Control No.	Resistance Value
1	Q 11-116	10 K	2	Q 13-133	0.5 meg
1	Q 11-123	50 K	1	Q 13-133X	0.5 meg
1	Q 13-123	50 K	1	Q 11-137	1.0 meg
1	Q 11-128	0.1 meg	1	Q 13-137	1.0 meg
1	Q 13-128	0.1 meg	1	Q 13-137X	1.0 meg
1	Q 11-130	0.25 meg	1	Q 13-139	2.0 meg
1	Q 13-130	0.25 meg	1	Q 13-139X	2.0 meg
1	Q 13-130X	0.25 meg	1	Q 13-139X	2.0 meg
1	Q 11-133	0.5 meg			

SWITCHES

6 **76-1 SPST** Quickly attached switch.

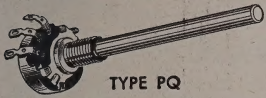
SPECIAL SHAFTS

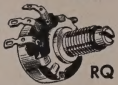
1 **BQ Shaft**—Universal slotted and tongued—3½″ long.
1 **GQ Shaft**—Short slotted shaft—1½″ long.
2 **HQ Shaft**—Flatted and grooved shaft—1 11/16″ long.
1 **NQ Shaft**—Universal flatted and slotted shaft—3/16″ diameter.

SPECIAL PURPOSE CONTROLS FOR INDUSTRY

TYPE PQ AND RQ

DISTRIBUTOR CONTROLS FOR INDUSTRY


TYPE PQ


RQ

IRC Distributor Controls for Industry offer commercial users a wide selection of resistance values and two industrial shaft types. Shafts are fixed. This combination of wide selection of values and speedy Distributor delivery holds many advantages for industrial purchasers. These Industrial Controls are adaptations of the new, compact 15/16″ Q Control. Power rating is ½ watt, 500 volts maximum. Electrical rotation is the same with or without switch. ⅜″ bushing is brass and held to close tolerance for snug shaft fit.

Terminals are heavily tinned for easy soldering, and may be bent without becoming noisy. Two locating lugs are provided, either or both of which may be bent down if not needed. Molded base. Both Types PQ and RQ are supplied in standard tapers.

TYPE PQ. Full round ¼″ shaft, approximately 3″ from mounting face, with ⅜″ long bushing. 19 stock values and 13 additional ranges as shown below. Regular IRC stock numbers are used with prefix PQ.
List $1.25

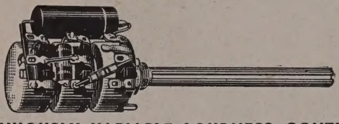
TYPE RQ. Very short screw-driver slot shaft, ¼″ diameter and approximately ½″ long from mounting face with ⅜″ long bushing. Available in 32 values as shown. Regular IRC stock numbers are used with prefix RQ.
List $1.25

STANDARD VALUES

TYPE PQ	TYPE RQ	RESISTANCE IN OHMS	TAPER
PQ11-103	RQ11-103	500	A
PQ11-108	RQ11-108	1K	A
PQ11-110	RQ11-110	2K	A
PQ11-112	RQ11-112	3K	A
PQ11-114	RQ11-114	5K	A
PQ11-115	RQ11-115	7.5K	A
PQ11-116	RQ11-116	10K	A
PQ13-116	RQ13-116	10K	C
PQ14-116	RQ14-116	10K	D
PQ11-119	RQ11-119	20K	A
PQ11-120	RQ11-120	25K	A
PQ14-120	RQ14-120	25K	D
PQ11-121	RQ11-121	30K	A
PQ11-123	RQ11-123	50K	A
PQ13-123	RQ13-123	50K	C
PQ14-123	RQ14-123	50K	D
PQ11-128	RQ11-128	0.1 meg	A
PQ13-128	RQ13-128	0.1 meg	C
PQ11-130	RQ11-130	0.25 meg	A
PQ13-130	RQ13-130	0.25 meg	C
PQ11-133	RQ11-133	0.5 meg	A
PQ13-133	RQ13-133	0.5 meg	C
PQ11-137	RQ11-137	1.0 meg	A
PQ13-137	RQ13-137	1.0 meg	C
PQ11-138	RQ11-138	1.5 meg	A
PQ11-139	RQ11-139	2.0 meg	A
PQ13-139	RQ11-139	2.0 meg	C
PQ11-239	RQ11-239	2.5 meg	A
PQ11-140	RQ11-140	3.0 meg	A
PQ13-140	RQ13-140	3.0 meg	C
PQ11-141	RQ11-141	5.0 meg	A
PQ11-143	RQ11-143	10.0 meg	A

Taper A is linear. Taper C is logarithmic.
Taper D is reverse curve for control of bias.

TYPE LCI



CONTINUOUSLY VARIABLE LOUDNESS CONTROLS

IRC Type LCI Continuously Variable Loudness Controls actually bring high fidelity tone to commercial audio systems—even at whisper level! They can be used economically to improve the sound quality of many radio, TV, and FM receivers, as well as sound systems. And they are as easily installed in most audio systems as an ordinary volume control.

Only three connections are needed to install the new Type LCI Loudness Control. No special taps or complicated circuits are required. Type LCI's eliminate the need for tapped volume controls, stepped-type loudness controls, bass and treble boost circuits. Type LCI's do what these other devices have failed to do. With LCI's, highs and lows are boosted automatically as volume is decreased — depth and brilliance of tone are maintained without multiple adjustments.
List $9.95 complete

ASSEMBLE YOUR OWN LOUDNESS CONTROL WITH SIMPLE, STANDARD PARTS

The new IRC Loudness Control is readily assembled in a short time with a standard IRC Type Q Volume Control and two IRC MULTISECTIONS. The MULTISECTIONS are rear control sections, so designed that they may be added to Type Q Controls or to other MULTISECTIONS in the same manner as switches. Simple assembly instructions are included with each MULTISECTION. Pictorial schematic of assembled unit is shown at left.

To assemble the Loudness Control, simply add to the "Q" Control the two specified MULTISECTIONS, in the order shown by schematic, using instructions included with each. Assemble the additional parts and make and solder all required connections as shown. Cut shaft to required length. Install and wire into any high gain audio amplifier. Parts needed are shown in the pictorial schematic in the following order:—

1. IRC Type Q Control—Q11-133
2. IRC MULTISECTION—M13-137
3. IRC MULTISECTION—M13-128
4. IRC BTS 0.1 meg ± 10%
5. IRC BTS 10,000, ± 10%
6. 82-mmf capacitor
7. 0.03-mfd capacitor

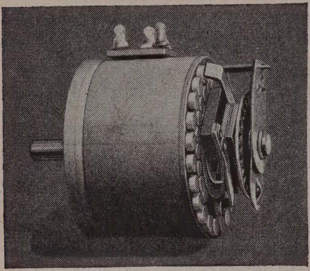
All are obtainable from your IRC Distributor.

IRC Parts for Assembling Loudness Control	List Price
Q11-133—Control (Panel section)	$1.25
M13-137—MULTISECTION (2nd section)	1.25
M13-128—MULTISECTION (Rear section)	1.25
BTS 0.1 megohm ½ watt Resistor	.17
BTS 10K ohm ½ watt Resistor	.17
(Capacitors not supplied separately by IRC)	

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.
COLLINGDALE, PENNSYLVANIA

SHALLCROSS AUDIO ATTENUATORS



SHALLCROSS ATTENUATOR NO. 420-2B2

These Shallcross Features Mean

✓ BETTER PERFORMANCE

✓ BIGGER VALUE

- ✓ Off position attenuation well in excess of 100 db.
- ✓ 25% to 50% fewer soldered joints.
- ✓ Noise level ratings that are factual. (130 db or more below zero level).
- ✓ Non-inductive Shallcross precision resistors used throughout assure flat attenuation to and beyond 30 kc.
- ✓ Types and sizes engineered for all needs. Attenuation accuracies of 1%, resistor accuracies of 0.1%, on special order.

Shallcross Audio Attenuators are available in either variable or fixed units, the former often being referred to as a "control" and the latter, as a "pad".

Controls are available with as few as 5 steps or as many as 52 steps with an attenuation as small as 0.1 db per step. The total attenuation for a single control does not exceed about 125 db since such high attenuation approaches the noise level of the switching mechanism.

The complete story of Shallcross attenuators may be found in Shallcross Engineering Bulletin #4, copies of which are available on request. Specifications and prices are given below for a few of the most popular variable attenuators.

IMPEDANCE: 150, 500, 250/500, 600 ohms, except potentiometers, which are 100,000 and 250,000 ohms.

RESISTORS: All non-inductively wirewound, ±5% tolerance, except types preceded with "C", which are composition selected to ±5%.

ATTENUATION: Increases for counter-clockwise rotation of knob end of shaft.

FREQUENCY RESPONSE: Flat over entire audio range.

SWITCH MECHANISM: Multi-leaf wiper arms, collector rings and contacts available in tarnish resistant silver alloy or brass. Noise level −130 db.

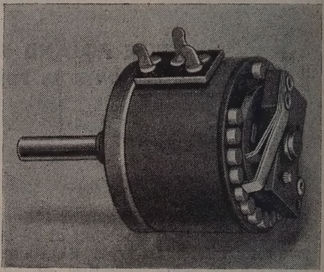
DETENT: Indexing mechanism available on any unit for $0.75 list. Back of panel depth is then increased 5/16″.

DIALS: $1.50 list each additional.

KNOBS (VA-16906): $0.60 list each additional.

120-2A3 **$ 9.50 silver** **10.50 brass**	Ladder attenuator, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C720-2A3 **$ 9.50 silver** **10.50 brass**	Potentiometer, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.

SHALLCROSS ATTENUATOR NO. C720-2A3



132-1.5B3 **$13.50 silver** **12.00 brass**	Ladder attenuator, 32 steps, 1.5 db per step, tapered on last 3 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 10°.
430-1C1 **$21.00 silver** **19.00 brass**	Bridged T attenuator, 30 steps, 1 db. per step, 30 db total. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
430-1.5C3 **$21.00 silver** **19.00 brass**	Bridged T attenuator, 30 steps, 1.5 db per step, tapered on last 5 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
420-2B2 **$16.00 silver**	Bridged T attenuator, 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 8-32 or 6-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C820-2B2 **$16.00 silver**	Dual potentiometer, each section 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.

SHALLCROSS V.U. METER RANGE EXTENDING ATTENUATORS

IMPEDANCE: Available with input impedances of 3900-7100-7500 ohms. Output impedance is 3900 ohms to match Weston Type 30B or General Electric Type DO 61 V.U. meters.

TOLERANCE: ±1% except "C" types which are ±5%.

INSERTION LOSS: Zero.

DETENT: All units supplied with indexing mechanism; back of panel depth includes detent.

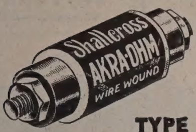
C35-4A4 **$16.00 silver** **15.00 brass**	T attenuator, +4 to +24 V.U., 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
C35-4A5 **$16.00 silver** **15.00 brass**	T attenuator, +4 to +20 V.U. and OFF, 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
320-2C4 **$23.50 silver** **22.50 brass**	T attenuator, +4 to +44 V.U., 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
320-2C5 **$31.50 silver**	T attenuator, +4 to +42 V.U. and OFF, 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
412-2B4 **$22.50 silver**	Bridged T attenuator, +4 to +28 V.U., 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.
412-2B5 **$22.50 silver**	Bridged T attenuator, +4 to +26 V.U. and OFF, 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS AKRA-OHM RESISTORS



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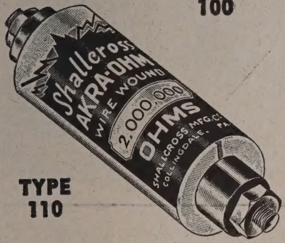

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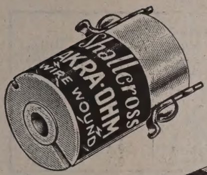
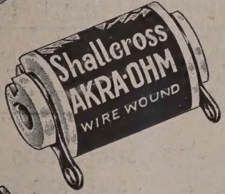
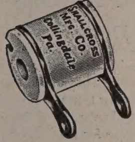


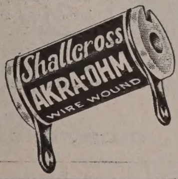
TYPES 140 160



TYPES 196 116



TYPE 183 A



TYPE 193

LIST PRICES—Standard BX Types, ±1% Tolerance

November 23, 1950 — RESISTOR PRICE SCHEDULE — PS-22

TOL. ± 1% Resistance to and Including OHMS	BX110, BX112, BX116, BX160 Wire Spec.			BX196, BX100 Wire Spec.			BX120, BX140, BX173, BX183A, BX193 Wire Spec.		
	N	J-E	L	N	J-E	L	N	J-E	L
.099	......	......	4.55	......	......	3.90	......	......	3.30
.499	......	......	3.60	......	......	3.00	......	......	2.45
1,000	......	......	3.00	......	......	2.40	......	......	2.00
5,000	3.30	3.45	4.35	2.50	2.70	3.40	2.10	2.20	3.05
10,000	3.45	3.65	4.90	2.60	2.85	3.80	2.15	2.25	3.45
15,000	3.60	3.70	5.50	2.75	3.05	4.30	2.20	2.30	3.95
30,000	3.70	4.00	6.90	2.85	3.20	5.40	2.25	2.55	4.95
50,000	3.90	4.35	8.70	3.00	3.40	6.80	2.40	2.60	6.10
75,000	4.20	4.90	10.50	3.30	3.75	8.25	2.70	3.10	6.80
100,000	4.60	5.15	12.30	3.60	4.30	9.70	3.00	3.45	7.55
125,000	4.80	5.60	13.20	3.95	4.65	10.40	3.30	3.95	8.10
150,000	5.10	6.10	14.10	4.30	5.15	11.15	3.45	4.35	8.60
200,000	5.50	6.60	15.00	4.90	5.70	11.85	3.95	4.80	9.70
250,000	6.00	7.05	16.80	5.40	6.40	13.30	4.30	5.30	10.80
300,000	6.15	7.15	16.95	6.00	7.00	13.45	4.45	5.55	11.35
400,000	7.00	8.15	19.55	6.60	7.70	15.50	5.05	6.15	13.45
500,000	7.85	9.00	22.10	7.45	8.50	17.55	5.85	6.90	14.80
600,000	8.50	9.65	24.70	8.05	9.20	19.65	6.30	7.55	16.20
700,000	8.95	10.05	27.30	8.60	9.85	21.70	6.75	8.25	17.55
750,000	9.45	10.35	28.55	9.20	10.35	22.75	7.35	8.70	18.25
900,000	10.10	11.20	30.75	9.75	10.90	24.45	8.05	9.30	21.70
1 megohm	11.20	12.35	31.60	10.35	11.50	25.15	8.60	9.75	22.40
1.5 "	13.50	16.95	45.40	12.35	13.50	36.20	10.90	12.65	......
2 "	19.55	21.25	59.20	15.80	17.25	47.25	13.20	15.50	......
Deduct if not BX		$0.50			$0.40			$0.40	

SPECIAL TOLERANCE

Resistors to closer tolerances can be supplied at higher prices. Add to list prices as follows:

± ½%, add 5% ±2/10%, add 15%
± ¼%, add 10% ±1/10%, add 25%

NOTES

1. BX impregnated resistors will be furnished unless order specifies "without BX".
2. Letters in separate price columns above indicate resistance wire alloy, as follows:
   a. "L"—manganin.
   b. "J"—iron-free nichrome.
   c. "N"—iron-bearing nichrome.
   d. "E"—high resistivity nichrome.

TYPES BX183A AND BX193—±1% IN COMMON VALUES—IN STOCK

In addition to the popular standard types listed here, Shallcross Akra-Ohm Resistors are made in a complete line of standard and special designs for precise electronic equipment demanding great stability and long life even under difficult conditions of temperature and humidity.

Shallcross achievements include the development of really practical hermetically-sealed units; BX processed resistors "tropicalized" against moisture and fungus; the use of spun glass insulated wire for applications where considerable power must be dissipated; bifilar wound resistors, 1000 ohms or less, for exacting instrument use; heavy-duty surge resistors; accurate heavy-duty power resistors, and various others. Write for Shallcross resistor bulletin R3-B for complete information.

ACCURATE FIXED WIRE-WOUND TYPES (JAN R93) PRICES ON REQUEST.

Shallcross Type	** JAN Style	Wattage	* Maximum Ohms	Std. Terminal	Mounting	Dimensions Length—Diam.
100	RB21B	1	750,000	#8 screw	5 amp. fuse clip	2 1/16″ x 9/16″
110	RB22B	2	2 Meg.	#8 screw	5 amp. fuse clip	2 7/8″ x 3/4″
116	RB14B	1	2 Meg.	Solder lugs	#6 screw	2 5/32″ x 3/4″
140	RB41B	0.5	350,000	Solder lugs	#6 screw	1 1/4″ x 11/16″
160	RB42B	1	500,000	Solder lugs	#6 screw	1 3/16″ x 11/16″
183A	RB11B	0.5	300,000	Solder lugs	#6 screw	5/8″ x 1/2″
193	RB12B	1	400,000	Solder lugs	#6 screw	1″ x 1/2″
196	RB13B	1	1 Meg.	Solder lugs	#6 screw	1 1/4″ x 3/4″
1101▲	RB12A	0.5	300,000	Solder lugs	#6 screw	7/8″ x 7/8″
1105▲	RB14A	1.5	400,000	Solder lugs	#6 screw	2″ x 7/8″
1180▲	RB11A	0.25	300,000	Solder lugs	#2 screw	19/32″ x 1/2″
1196▲	RB13A	1	1 Meg.	Solder lugs	#6 screw	1 1/4″ x 7/8″

* Based on use of .0014″ diameter nickel chromium wire. Smaller wire sizes will greatly increase maximum allowable resistance on any form.
** JAN style refers to Joint Army-Navy Specification R93. Price depends on wire size and specification.
△ Hermetically sealed. Other sizes available.

SEND FOR RESISTOR ENGINEERING CHART FOR COMPLETE DATA

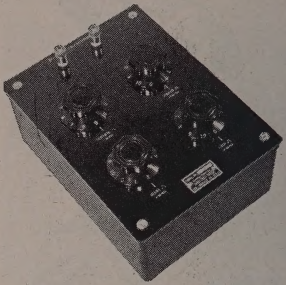
SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS DECADE RESISTANCE BOXES

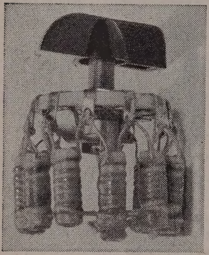
The large assortment and wide range of resistance available makes the Shallcross line of Resistance Boxes unique in the instrument field. They are used extensively as laboratory standards, AC and DC Bridge and ratio arms, voltage dividers, etc.



Accuracy adjustment of Resistors as follows:
0.1 ohm...... 1% 1. ohm..... 0.25% all others...... 0.1%

No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price	No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price
543	1	0.1	1	$22.00	821	3	10	11,100	$60.00
544	1	1.0	10	22.00	822	3	100	111,000	63.00
545	1	10	100	22.00	823	3	1,000	1,110,000	77.00
546	1	100	1,000	22.00	824	3	10,000	11,100,000	120.00
547	1	1,000	10,000	24.00	825	4	1	11,110	77.00
548	1	10,000	100,000	26.00	826	4	10	111,100	79.00
549	1	100,000	1,000,000	36.00	827	4	100	1,111,000	92.00
550	1	1,000,000	10,000,000	66.00	828	4	1,000	11,110,000	139.00
817	3	.01	11.1	60.00	8285	5	0.1	11,111	94.00
817A	4	.01	111.1	75.00	829	5	1	111,110	101.00
817B	5	.01	1,111.1	94.00	830	5	10	1,111,100	113.00
818	3	0.1	111	51.00	831	5	100	11,111,000	155.00
819	4	0.1	1,111	71.00	832	6	1	1,111,110	121.00
820	3	1	1,110	56.00	833	6	10	11,111,100	169.00

UNMOUNTED DECADE RESISTANCES



In response to a demand from engineers, manufacturers and physicists who design and construct their own electrical measuring instruments, we have made the Shallcross Unmounted Decade Resistances available. They are of the same construction as those used in the popular Shallcross Resistance Decades described above and consist of ten Shallcross Resistors mounted on a ceramic instrument switch.

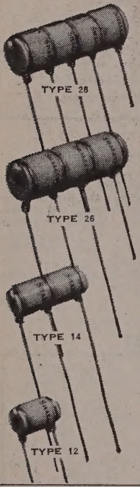
SPECIFICATIONS

Type No.	Total Resistance Ohms	Unit Resistance Ohms	Switch No.	Accuracy	*Price
435	1.0	.1	4485-S	1.0%	$12.00
436	10	1.0	4485-B	0.25%	13.25
437	100	10	4485-B	0.1	13.25
438	1,000	100	4485-B	0.1	15.00
439	10,000	1,000	4485-B	0.1	16.00
440	100,000	10,000	4485-B	0.1	18.50
441	1 Meg.	100,000	4485-B	0.1	32.50
442	10 Meg.	1 Meg.	4485-B	0.1	60.00

* Does not include knob or dial.

MOUNTING: Single ⅜" Hole Mounting—Panels up to 3/16" Thick. All of the above are available with aluminum dust cover, shield, and isolated shaft at $3.00 additional.

Knob #1916-1 (illustrated): $0.25 additional and aluminum dial 0-10 #1522-1 $0.70 additional.



SHALLCROSS AKRA-OHM PRECISION RESISTORS

for "Miniaturization" applications

UNUSUAL ACCURACY IN SMALL SPACE

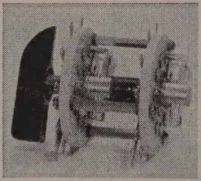
These new Shallcross Akra-Ohm Wire-Wound Precision Resistors have been designed to meet the needs of modern, miniature equipment. Standard tolerance is 1%. Closer tolerances can be furnished on special order.

The units offer unusually high and accurate resistance values in small space and are light enough to be suspended by their own tinned copper leads, or may be secured with mounting screw.

Type	Sections	Size	Watts Each Section	Maximum Resistance per Section Ohms	Minimum Resistance per Section Ohms
10	1	¼" x ¼"	0.1	70,000	1.
12	1	13/32" x ¼"	0.15	150,000	1.
14	2	45/64" x ¼"	0.15	150,000	1.
26	3	1 4/32" x ⅜"	0.25	550,000	1.
28	4	1¼" x ⅜"	0.25	375,000	1.

Prices on application.

SHALLCROSS ROTARY SELECTOR SWITCHES



Like other Shallcross instrument components, these Rotary Selector Switches are designed to cover a very wide field of application in both shorting and non-shorting types, and can be modified to control a variety of circuits. Details on any type for practically any application on request. Suffixes B and S denote Brass and Silver contacts and contact arms. Write for Specification Sheet SS-6.

SPECIFICATIONS

Poles	Positions	Contact Spacing	Contact Plate Material	Type Number		*List Price
				Shorting	Non-Shorting	
1	11	32.7°	Steatite	4605-B	4610-B	$ 4.25
2	11	32.7°	Steatite	4620-B	4615-B	9.50
1	11	32.7°	Steatite	4605-S	4610-S	4.50
2	11	32.7°	Steatite	4620-S	4615-S	10.00
1	12	30°	Bakelite	5550-B	5620-B	4.95
1	12	30°	Bakelite	5550-S	5620-S	5.25
1	15	24°	Steatite	5610-B	4225-B	5.55
2	15	24°	Steatite	5615-B	4980-B	12.50
1	15	24°	Steatite	5610-S	4225-S	6.00
2	15	24°	Steatite	5615-S	4980-S	13.50
1	18	20°	Steatite	5155-B	5625-B	6.50
1	18	20°	Steatite	5155-S	5625-S	7.00
1	24	15°	Bakelite	5630-B	5570-B	9.50
1	24	15°	Bakelite	5630-S	5570-S	10.00
1	36	10°	Bakelite	.....	10054-S	28.00
1	40	8.8°	Melamine	8140-S	.....	35.00
1	60	6°	Bakelite	.....	10061-S	30.00

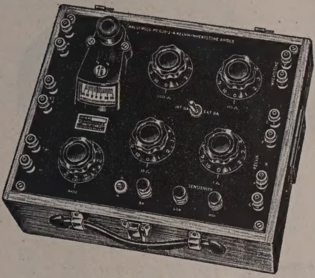
* Does not include knob or dial.

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

SHALLCROSS D-C BRIDGES



No. 638-R

KELVIN WHEATSTONE BRIDGE

Resistance range 0.0001 ohm to 11.11 megohms

SPECIFICATIONS

ACCURACY—0.3% between 1.0 ohm and .1111 megohms. Below and above this range—2%.

GALVANOMETER—Built-in—sensitivity 1 micro-ampere per millimeter division.

RHEOSTAT ARM—Four decades—1.0 ohm steps in Wheatstone and 1.0 micro-ohm steps in Kelvin ranges.

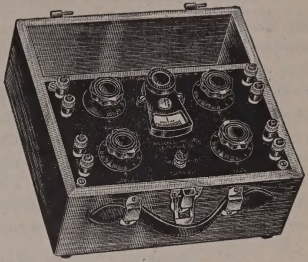
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

PUSH BUTTONS—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover (not illustrated) and compartment for 4½ volt battery (not supplied) for Wheatstone range measurements.

DIMENSIONS—Length 12½″, width 10½″, height 6¾″.

WEIGHT—Approx. 9 lbs. Price $260.00.



No. 630

WHEATSTONE BRIDGE

Resistance range from 0.1 ohm to 11.1 megohms

SPECIFICATIONS

ACCURACY—1.0% between 10 ohms and 1.0 megohm—2% over 1 megohm.

COMPONENT RESISTORS—0.1% accurate except 1 ohm, which are 0.25%.

RHEOSTAT ARM—Three decades—variable in 10.0 ohm steps.

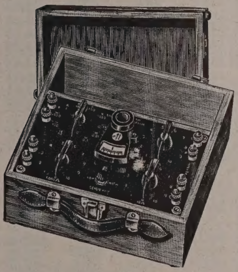
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

CAM SWITCHES—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover and compartment for batteries and leads (not supplied).

DIMENSIONS—Length 10″, width 9¾″, height 6″.

WEIGHT—Approx. 6 lbs. Price $145.00.



No. 637

KELVIN WHEATSTONE BRIDGE

Resistance range 0.001 ohm to 11.1 megohms

SPECIFICATIONS—Same as No. 638-R except:

ACCURACY—1.0% between 1.0 ohm and 1.0 megohm; 2.0% above 1.0 megohm; and 3.0% below 0.1 ohm.

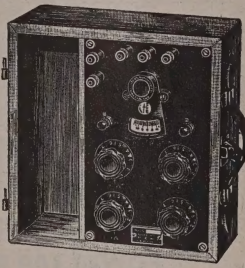
GALVANOMETER—Sensitivity 1.0 micro-ampere per millimeter division. Built-in.

RHEOSTAT ARM—Three decades—10 ohm steps in Wheatstone and 10 micro-ohm steps in Kelvin ranges.

CANNOT be used as Resistance Box.

DIMENSIONS—Length 10″, width 9¾″, height 5¼″.

WEIGHT—Approx. 7 lbs. Price $185.00.



No. 627

FAULT LOCATION BRIDGE

Resistance range 0.1 ohm to 11.11 megohms

SPECIFICATIONS

COMPONENT RESISTORS—0.1% accurate except 1.0 ohm, which are 0.25%.

GALVANOMETER—Built-in—sensitivity 1.0 micro-ampere per mm. division.

RHEOSTAT ARM—Four decades—1,111 ohms—variable in 0.1 ohm steps.

RATIO—Unity ratio makes rheostat setting indicate resistance directly. Operator then uses charts in lid to convert readings into fault distance.

CAM SWITCHES—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover, concealed compartment for battery (not supplied).

ACCURACY—0.3% for 1 to 1,111 ohms—2% for 0.1 to 1 ohm.

DIMENSIONS—Length 10″, width 9¾″, height 5¾″.

WEIGHT—Approx. 6 lbs. Price $145.00.

VOLTAGE DIVIDERS (DECADE POTENTIOMETERS)

No.	Dials	Total Resistance	Price	No.	Dials	Total Resistance	Price
835	4	10,000 ohms	$132.00	845	3	1,000 ohms	$ 98.00
836	4	100,000 ohms	146.00	846	3	10,000 ohms	105.00
837	4	1,000 ohms	126.00	850	3	100,000 ohms	123.00

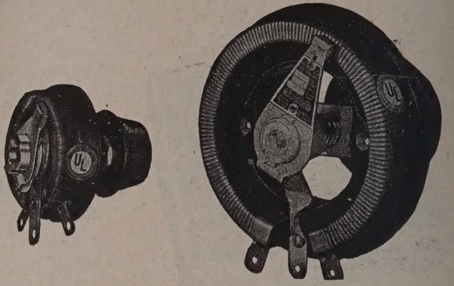
BE RIGHT WITH

OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

OHMITE RHEOSTATS

All-Porcelain — Vitreous-Enameled

The design and construction of these sturdy, compact Ohmite Rheostats insure permanently smooth, gradual, close control. The wire is wound over a porcelain core, bonded to porcelain base, and permanently locked in place by special Ohmite Vitreous Enamel. Nothing to smoke, char, shrink, or shift. Dissipates heat rapidly. Insulated shafts and bushings. Copper graphite contacts. Ratings are for "free air" use. Time-proved through long trouble-free service in countless installations the world over. Underwriters' Laboratories Listed.



MODEL "H" 25 Watt

Diameter 1$\frac{9}{16}$". Depth behind panel 1⅜".

Stock No.	Ohms	Max. Mils.	List Price
0140	1	5,000	$7.03
0141	2	3,540	6.22
0142	3	2,880	6.22
0143	6	2,040	6.22
0144	8	1,770	6.22
0145	10	1,580	6.22
0146	15	1,290	6.22
0147	25	1,000	6.22
0148	35	845	6.22
0149	50	707	6.22
0150	75	575	6.22
0151	100	500	6.22
0152	125	445	$6.22
0153	175	375	6.22
0154	250	316	6.22
0155	350	267	6.22
0156	500	222	6.22
0157	750	182	6.22
0158	1,000	155	7.03
0159	1,500	129	7.03
0160	2,500	100	7.03
0161	3,500	84	7.39
0162	5,000	70	7.39

MODEL "J" 50 Watt

Diameter 2$\frac{5}{16}$". Depth behind panel 1⅜".

Stock No.	Ohms	Max. Mils.	List Price
0308	0.5	10,000	$7.81
0309	1	7,070	7.81
0310	2	5,000	7.81
0311	4	3,530	7.03
0312	6	2,880	7.03
0313	8	2,500	7.03
0314	12	2,040	7.03
0315	16	1,760	7.03
0316	22	1,500	7.03
0317	35	1,190	7.03
0318	50	1,000	7.03
0319	80	790	7.03
0320	125	630	7.03
0321	150	575	$7.03
0322	225	470	7.03
0323	300	408	7.03
0324	500	316	7.03
0325	800	250	7.39
0326	1,000	224	7.39
0327	1,600	176	7.39
0328	2,500	141	7.39
0329	3,500	119	7.81
0330	5,000	100	7.81
0331	8,000	79	7.81
0332	10,000	70	7.81

NON-SHORTING TYPE ROTARY POWER TAP SWITCH

Single-pole, multi-position switch with all-ceramic insulation, silver-to-silver contacts and "slow-break" action designed especially for alternating current. Switch shaft is electrically "dead". A.C. rating 10 amps., 150 volts. Diameter 1¾"—Depth behind panel 1⅛"—Shaft diameter ¼" — Recommended knob, stock number 4500 (round type) or 4516 (bar type).

Number of Taps	Total Rotation	Stock Number	List Price Less Knob
11	300°	111-11	$4.67
10	270°	111-10	4.53
9	240°	111- 9	4.53
8	210°	111- 8	4.36
7	180°	111- 7	4.36
6	150°	111- 6	4.19
5	120°	111- 5	4.19
4	90°	111- 4	4.06
3	60°	111- 3	4.06
2	30°	111- 2	4.06

MODEL "K" 100 Watt

Diameter 3¼". Depth behind panel 1¾".

Stock No.	Ohms	Max. Mils.	List Price
0440	0.5	14,100	$11.70
0441	1	10,000	11.70
0442	2	7,070	11.70
0443	3	5,750	11.70
0444	5	4,470	11.70
0445	7.5	3,650	10.95
0446	10	3,160	10.95
0447	16	2,500	10.95
0448	25	2,000	10.95
0449	50	1,410	10.95
0450	75	1,150	10.95
0451	100	1,000	10.95
0452	200	707	$10.95
0453	300	575	10.95
0454	400	500	10.95
0455	500	447	10.95
0456	750	365	10.95
0457	1,000	316	11.70
0458	1,500	258	11.70
0459	2,000	224	11.70
0460	2,500	200	11.70
0461	5,000	141	12.47
0462	7,500	115	13.28
0463	10,000	100	14.03

MODEL "L" 150 Watt

Diameter 4". Depth behind panel 2".

Stock No.	Ohms	Max. Mils.	List Price
0524	0.5	17,300	$14.83
0525	1	12,300	14.83
0526	2	8,650	14.83
0527	3	7,070	14.83
0528	5	5,480	14.83
0529	7.5	4,470	14.83
0530	10	3,880	14.03
0531	15	3,163	14.03
0532	25	2,450	14.03
0533	35	2,070	14.03
0534	50	1,735	14.03
0535	75	1,415	14.03
0536	100	1,225	14.03
0537	150	1,000	$14.03
0538	200	865	14.03
0539	250	775	14.03
0540	350	655	14.03
0541	500	548	14.03
0542	750	447	14.83
0543	1,250	346	14.83
0544	1,800	288	15.61
0545	2,250	259	15.61
0546	3,000	224	15.61
0547	4,500	182	16.36
0548	7,500	141	17.17
0549	10,000	122	18.72

MODEL "N" 300 Watt

Diameter 6". Depth behind panel 2⅜".

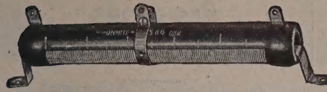
Stock No.	Ohms	Max. Mils.	List Price
0650	1	17,320	$21.06
0651	2	12,240	21.06
0652	3	10,000	21.06
0553	4	8,660	21.06
0654	5	7,750	21.06
0655	7.5	6,320	21.06
0656	10	5,480	21.06
0657	15	4,470	21.06
0658	25	3,460	21.06
0659	50	2,450	21.06
0660	75	2,000	21.06
0661	100	1,730	$21.06
0662	150	1,410	21.06
0663	200	1,220	21.06
0664	300	1,000	21.06
0665	400	866	21.06
0666	700	655	21.06
0667	900	578	21.06
0668	1,200	500	21.06
0669	1,500	447	21.06
0670	1,750	414	21.06
0671	2,500	346	21.06

OTHER OHMITE RHEOSTATS

Ohmite Rheostats are also available in Model G, 75 Watt; Model P, 225 Watt; Model R, 500 Watt; Model T, 750 Watt; and Model U, 1,000 Watt units, in many resistance values. Special Rheostats with tapered windings, etc., can be supplied; also Special Rheostats for Model Train Control. Cages and other accessories also available.

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

OHMITE DIVIDOHM RESISTORS

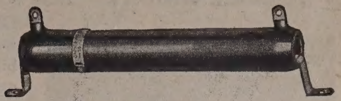


You can adjust the resistance or secure odd resistance values quickly with these Dividohms; easily put on more taps where needed. Ideal voltage dividers. With one adjustable lug and with mounting brackets.

OHMITE FIXED RESISTORS

All-Porcelain

Vitreous-Enameled



Extra-sturdy, wire-wound, all-porcelain resistors with the permanent protection of Ohmite Vitreous Enamel. Widely used for heavy duty applications to assure continuous trouble-free service. With mounting brackets.

10 WATTS

Core Size 1¾" x 5/16" **Mounting Centers 2¼"**

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
1	3,150	1001	750	115	1021
2	2,235	1002	800	111	1022
3	1,825	1003	1,000	100	1023
5	1,415	1004	1,250	89	1024
7.5	1,155	1005	1,500	79	1025
10	1,000	1006	2,000	69	1026
15	816	1007	2,250	64	1027
20	707	1008	2,500	63	1028
25	632	1009	3,000	56	1029
50	447	1010	3,500	51	1030
75	365	1011	4,000	47	1031
100	316	1012	4,500	45	1032
150	258	1013	5,000	43	1033
200	223	1014	6,000	38	1034
250	200	1015	7,000	34	1035
300	182	1016	7,500	33	1036
350	169	1017	8,000	31	1037
400	158	1018	8,500	29	1038
500	141	1019	9,000	28	1039
600	129	1020	10,000	26	1040

List Price, 1 thru 1000 ohms..........$1.47
List Price, 1,250 thru 5,000 ohms...... 1.53
List Price, 6,000 thru 10,000 ohms..... 1.63

25 WATTS

Core Size 2"x 9/16" **Mounting Centers 2¾"**

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
1	5,000	0200J	$0.97	0360	$1.87
2	3,535	0200K	.97	0360B	1.87
3	2,885	0200L	.97	0361	1.87
5	2,235	0200A	.97	0362	1.87
7.5	1,825			0362B	1.87
10	1,580	0200B	.97	0363	1.87
15	1,290	0200R	.97	0364	1.87
20	1,117			0364B	1.87
25	1,000	0200C	.97	0365	1.87
50	707	0200D	.97	0366	1.87
75	577	0200E	.97	0367	1.87
100	500	0200F	.97	0368	1.87
150	408	0200G	.97	0369	1.87
200	353	0200H	.97	0370	1.87
250	316	0201	.97	0371	1.87
300	288			0371B	1.87
400	250			0371C	1.87
500	223	0202	.97	0372	1.87
750	182	0203	.97	0373	1.87
800	176	0204	.97	0374	1.87
1,000	158	0205	.97	0375	1.87
1,250	141			0375B	1.88
1,500	129	0206	1.03	0376	1.88
2,000	111	0207	1.03	0377	1.88
2,250	105			0377B	1.88
2,500	100	0208	1.03	0378	1.88
3,000	91	0209	1.03	0379	1.88
3,500	84	0210	1.03	0380	1.88
4,000	79	0211	1.03	0381	1.88
4,500	74			0381B	1.88
5,000	70	0212	1.03	0382	1.88
6,000	64	0213	1.14	0383	2.03
7,000	60			0383B	2.03
7,200	59			0383C	2.03
7,500	57	0214	1.14	0384	2.03
8,000	55			0384B	2.03
9,000	52			0384C	2.03
10,000	50	0215	1.14	0385	2.03
12,000	42	0216	1.19	0386	2.08
15,000	34	0217	1.19	0387	2.08
20,000	26	0218	1.19	0388	2.08
25,000	21	0219	1.36	0389	2.28
40,000	14	0222	1.36		
50,000	12	0224	1.56		
100.000	7	0229	2.11		

50 WATTS

Core Size 4"x 9/16" **Mounting Centers 4¾"**

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	3,160	0400A	$1.63	0560	$2.37
10	2,235	0400B	1.63	0561	2.37
25	1,414	0400C	1.63	0562	2.37
50	1,000	0400D	1.63	0563	2.37
75	816	0400E	1.63	0564	2.37
100	707	0400F	1.63	0565	2.37
150	577	0400G	1.63	0566	2.37
200	500	0400H	1.63	0567	2.37
250	447	0401	1.63	0568	2.37
300	408			0568B	2.37
400	353			0568C	2.37
500	316	0402	1.63	0569	2.37
750	258	0403	1.63	0570	2.37
1,000	223	0405	1.63	0572	2.37
1,250	200			0572B	2.47
1,500	182	0406	1.75	0573	2.47
2,000	158	0407	1.75	0574	2.47
2,500	141	0408	1.75	0575	2.47
3,000	129	0409	1.75	0576	2.47
3,500	119			0576B	2.47
4,000	111	0410	1.75	0577	2.47
4,500	105			0577B	2.47
5,000	100	0411	1.75	0578	2.47
6,000	91			0578B	2.63
7,000	84			0578C	2.63
7,500	81	0412	1.92	0579	2.63
8,000	79	0413	1.92	0580	2.63
9,000	74			0580B	2.63
10,000	70	0414	1.92	0581	2.63
12,000	64	0415	2.08	0582	2.83
15,000	57	0416	2.08	0583	2.83
20,000	48	0417	2.08	0584	2.83
25,000	41	0418	2.33	0585	3.08
30,000	36			0586	3.08
35,000	32	0419	2.33		
40,000	28			0587	3.08
50,000	23	0420	2.58	0588	3.30
60,000	19			0589	3.30
75,000	16	0421	2.92		
80,000	15			0590	3.67
100,000	12	0422	3.20	0591	3.92

75 WATTS

Core Size 6" x 9/16" **Mounting Centers 6¾"**

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
5	3,870	0769	5,000	122	0783
10	2,735	0770	6,000	111	0783B
15	2,236	0771	7,000	103	0783C
25	1,732	0772	7,500	100	0784
50	1,224	0773	8,000	96	0784B
100	866	0774	9,000	91	0784C
200	612	0774B	10,000	86	0785
250	547	0775	12,000	79	0785B
300	500	0775B	15,000	70	0786
400	433	0775C	20,000	61	0787
500	387	0776	25,000	49	0788
750	316	0777	30,000	42	0789
1,000	273	0778	35,000	36	0790
1,250	245	0778B	40,000	32	0791
1,500	223	0779	45,000	29	0792
2,000	193	0780	50,000	26	0793
2,500	173	0781	60,000	22	0794
3,000	158	0781B	80,000	17	0795
3,500	146	0782	100,000	13	0796
4,000	136	0782B			

List Price, 5 thru 1,000 ohms..........$2.75
List Price, 1,250 thru 5,000 ohms...... 2.83
List Price, 6,000 thru 10,000 ohms..... 3.00
List Price, 12,000 thru 20,000 ohms.... 3.20
List Price, 25,000 thru 40,000 ohms.... 3.53
List Price, 45,000 thru 60,000 ohms.... 3.62
List Price, 80,000 ohms............... 3.97
List Price, 100,000 ohms.............. 4.33

100 WATTS

Core Size 6½"x¾" **Mounting Centers 7⅜"**

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	4,470	0600A	$2.42	0956	$3.58
10	3,160	0600B	2.42	0957	3.58
25	2,000	0601	2.42	0958	3.58
50	1,414	0602	2.42	0959	3.58
75	1,153	0603	2.42		
100	1,000	0604	2.42	0960	3.58
150	816	0605	2.42		
250	632	0606	2.42	0960B	3.58
500	447	0607	2.42	0961	3.58
750	365	0608	2.42		
1,000	316	0609	2.42	0962	3.58
1,500	258	0610	2.53	0962B	3.67
2,000	223	0611	2.53		
2,500	200	0612	2.53	0963	3.67
3,000	182	0613	2.53		
5,000	141	0614	2.53	0964	3.67
7,500	115	0615	2.70		
10,000	100	0616	2.70	0965	3.87
15,000	81	0617	2.97	0966	4.12
20,000	70	0618	2.97	0967	4.12
25,000	53	0619	3.20	0968	4.37
30,000	47	0620	3.20	0969	4.37
40,000	36	0621	3.20	0970	4.37
50,000	29	0622	3.37	0971	4.53
60,000	24	0623	3.37		
75,000	19	0624	3.58	0972	4.75
100,000	15	0625	3.80	0973	4.95

160 Watt Resistors—Core Size 8½" x 1⅛". Mounting Centers 9⅜" available in same resistances as the 200 Watt Resistors.

Ohms	Fixed Res. List Price	Adj. Res. List Price
5	$4.16	$5.33
10 thru 1,000	2.98	4.14
1,500 thru 5,000	3.04	4.19
7,500 & 10,000	3.30	4.44
15,000 & 20,000	3.54	4.69
25,000 thru 40,000	3.64	4.81
50,000 & 60,000	3.76	4.94
75,000	4.03	5.17
100,000	4.26	5.44

200 WATTS

Core Size 10½"x1⅛" **M'nt'ng Centers 11⅜"**

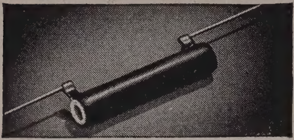
5	6,320	0900A	$4.53	1356	$5.67
10	4,470	0900B	3.22	1357	4.37
25	2,828	0901	3.22	1358	4.37
50	2,000	0902	3.22	1359	4.37
75	1,635	0903	3.22		
100	1,414	0904	3.22	1360	4.37
150	1,153	0905	3.22		
250	894	0906	3.22	1360B	4.37
500	632	0907	3.22	1361	4.37
750	516	0908	3.22		
1,000	447	0909	3.22	1362	4.37
1,500	365	0910	3.30	1362B	4.45
2,000	316	0911	3.30		
2,500	283	0912	3.30	1363	4.45
3,000	258	0913	3.30		
5,000	200	0914	3.30	1364	4.45
7,500	163	0915	3.53		
10,000	141	0916	3.53	1365	4.70
15,000	115	0917	3.77	1366	4.92
20,000	100	0918	3.77	1367	4.92
25,000	80	0919	3.90	1368	5.03
30,000	81	0920	3.90	1369	5.03
40,000	61	0921	3.90	1370	5.03
50,000	49	0922	4.03	1371	5.17
60,000	41	0923	4.03		
75,000	33	0924	4.25	1372	5.42
100,000	25	0925	4.53	1373	5.67

ADJUSTABLE LUGS

Bakelite Knob			Screw Driver Type		
Res. Dia.	Stock No.	List Price	Res. Dia.	Stock No.	List Price
9/16"	0359	$0.36	5/16"	1058	$0.25
¾"	1959	.47	9/16"	0358	.25
1⅛"	2159	.47	¾"	1958	.42
			1⅛"	2158	.42

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

Popular OHMITE "BROWN DEVIL" RESISTORS



High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1½" tinned wire leads. The standard resistance tolerance is ±10%.

The all-welded construction of the 5 watt unit makes it possible to extend the resistance range to 10,000 ohms, an unusually high value for a vitreous enameled stock unit.

5 Watt—1" x 5/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
1	2,236	125	200	1,250	63
1.5	1,820	150	182	1,500	57
2	1,580	200	158	1,750	53
3	1,290	225	149	2,000	49
4	1,120	250	141	2,250	46
5	1,000	300	129	2,500	44
7.5	818	350	120	3,000	39
10	707	400	112	3,500	36
12	645	450	105	4,000	33
15	575	500	100	4,500	31
20	500	600	91	5,000	29
25	447	700	84	6,000	26
30	408	750	81	7,000	24
35	378	800	79	7,500	22
40	353	900	74	8,000	21
50	316	1,000	70	9,000	19
75	258	1,100	67	10,000	18
100	224	1.200	64		

List Price, 1 thru 1,000 ohms.........$0.67
List Price, 1.100 thru 5.000 ohms...... .72
List Price, 6,000 thru 10,000 ohms..... .78

10 Watt—1¾" x 5/16" Core Size

Ohms	Mils,	Ohms	Mils.	Ohms	Mils.
1	3,160	350	169	6,000	38
2	2,235	400	158	7,000	34
3	1,825	450	149	7,500	32
4	1,580	500	141	8,000	31
5	1,414	600	129	8,500	29
7.5	1,155	700	119	10,000	26
10	1,000	750	115	11,000	24
12	910	800	111	12,000	23
15	816	900	105	12,500	22
20	707	1,000	100	13,500	21
25	632	1,100	95	14,300	20
30	575	1,200	91	15,000	19
35	535	1,250	89	16,000	18
40	500	1,500	79	17,500	17
50	447	1,750	74	18,000	17
75	365	2,000	69	20,000	16
100	316	2,250	64	22,500	15
125	283	2,500	63	25,000	14
150	258	3,000	56	30,000	12
200	223	3,500	51	35,000	10
225	217	4,000	47	40,000	9
250	200	4,500	45	45,000	8
300	182	5,000	43	50,000	7

List Price, 1 thru 1,000 ohms..........$0.75
List Price, 1.100 thru 5,000 ohms...... .80
List Price, 6,000 thru 10,000 ohms..... .92
List Price, 11,000 thru 20,000 ohms.... 1.03
List Price, 22,500 & 25,000 ohms...... 1.08
List Price, 30,000 thru 50,000 ohms.... 1.22

20 Watt—2" x 7/16" Core Size

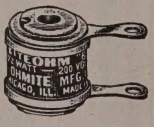
Ohms	Mils.	Ohms	Mils.	Ohms.	Mils.
5	2,000	1,250	126	15,000	30
10	1,414	1,500	115	20,000	24
25	894	1,750	107	25,000	20
50	632	1,850	104	30,000	17
75	516	2,000	100	35,000	15
100	447	2,250	94	40,000	14
150	365	2,400	91	45,000	13
200	316	2,500	89	50,000	12
250	283	2,750	85	55,000	10
300	258	3,000	81	60,000	9.0
350	239	3,500	75	65,000	8.0
400	223	4,000	70	70,000	7.0
500	200	4,500	66	75,000	7.0
650	175	5,000	63	80,000	7.0
700	169	6,000	57	85,000	6.0
750	163	7,000	53	90,000	6.0
800	158	7,500	51	95,000	6.0
850	153	8,000	50	100,000	6.0
1,000	141	10,000	43		
1,200	129	12,500	35		

List Price, 5 thru 1,000 ohms.........$0.95
List Price, 1,200 thru 5,000 ohms...... .97
List Price, 6,000 thru 10,000 ohms..... 1.12
List Price, 12,500 thru 20,000 ohms.... 1.20
List Price, 25,000 thru 40,000 ohms.... 1.37
List Price, 45,000 thru 60,000 ohms.... 1.58
List Price, 65,000 thru 80,000 ohms.... 1.83
List Price, 85,000 thru 100,000 ohms... 2.11

RITEOHM SERIES "84" PRECISION RESISTORS

Ohms	Max. Voltage	Ohms	Max. Voltage	Ohms	Max. Voltage
*0.1	.316	4,000	44.70	.125 Meg.	200
0.5	.500	5,000	50.00	.150 Meg.	200
1	.707	7,500	61.20	.175 Meg.	200
10	2.24	10,000	70.70	.200 Meg.	200
25	3.54	12,500	79.00	*.225 Meg.	400
50	5.00	15,000	86.60	*.250 Meg.	400
100	7.07	20,000	100	*.300 Meg.	400
200	10.00	22,500	106	*.400 Meg.	400
250	11.20	25,000	112	†.500 Meg.	400
300	12.20	30,000	122	†.600 Meg.	400
500	15.80	40,000	141	†.750 Meg.	400
1000	22.40	50,000	158	†.900 Meg.	400
1500	27.40	60,000	173	†1.0 Meg.	400
2000	31.60	75,000	194	†1.5 Meg.	400
2500	35.40	.1 Meg.	200		

*Type 844-A 4 Pie—1 Watt Size 9/16" x 7/8"
†Type 844-B 4 Pie—1 Watt Size 3/4" x 1 3/16"
All others Type 842-A 2 Pie—½ Watt Size 9/16" x 9/16"



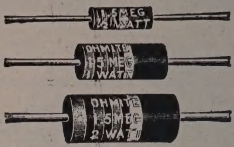
High quality, 1% tolerance, non-inductive, pie-wound units for meter multipliers, lab. equipment, etc. Prices are for stock values shown in table.

Ohms	List Price	Ohms	List Price
0.1 thru 500	$1.33	.225 & .25 Meg.	$4.06
1,000 thru 2,500	1.39	.3 megohm	4.44
4,000 thru 10,000	1.56	.4 megohm	4.67
12,500 & 15,000	1.69	.5 megohm	5.31
20,000 thru 50,000	2.11	.6 megohm	6.64
60,000 & 75,000	2.50	.75 megohm	7.03
.1 megohm	2.89	.9 megohm	7.39
.125 megohm	3.28	1.0 megohm	8.20
.15 thru .2 megohm	3.67	1.5 megohm	11.70

Complete Listings in Bulletin 126

OHMITE "LITTLE DEVIL" RESISTORS

Individually Marked



Ohmite "Little Devils" are full ½ Watt, 1 Watt and 2 Watt Insulated Composition Resistors and can be used at their full wattage ratings at 70° C. (158° F.) ambient temperature. They meet requirements of specification JAN-R-11. All units are color coded. Each resistor is marked with the resistance value, wattage rating and the Ohmite trademark. "LITTLE DEVILS" are available from stock in ½, 1 and 2 watt sizes with ±5% or ±10% tolerance. The standard RMA values, 10 ohms to 22 megohms can be furnished. In the 1 watt size, ±10% tolerance values as low as 2.7 ohms are available from stock.

Stocked in RMA Values ±5% or ±10% Tolerance

(Figures in bold type are ±10% RMA values. All values except (*) available in ±5% tolerance.)

Ohms	Ohms	Ohms	Ohms	Megs.
***2.7**	110	2,400	51,000	1.1
***3.3**	**120**	**2,700**	**56,000**	**1.2**
***3.9**	130	3,000	62,000	1.3
***4.7**	**150**	**3,300**	**68,000**	**1.5**
***5.6**	160	3,600	75,000	1.6
***6.8**	**180**	**3,900**	**82,000**	**1.8**
***8.2**	200	4,300	91,000	2.0
10	**220**	**4,700**	MEGS	**2.2**
11	240	5,100	**0.1**	2.4
12	**270**	**5,600**	0.11	**2.7**
13	300	6,200	**0.12**	3.0
15	**330**	**6,800**	0.13	**3.3**
16	360	7,500	**0.15**	3.6
18	**390**	**8,200**	0.16	**3.9**
20	430	9,100	**0.18**	4.3
22	**470**	**10,000**	0.20	**4.7**
24	510	11,000	**0.22**	5.1
27	**560**	**12,000**	0.24	**5.6**
30	620	13,000	**0.27**	6.2
33	**680**	**15,000**	0.30	**6.8**
36	750	16,000	**0.33**	7.5
39	**820**	**18,000**	0.36	**8.2**
43	910	20,000	**0.39**	9.1
47	**1,000**	**22,000**	0.43	**10.0**
51	1,100	24,000	**0.47**	11.0
56	**1,200**	**27,000**	0.51	**12.0**
62	1,300	30,000	**0.56**	13.0
68	**1,500**	**33,000**	0.62	**15.0**
75	1,600	36,000	**0.68**	16.0
82	**1,800**	**39,000**	0.75	**18.0**
91	2,000	43,000	**0.82**	20.0
100	**2,200**	**47,000**	0.91	**22.0**
			1.0	

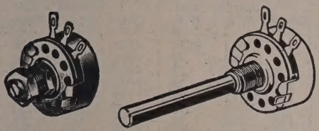
*1 Watt Size Only. ±10% tolerance.

Type	Size Length	Size Diam.	Max. Volts	List Price ±10%	List Price ±5%
½ Watt	3/8"	9/64"	350	17c	33c
1 Watt	9/16"	7/32"	500	25c	50c 10 Ohms and up
2 Watt	11/16"	5/16"	1,000	33c	66c

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

BE RIGHT WITH OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

2 WATT MOLDED COMPOSITION POTENTIOMETER—TYPE AB



The Type AB Potentiometer is an exceptionally high quality unit designed especially for industrial, laboratory, radio service and other uses where reliability is particularly important. Because the resistor element is molded, the unit has an exceptionally large safety factor. The power rating of 2 watts is unusual for a unit of such small size. The unit has a very low noise level and low voltage coefficient. It will pass the Army-Navy 200 hour salt spray test, specification AN-QQ-S-91. The unit is 1-1/16″ diameter and extends 9/16″ behind the panel. The 2″ long round shaft (including the ⅜″ long mounting bushing) is available from stock on potentiometers with all three resistance tapers. The screwdriver shaft with locking-nut is available from stock on the linear taper units only. A SPST switch, to be attached to the back of the control, can be supplied extra.

Total Resistance- ±10% Except as Noted	Resistance Rotation Characteristics (Taper)			
	LINEAR		Type A Clockwise Log. Stock No.	Type B Counterclock. Log. Stock No.
	Type U 2″ Shaft Stock No.	Type LU Locking Shaft Stock No.		
50 Ohms	CU 5001	CLU 5001		
100 Ohms	CU 1011	CLU 1011		
250 Ohms	CU 2511	CLU 2511		
500 Ohms	CU 5011	CLU 5011		
1,000 Ohms	CU 1021	CLU 1021		
2,500 Ohms	CU 2521	CLU 2521		
5,000 Ohms	CU 5021	CLU 5021		
10,000 Ohms	CU 1031	CLU 1031		CB 1031
25,000 Ohms	CU 2531	CLU 2531		CB 2531
50,000 Ohms	CU 5031	CLU 5031		CB 5031
.10 Meg.	CU 1041	CLU 1041	CA 1041	
.25 Meg.	CU 2541	CLU 2541	CA 2541	
.5 Meg.	CU 5041	CLU 5041	CA 5041	
1.0 Meg. ±20%	CU 1052	CLU 1052	CA 1052	
2.5 Meg. ±20%	CU 2552	CLU 2552	CA 2552	
5.0 Meg. ±20%	CU 5052	CLU 5052		

Type AB Potentiometer with 2″ long shaft........**List Price** **$3.00**

Type AB Potentiometer with locking shaft illustrated above........**List Price** **3.75**

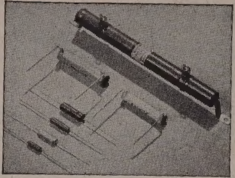
Stock No. CS-1, Switch only for above unit (supplied unmounted)........**List Price** **.90**

LITTLE DEVIL RESISTOR ASSORTMENTS FOR SERVICE USE

Serviceman's assortments of 125 Ohmite "Little Devil," ½-watt, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9″ long, 4¾″ high, and 5¼″ deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE ±10% tolerance (40 resistance values)	CAB-1	125	½ watt	12.50
	CAB-2	125	1 watt	18.75
	CAB-3	125	2 watt	25.00

OHMITE R.F. PLATE CHOKES



This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimensions	List Price
Z-7	3 to 20 Mc.	84.0	6″ x 9/16″	$1.86
Z-14	7 to 35 Mc.	44.0	2″ x 7/16″	.81
Z-28	20 to 60 Mc.	21.0	1¾″ x 5/16″	.53
Z-50	35 to 110 Mc.	7.0	⅞″ x 9/32″	.39
Z-144	80 to 200 Mc.	1.8	¾″ x 3/16″	.39
Z-235	160 to 350 Mc.	0.84	¾″ x 3/16″	.39
Z-460	320 to 520 Mc.	0.20	½″ x 5/32″	.39

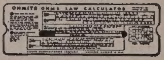
Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

OHMITE POWER LINE CHOKES

Prevents high-frequency currents of radio transmitters, diathermy and therapeutic equipment from going out over the power lines and interfering with nearby radio receiving sets. Used as a filter in connection with two grounding condensers of 0.1 microfarad capacity each. The Z-20 Choke is also used at radio receivers to keep out interference. All chokes consist of two single-layer windings on a single ceramic core—insulated and protected by moisture-proof coating. Recommended for use in suppressing radio (not audio) frequency interference.

Stock No.	Micro-henries	Current Rating	Total D.C. Resistance Ohms	Lgth.	Tube Dia.	List Price
Z-20	14	5 Amperes	0.15	4″	9/16″	$2.56
Z-21	15	10 Amperes	0.07	6½″	¾″	4.31
Z-22	18	20 Amperes	0.045	8½″	1⅛″	6.22

NEW OHM'S LAW CALCULATOR



Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator—popular the world over with servicemen, engineers and students—now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the slide the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.

Ohmite Ohm's Law Calculator........**NET Price** **$0.25**

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

WARD LEONARD · VITROHM RESISTORS and RHEOSTATS

VITROHM FIXED RESISTORS

Wire wound resistors, sturdy construction, using low temperature coefficient materials. Coated with Ward Leonard's own crazeless Green Enamel.

5 WATTS Type 5F

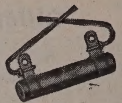
Size 1" x 5/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	2230	$0.67	500	100	$0.67
1.5	1820	.67	600	91	.67
2	1580	.67	700	84	.67
3	1290	.67	750	81	.67
4	1117	.67	800	79	.67
5	1000	.67	900	74	.67
7.5	811	.67	1000	70	.67
10	707	.67	1100	67	.72
12	644	.67	1200	64	.72
15	577	.67	1250	63	.72
20	500	.67	1500	57	.72
25	450	.67	1750	53	.72
30	408	.67	2000	50	.72
35	378	.67	2250	47	.72
40	353	.67	2500	45	.72
50	316	.67	3000	40	.72
75	257	.67	3500	37	.72
100	223	.67	4000	35	.72
125	200	.67	4500	33	.72
150	182	.67	5000	31	.72
200	158	.67	6000	28	.78
250	141	.67	7000	26	.78
300	129	.67	7500	25	.78
350	119	.67	8000	25	.78
400	112	.67	9000	23	.78
450	105	.67	10000	22	.78

20 WATTS Type 20F

Size 2" x 9/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	4480	$0.95	2500	90	$0.97
3	2580	.95	2750	85	.97
5	2000	.95	3000	80	.97
10	1410	.95	3500	76	.97
15	1150	.95	4000	70	.97
25	900	.95	4500	67	.97
50	630	.95	5000	63	.97
75	510	.95	6000	55	1.12
100	450	.95	7000	53	1.12
150	365	.95	7500	51	1.12
175	340	.95	8000	50	1.12
200	320	.95	10000	40	1.12
250	285	.95	12500	32	1.20
300	258	.95	15000	27	1.20
350	240	.95	20000	20	1.20
400	220	.95	25000	16	1.37
500	200	.95	30000	13	1.37
650	175	.95	35000	11	1.37
700	169	.95	40000	10	1.37
750	160	.95	45000	9	1.58
800	155	.95	50000	8	1.58
850	153	.95	55000	7	1.58
1000	141	.95	60000	10.8	1.58
1200	130	.97	65000	10.5	1.83
1250	125	.97	70000	10.0	1.83
1500	115	.97	75000	9.5	1.83
1750	107	.97	80000	9.3	1.83
1850	104	.97	85000	9.1	2.11
2000	100	.97	90000	8.8	2.11
2250	94	.97	95000	8.6	2.11
2400	91	.97	100000	8.4	2.11



5-watt, 10-watt, 20-watt

Types 5F, 10F, and 20F are furnished with wire terminal leads — no brackets.

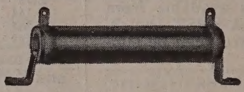
Order by Type Number and Resistance Value.

10 WATTS Type 10F

Size—1¾" x 5/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	3160	$0.75	150	258	$0.75	4500	47	$0.80
1.5	2580	.75	200	224	.75	5000	45	.80
2	2235	.75	225	211	.75	6000	41	.92
3	1825	.75	250	200	.75	7000	38	.92
4	1580	.75	300	182	.75	7500	36	.92
5	1415	.75	350	169	.75	8000	35	.92
7.5	1155	.75	400	158	.75	8500	34	.92
10	1000	.75	450	149	.75	9000	33	.92
12	913	.75	500	142	.75	10000	30	.92
15	815	.75	600	129	.75	11000	27	1.03
20	707	.75	700	120	.75	12000	25	1.03
25	630	.75	750	115	.75	12500	24	1.03
30	577	.75	800	110	.75	13500	22	1.03
35	534	75	900	105	.75	14300	21	1.03
40	500	.75	1000	100	.75	15000	20	1.03
50	450	.75	1100	95	.80	16000	19	1.03
75	365	.75	1200	91	.80	17500	17	1.03
100	316	.75	1250	89	.80	18000	16	1.03
125	283	.75	1500	81	.80	20000	15	1.03
			1750	75	.80	22500	13	1.08
			2000	70	.80	25000	12	1.08
			2250	66	.80	30000	13	1.22
			2500	63	.80	35000	12	1.22
			3000	58	.80	40000	11	1.22
			3500	53	.80	45000	10.5	1.22
			4000	50	.80	50000	10	1.22

HEAVY DUTY RESISTORS



Mounting brackets and lug type terminals

25 WATTS Type 25F

Size—2" x 5/8" Mounting Centers—2⅝"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	$0.97	2000	112	$1.03
2	3535	.97	2500	100	1.03
3	2890	.97	3000	90	1.03
4	2500	.97	3500	85	1.03
5	2235	.97	4000	80	1.03
10	1580	.97	5000	70	1.03
15	1290	.97	6000	65	1.14
25	1000	.97	7500	53	1.14
50	710	.97	8500	47	1.14
75	580	.97	10000	40	1.14
100	500	.97	12000	33	1.19
150	410	.97	15000	27	1.19
200	354	.97	20000	20	1.19
250	315	.97	25000	16	1.36
300	289	.97	30000	13	1.36
400	250	.97	35000	11	1.36
500	224	.97	40000	10	1.36
750	182	.97	50000	8	1.56
800	177	.97	60000	6.7	1.56
850	170	.97	70000	5.7	1.83
1000	158	.97	75000	5.3	1.83
1250	140	1.03	80000	5	1.83
1500	129	1.03	100000	4	2.11

50 WATTS Type 50F

Size—3½" x ¾" Mounting Centers—4¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	$2.25	5000	100	$1.75
2	5000	1.63	6000	91	1.92
3	4080	1.63	7500	82	1.92
4	3535	1.63	8000	79	1.92
5	3160	1.63	10000	70	1.92
10	2235	1.63	12000	64	2.08
25	1415	1.63	12500	56	2.08
50	1000	1.63	15000	47	2.08
75	815	1.63	20000	35	2.08
100	707	1.63	25000	28	2.33
150	575	1.63	30000	23	2.33
200	500	1.63	35000	20	2.33
250	445	1.63	40000	18	2.33
300	408	1.63	45000	17	2.58
400	353	1.63	50000	14	2.58
500	316	1.63	75000	9	2.92
750	258	1.63	100000	7	3.20
800	250	1.63	125000	5	3.36
1000	224	1.63	150000	4.6	3.50
1500	180	1.75	175000	4.0	3.64
2000	160	1.75	200000	3.5	3.78
2500	141	1.75	225000	3.1	4.22
3000	130	1.75	250000	2.8	4.22
4000	110	1.75			

100 WATTS Type 100F

Size—6½" x 1⅛" Mounting Centers—7¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	$3.37	2500	200	$2.53
2	7070	3.37	3000	180	2.53
3	5770	3.37	3500	170	2.53
4	5000	2.42	4000	160	2.53
5	4470	2.42	4500	150	2.53
10	3160	2.42	5000	141	2.53
25	2000	2.42	7500	115	2.70
50	1410	2.42	10000	100	2.70
75	1150	2.42	15000	80	2.97
100	1000	2.42	20000	70	2.97
125	895	2.42	25000	60	3.20
150	815	2.42	30000	50	3.20
250	630	2.42	35000	43	3.20
500	447	2.42	40000	37	3.20
750	365	2.42	50000	30	3.37
1000	316	2.42	60000	25	3.37
1250	285	2.53	70000	21	3.58
1500	260	2.53	75000	20	3.58
2000	225	2.53	100000	15	3.80

160 WATTS Type 160F

Size—8½" x 1⅛" Mounting Centers—9¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	12650	$4.16	2500	252	$3.04
2	8940	4.16	3000	230	3.04
3	7300	4.16	3500	215	3.04
4	6320	4.16	4000	200	3.04
5	5650	4.16	4500	185	3.04
10	4000	2.98	5000	178	3.04
15	3265	2.98	7500	146	3.30
25	2525	2.98	10000	126	3.30
50	1785	2.98	15000	105	3.54
75	1460	2.98	20000	90	3.54
100	1265	2.98	25000	80	3.64
150	1035	2.98	30000	67	3.64
200	894	2.98	35000	57	3.64
250	800	2.98	40000	50	3.64
500	565	2.98	50000	40	3.76
750	460	2.98	60000	33	3.76
1000	400	2.98	75000	26	4.03
1500	326	3.04	80000	25	4.26
2000	280	3.04	100000	20	4.26

200 WATTS Type 200F

Size—10½" x 1⅛" Mounting Centers—11¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	14140	$4.53	3500	240	$3.30
2	10000	4.53	4000	225	3.30
3	8162	4.53	4500	210	3.30
5	6325	4.53	5000	200	3.30
10	4470	3.22	7500	163	3.53
25	2825	3.22	10000	141	3.53
50	2000	3.22	15000	115	3.77
75	1630	3.22	20000	100	3.77
100	1414	3.22	25000	90	3.90
150	1150	3.22	30000	82	3.90
250	900	3.22	35000	71	3.90
500	632	3.22	40000	62	3.90
750	515	3.22	50000	50	4.03
1000	447	3.22	60000	42	4.03
1500	365	3.30	75000	33	4.25
2000	315	3.30	100000	25	4.53
2500	282	3.30			
3000	260	3.30			

WARD LEONARD • VITROHM RESISTORS and RHEOSTATS

ADJUSTABLE RESISTORS -- ADJUSTOHMS

Adjustohm Resistors are for use in any application where it is necessary or desirable to have one or more intermediate resistance values; or in circuits that need to be changed from time to time to meet varying electrical conditions.

Adjustohm Resistors are built of the highest grade low temperature coefficient materials, and are coated with Ward Leonard's tough crazeless Vitreous Enamel.

10 WATTS Type 10A

Size—1¾" x 5/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	3160	$1.47	750	115	$1.47
2	2235	1.47	800	110	1.47
3	1825	1.47	1000	100	1.47
5	1415	1.47	1250	89	1.53
7.5	1155	1.47	1500	81	1.53
10	1000	1.47	2000	70	1.53
15	815	1.47	2500	63	1.53
20	707	1.47	3000	58	1.53
25	630	1.47	3500	53	1.53
50	450	1.47	4000	50	1.53
75	365	1.47	4500	47	1.53
100	316	1.47	5000	45	1.53
150	258	1.47	6000	41	1.63
200	224	1.47	7000	38	1.63
250	200	1.47	7500	36	1.63
300	182	1.47	8000	35	1.63
350	169	1.47	8500	34	1.63
400	158	1.47	9000	33	1.63
500	142	1.47	10000	30	1.63
600	129	1.47			

50 WATTS Type 50A

Size—4½" x ¾" Mounting Centers—5⅛"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	$3.00	3000	130	$2.47
2	5000	2.37	3500	120	2.47
3	4080	2.37	4000	110	2.47
4	3535	2.37	4500	105	2.47
5	3160	2.37	5000	100	2.47
10	2235	2.37	6000	91	2.63
25	1415	2.37	7000	85	2.63
50	1000	2.37	7200	83	2.63
75	815	2.37	7500	82	2.63
100	707	2.37	8000	79	2.63
150	575	2.37	9000	75	2.63
200	500	2.37	10000	71	2.63
250	445	2.37	12000	64	2.83
300	408	2.37	15000	58	2.83
400	353	2.37	20000	48	2.83
500	316	2.37	25000	40	3.08
750	258	2.37	30000	33	3.08
800	250	2.37	40000	25	3.08
1000	224	2.37	50000	20	3.30
1250	200	2.47	60000	17	3.30
1500	180	2.47	75000	13	3.67
2000	160	2.47	80000	12	3.67
2250	150	2.47	100000	10	3.92
2500	141	2.47			

160 WATTS Type 160A

Size—8½" x 1⅛" Mounting Centers—9¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	12650	$5 33	3000	230	$4.19
2	8940	5.33	3500	215	4.19
3	7300	5.33	4000	200	4.19
4	6320	5.33	4500	185	4.19
5	5650	5.33	5000	178	4.19
10	4000	4.14	7500	146	4.44
15	3265	4.14	10000	126	4.44
25	2525	4.14	15000	105	4.69
50	1785	4.14	20000	90	4.69
100	1265	4.14	25000	80	4.81
200	894	4.14	30000	67	4.81
250	800	4.14	40000	50	4.81
500	565	4.14	50000	40	4.94
1000	400	4.14	60000	33	4.94
1500	326	4.19	75000	26	5.17
2000	280	4.19	80000	25	5.17
2500	259	4.19	100000	20	5.44

25 WATTS Type 25A

Size—2" x ⅝" Mounting Centers—2⅝"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	$1.86	1250	140	$1.89
2	3535	1.86	1500	129	1.89
3	2890	1.86	2000	112	1.89
5	2230	1.86	2250	105	1.89
7.5	1825	1.86	2500	100	1.89
10	1580	1.86	3000	90	1.89
15	1290	1.86	3500	85	1.89
20	1115	1.86	4000	80	1.89
25	1000	1.86	4500	74	1.89
50	710	1.86	5000	70	1.89
75	580	1.86	6000	65	2.03
100	500	1.86	7000	57	2.03
150	410	1.86	7200	56	2.03
200	354	1.86	7500	53	2.03
250	315	1.86	8000	50	2.03
300	289	1.86	8500	47	2.03
400	250	1.86	9000	44	2.03
500	224	1.86	10000	40	2.03
750	182	1.86	12000	33	2.11
800	177	1.86	15000	27	2.11
850	170	1.86	20000	20	2.11
1000	158	1.86	25000	16	2.28

80 WATTS Type 80A

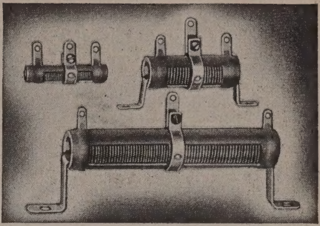
Size—6½" x ¾" Mounting Centers—7¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	8660	$3.53	3000	158	$2.83
2	6120	3.53	3500	146	2.83
3	5000	2.72	4000	137	2.83
4	4330	2.72	4500	129	2.83
5	3870	2.72	5000	122	2.83
10	2740	2.72	6000	111	3.00
15	2235	2.72	7000	103	3.00
25	1730	2.72	7200	102	3.00
50	1220	2.72	7500	100	3.00
75	1000	2.72	8000	97	3.00
100	866	2.72	9000	91	3.00
200	612	2.72	10000	87	3.00
250	550	2.72	15000	71	3.17
300	500	2.72	20000	61	3.17
400	433	2.72	25000	55	3.50
500	387	2.72	30000	50	3.50
750	315	2.72	35000	43	3.50
800	305	2.72	40000	37	3.50
1000	274	2.72	45000	33	3.61
1250	245	2.72	50000	30	3.61
1500	224	2.83	60000	25	3.61
2000	195	2.83	70000	21	3.94
2250	183	2.83	80000	19	3.94
2500	173	2.83	100000	15	4.33

200 WATTS Type 200A

Size—10½" x 1⅛" Mounting Centers—11¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	14140	$5.67	4000	225	$4.45
2	10000	5.67	4500	210	4.45
3	8160	5.67	5000	200	4.45
4	7070	5.67	7500	163	4.70
5	6320	5.67	10000	141	4.70
10	4470	4.37	15000	115	4.92
25	2825	4.37	20000	100	4.92
50	2000	4.37	25000	90	5.03
100	1414	4.37	30000	82	5.03
250	900	4.37	40000	62	5.03
500	632	4.37	50000	50	5.17
1000	447	4.37	60000	42	5.17
1500	365	4.45	75000	33	5.42
2000	315	4.45	100000	25	5.67
2500	282	4.45	125000	20	5.67
3000	260	4.45	150000	16	5.67
3500	240	4.45			



WATT RATINGS

Nominal watt ratings for Adjustohm Resistors apply when the entire resistor is in the circuit. For most practical purposes the watt rating for each part of the resistor is approximately proportional to the amount of the resistance that is in the circuit.

Mounting brackets are furnished with all Adjustohm Resistors, except the 10-watt size, Type 10A.

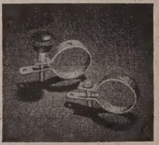
Price of resistor includes brackets and one adjustable band.

100 WATTS Type 100A

Size—6½" x 1⅛" Mounting Centers—7¼"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	$4.53	2500	200	$3.67
2	7070	4.53	3000	180	3.67
3	5770	4.53	4000	160	3.67
4	5000	3.58	4500	150	3.67
5	4470	3.58	5000	114	3.67
10	3160	3.58	6000	130	3.87
25	2000	3.58	7500	115	3.87
50	1410	3.58	10000	100	3.87
100	1000	3.58	15000	80	4.12
200	707	3.58	20000	70	4.12
250	630	3.58	25000	60	4.37
400	500	3.58	30000	50	4.37
500	447	3.58	40000	37	4.37
750	365	3.58	50000	30	4.53
1000	316	3.58	60000	25	4.53
1500	260	3.67	75000	20	4.75
2000	225	3.67	100000	15	4.95

ADJUSTABLE BANDS



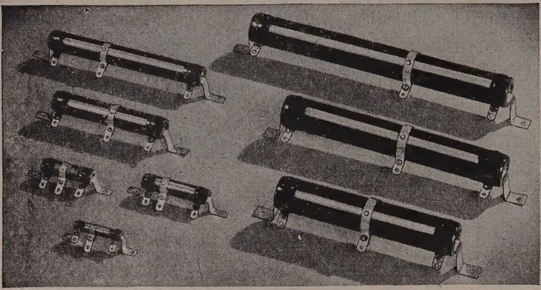
Each Adjustohm Resistor is furnished with one Screw - Driver Type Adjustable Band Terminal (at right in illustration).

Additional band terminals are available. See list in the accompanying table.

Size of Resistor	Screw Driver Type		Bakelite Knob Type	
	Cat. No.	Price	Cat. No.	Price
10 Watts	507-685	$0.25	....	....
25 Watts	507-686	.25	507-691	$0.36
50 Watts	507-688	.25	507-693	.36
75 Watts	507-688	.25	507-693	.36
100 Watts	507-690	.42	507-695	.47
160 Watts	507-690	.42	507-695	.47
200 Watts	507-690	.42	507-695	.47

LECTROHM *Vitreous Enameled* RESISTORS

Quality—Accuracy—Dependability—Long Life



WIRE WOUND ADJUSTABLE TYPES

The same high quality and construction are used for LECTROHM Adjustable Resistors as are incorporated in LECTROHM fixed units.

These resistors are used for replacing voltage dividers in radio receivers, for radio transmitter power supply, and for general experimental work.

TYPE 1¾EV—10-WATT

DIMENSIONS .... 5/16" x 3/16" x 1¾"
TERMINALS ....Lug Type
MAXIMUM RESISTANCE........10,000 ohms
MOUNTING BRACKET ....Centers 2¼"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150		750	115	
2	2230		800	111	
3	1825		1000	100	
5	1415		1250	89	
7.5	1155		1500	79	
10	1000		2000	69	
15	815		2250	64	
20	707		2500	61	
25	630		3000	56	
50	447		3500	51	
75	365		4000	47	
100	315		4500	44	
150	258		5000	40	
200	223		6000	36	
250	200		7000	33	
300	182		7500	32	
350	169		8000	31	
400	158		8500	30	
500	141		10000	24	
600	129				

TYPE 2SV—25-WATT

DIMENSIONS ....9/16" x 5/16" x 2"
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE..........25,000 ohms
MOUNTING BRACKET...........Centers 2⅞"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	5000		1000	158	
3	2890		1250	141	
5	2240		1500	129	
10	1580		2000	112	
15	1290		2500	100	
25	1000		3000	91	
50	707		3500	84	
75	575		4000	79	
100	500		5000	71	
150	400		6000	64	
200	353		7500	57	
250	316		10000	50	
300	288		12000	44	
400	250		15000	26	
500	224		20000	22	
750	182		25000	20	

TYPE 4½MV—50-WATT

DIMENSIONS...................¾" x ½" x 4½"
TERMINALS...............................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 5½"

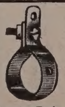
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3160		3000	129	
10	2230		4000	112	
25	1410		5000	100	
50	1000		7500	81	
75	816		10000	70	
100	707		12000	64	
150	577		15000	57	
200	500		20000	50	
250	447		25000	44	
300	408		30000	41	
400	354		40000	35	
500	316		50000	20	
750	258		60000	18	
1000	224		75000	17	
1500	182		80000	16	
2000	158		100000	14	
2500	141				

TYPE 6½MV—80-WATT

DIMENSIONS...................¾" x ½" x 6½"
TERMINALS...............................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
10	2830		3500	152	
15	2310		5000	126	
25	1790		7500	103	
50	1265		10000	89	
100	894		15000	73	
250	566		20000	63	
300	517		25000	57	
400	495		30000	51	
500	400		40000	44	
750	327		50000	25	
1000	283		60000	23	
1500	231		75000	21	
2000	200		80000	20	
2500	179		100000	18	

ADJUSTABLE LUGS



Screw-Driver Type

Diameter of Resistor	List Price
⅜"	$0.13
⅝"	.13
⅞"	.20
1¼"	.20

TYPE 6½KV—100-WATT

DIMENSIONS................1⅛" x ¾" x 6½"
TERMINALS...............................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	1413		15000	81	
100	1000		20000	70	
500	447		25000	63	
1000	316		30000	57	
2000	223		35000	53	
3000	182		40000	50	
4000	158		50000	44	
5000	141		75000	23	
7500	115		100000	20	
10000	100				

TYPE 8½KV—160-WATT

DIMENSIONS..................1⅛" x ¾" x 8½"
TERMINALS.............................. Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 9½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660		10000	126	
10	4000		15000	103	
25	2530		20000	89	
50	1788		25000	80	
100	1266		30000	73	
500	566		40000	55	
1000	400		50000	43	
2500	253		75000	27	
5000	179		100000	18	

TYPE 10½KV—200-WATT

DIMENSIONS................1⅛" x ¾" x 10½"
TERMINALS...............................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET..........Centers 11½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	2000		10000	141	
100	1414		20000	100	
500	632		25000	89	
1000	447		30000	81	
1500	361		50000	63	
2000	316		75000	51	
2500	283		100000	28	
5000	200				

Mounting brackets and one band are furnished with all adjustable types.

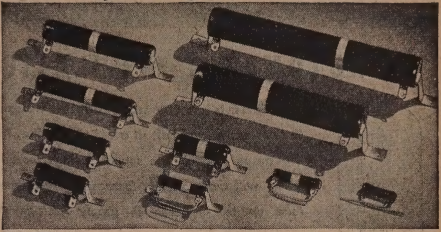
LECTROHM *Vitreous Enameled* RESISTORS

Quality—Accuracy—Dependability—Long Life

WIRE WOUND—FIXED TYPES

LECTROHM Resistors are manufactured from the highest quality materials obtainable and are rated according to R.M.A. standards. LECTROHM Resistors are rugged—dependable — accurate — quality components that will give long trouble-free service.

(Mounting brackets available for 20, 50, 80, 100, 160 and 200 watt units.)



TYPE 1¼L—5-WATT

DIMENSIONS..................¼" $\frac{5}{32}$" x 1¼"
TERMINALS..........................Pig Tail
MAXIMUM RESISTANCE.........10,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	2240		300	129	
2	1580		350	119	
3	1290		400	111	
4	1110		500	100	
5	1000		600	91	
10	707		700	84	
15	575		750	81	
20	500		800	79	
25	447		900	74	
30	408		1000	70	
35	374		1100	64	
40	346		1200	60	
50	316		1250	59	
75	258		1500	54	
100	222		1750	50	
125	200		2000	44	
150	182		2500	40	
200	158		3000	36	
225	149		4000	31	
250	141		5000	28	

TYPE 1¾—10-WATT

DIMENSIONS...............$\frac{5}{16}$" x $\frac{3}{16}$" x 1¼"
TERMINALS..........................Pig Tail
MAXIMUM RESISTANCE.........40,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150		1500	79	
2	2230		1750	74	
3	1825		2000	69	
5	1415		2250	64	
7.5	1155		2500	61	
10	1000		3000	56	
15	815		3500	51	
20	707		4000	47	
25	630		4500	44	
50	447		5000	40	
75	365		6000	36	
100	315		7000	33	
150	258		7500	32	
200	223		8000	31	
250	200		8500	30	
300	182		10000	24	
350	169		12000	20	
400	158		12500	20	
500	141		15000	18	
600	129		17500	17	
700	119		18000	16	
750	115		20000	15	
800	111		22500	15	
900	105		25000	14	
1000	100		30000	8	
1200	91		40000	7	
1250	89				

LECTROHM R. F. PLATE CHOKES

(1000 Milliamps.)

Type	RFC-1	RFC-2	RFC-3	RFC-4
Amateur Band Meters	5	10 & 20	20 & 40	20, 40 80 & 160
Microhenries	5.4	35	95	220
D. C. Ohms	0.85	2	5	9
Lgth. Overall	1¾"	3"	6"	6½"
Diameter	¼"	$\frac{3}{16}$"	$\frac{3}{16}$"	¾"
List Price	**$0.33**	**$1.04**	**$1.56**	**$2.15**

TYPE 2R—20-WATT

DIMENSIONS..................½" x $\frac{5}{16}$" x 2"
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 2⅞"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	2000		1100	134	
10	1414		1250	126	
15	1153		1500	115	
20	1000		2000	100	
25	894		2500	89	
40	707		3000	81	
50	633		4000	70	
60	574		5000	63	
75	517		6000	57	
100	448		7000	53	
125	400		7500	51	
150	365		8000	50	
200	316		10000	43	
250	283		12500	39	
300	258		15000	30	
350	238		20000	24	
400	223		25000	21	
500	200		30000	21	
600	182		35000	18	
700	169		40000	17	
750	163		45000	13	
800	158		50000	11	
1000	141				

TYPE 4½M—50-WATT

DIMENSIONS..................¾" x ½" x 4½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 5½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3165		6000	85	
10	2230		7000	78	
25	1390		7500	77	
50	1000		8000	75	
100	700		10000	66	
200	500		12000	63	
250	440		12500	60	
500	300		15000	56	
750	250		20000	48	
1000	215		25000	43	
1500	175		30000	39	
2000	155		40000	34	
2500	135		50000	30	
3000	120		60000	28	
4000	105		75000	25	
5000	95		100000	21	

TYPE 6½M—80-WATT

DIMENSIONS..................¾" x ½" x 6½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	4000		5000	122	
10	2730		6000	112	
25	1730		7500	100	
50	1220		8000	98	
100	865		10000	86	
200	612		15000	70	
250	545		20000	61	
500	387		25000	55	
750	316		30000	50	
1000	274		50000	43	
1500	223		50000	39	
2000	193		60000	35	
2500	173		75000	31	
3000	158		100000	27	
4000	137				

TYPE 6½K—100-WATT

DIMENSIONS..................1⅛" x ¾" x 6½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
25	2000		3000	180	
50	1414		5000	140	
75	1155		7500	115	
100	1100		10000	100	
150	815		15000	80	
250	632		20000	70	
500	447		25000	63	
750	365		30000	58	
1000	315		40000	50	
1250	280		50000	44	
1500	250		60000	41	
2000	220		75000	36	
2500	200		100,000	31	

TYPE 8½K—160-WATT

DIMENSIONS..................1⅛" x ¾" x 8½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 9½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660		4500	185	
10	4000		5000	180	
25	2530		7500	145	
50	1788		10000	125	
75	1460		15000	105	
100	1260		20000	90	
200	900		25000	80	
500	570		30000	67	
1000	400		35000	57	
1500	330		40000	50	
2000	280		50000	40	
2500	250		60000	33	
3000	230		70000	28	
3500	215		80000	25	
4000	200		100000	20	

TYPE 10½K—200-WATT

DIMENSIONS..................1⅛" x ¾" x 10½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 11½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	6310		4500	210	
10	4470		5000	200	
25	2830		7500	165	
50	2000		10000	140	
75	1635		15000	115	
100	1400		20000	100	
250	900		25000	90	
500	630		30000	82	
1000	450		35000	71	
1500	365		40000	62	
2000	315		50000	50	
2500	280		60000	42	
3000	260		75000	33	
3500	240		100000	25	
4000	225				

LECTROHM INSULATED WIRE-WOUND RESISTORS—1 WATT

LECTROHM
ONE WATT

Ohms	Max. Current Mills.	Ohms	Max. Current Mills.	Ohms	Max. Current Mills.	Ohms	Max. Current Mills.
100	100	750	36	2,500	20	9,000	10
125	89	800	35	3,000	18	10,000	10
150	81	900	33	3,500	16	12,500	9
200	70	1,000	31	4,000	15	15,000	8
250	63	1,100	30	4,500	14	16,000	7
300	57	1,200	28	5,000	14	17,500	7
350	53	1,250	28	6,000	12	18,000	7
400	50	1,500	25	7,000	11	20,000	7
500	44	1,750	23	7,500	11	22,500	6
600	40	2,000	22	8,000	11	25,000	6
700	87	2,250	21				

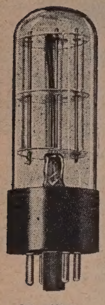
List Price, Each **$0.33**

AUTOMATIC **AMPERITE** **REGULATOR**

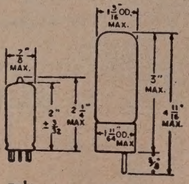
BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE

AUTOMATIC REGULATION

AMPERITE is an automatic rheostat designed to keep the current in a circuit at a definite value, for example, 0.5 amps. ***Should the supply voltage increase, the Amperite will automatically increase in resistance enough to take up the increase in supply voltage—keeping the voltage on the load constant.***



T9 BULB

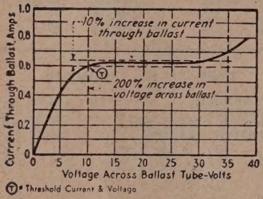


SIZES:

T–5½ L, Miniature. O.D. 11/16"; seated height, 2 3/16".

T–6½ L, Miniature. O.D. 13/16"; seated height, 2 3/16".

T–9, Octal base. O.D. 1 5/16"; seated height, 3".



CHARACTERISTIC CURVE

Characteristic curve of a typical Amperite. Approximate curve of any other Amperite can be obtained by multiplying or dividing the current or voltage scale by any number.

SPECIAL BALLAST TUBES
List $3.00—Dealer Cost $1.80

1H4
1H11
1H22
*1HT2
*1HT4
*1HT11
1TF10
1HTF10
2A12
2A16
2A20
2H4
2H20
*2HT2
*2HT4
3–2
3–4
3–7
3–11
3–12
3–14
3–14B
3–16
3–38A
3–50A
3A20
3H–1–7
3H–11
3H–25
*3T2
*3T4
*3T7
*3T11
3TFV4
3V4
4H3
4H4
4H11
4HTF4
5–4
5–11
5–16
5H3
5H4
5H11
*5T4
5TF4
6–2
6–3
6—4
6–7
6–8B
6–11
6–12
6–13
6A20
6H4
6H6
6H11
*6T2
*6T3
*6T4
7–4
7–11
7H4
7H11
7H12
7HTF3
7HTF4
*7T4
7H4B
8–3B
8–11
9–3
9–4
9–7
9–11
10–3
10–4A
10–4B
10–4D
10–4E
10–25
10A12
10T1
11–4
11–11
12–4
12–7
13–4
17–2
17–3
20–3
20–4
40–6E
41–7E
55–1
55–4
D5HM2
D6M2
D6–1E
D6–4
D6–11
*D6T4
*D6T11
D7H4
*D7HT4
*D7HT11
**D6TF10
**D6TF11
D6TF20
D6TF30
R1900

124A—**List $10.00.**

(*) T Type. T–5 ½ miniature bulb.

TV BALLAST TUBES
List $2.25
Dealer Cost $1.35

17A470303
17A485459
397021
397022
397023
B9M15822
B9M16067
B9M16534
B9M17571
R1000R

A10 SERIES
List $3.00 **Dealer Cost $1.80**

Amperite Number	Voltage 12-30 Current—Amps.	Amperite Number	Voltage 12-30 Current—Amps.
**D6–TF10	0.060– .068	5H10	0.55 – .60
**1TF10	0.10 – .11	6A10	0.60 – .65
1H10	0.15 –1.65	6H10	0.65 – .73
**1HTF10	0.15 – .165	7A10	0.70 – .80
2A10	0.2 – .22	7H10	0.75 – .85
**2TF10	0.2 – .22	8A10	0.80 – .90
2H10	0.25 – .28	9A10	0.90 –1.0
**2HTF10	0.25 – .28	10A10	1.0 –1.15
3A10	0.3 – .33	11A10	1.1 –1.25
3H10	0.35 – .39	12A10	1.2 –1.35
4A10	0.4 – .45	13A10	1.3 –1.5
4H10	0.45 – .50	14A10	1.4 –1.6
5A10	0.5 – .56		

** Type T6 ½ Miniature bulb—9 Pin min. base.

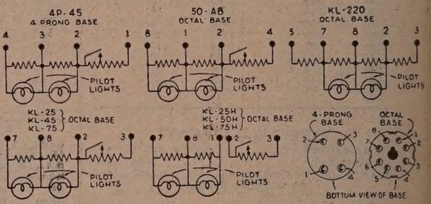
AC-DC REPLACEMENTS

REPLACEMENT AMPERITE—A.C.–D.C. SETS. List $1.25

Amperite No.	Amperites Shown Replace All A.C.–D.C. Ballasts		
	Starting With Letter	With Numbers From	Ending In
KL. 25# **KL. 45** **KL. 75**	K, L, M or BK BL or BM	10 to 36 36 " 67 67 " 105	A, B, C, or D
KL. 25H **KL. 50H** **KL. 75H**	K, L, M, or BK	11 to 26 36 " 67 67 " 105	F, G or H
KL. 50S1 **KL. 50S2** **KL. 50S3**	K or L " "	40 to 100 " "	S1 S2 S3
KL. 50E	"	36 " 67	E

Except K18B, use Amperite K18B—4 Prong Base.

BASE WIRING OF AMPERITES FOR A.C.-D.C. SETS



AC-DC REPLACEMENT—List $1.25—Dealer Cost $0.75.

For	Use Amperite	For	Use Amperite	For	Use Amperite
2CR–241	KL–45	50W	4P45	185L44	4P45
2LR–212	50AB	50A2	4P45	185LB	4P45
2UR–215	KL–45	50A2MG	KL–50S2	185LC	4P45
2UR–224	KL–45	50B2	4P45	185M4	4P45
3–40	3–40	50B2MG	KL–50S1	185M8	4P45
6B	4P45	50X3	4P45	185R	4P45
6.125	KL–45J	50X3T	4P45	185R4	4P45
6.126	KL–45J	55A	KL–45	185R8	4P45
6–128	KL–45J	55H	KL–50H	185R44	4P45
6–129	KL–45J	55KB	KL–45	200R	200R
6–133	KL–45J	60–92A	KL–75	200R4	4P45
6–135	KL–45J	69–2027	3–40	200R8	4P45
7	7	69–2033	KL–45	5459 (list 2.25)	5459
8	4P45	66–2037	KL–45	81966	KL–45
9	4P45	75	KL–75	35000	35000
10–23A	KL–25	80	4P45	A (JFD)	KL–45
23–55A	KL–45	80R	80R	B (JFD)	KL–75
23–55F	KL–50H	92A	4P45	Bkv51dj	Bkv51dj
23–55B	KL–45	95K2	KL–45	D30	D–35
23–55C	KL–45	100.R8	4P45	D35	D35
23–55D	KL–45	100–37	KL–45J	D140	200R
32	KL–50H	100–38	KL–45J	D150	200R
33AG	KL–25	100–77	100–77	D200	200R
36A	KL–25	100–79	100–79	L26CC	KL–25
40	3–40	165KC	4P45	NUA	KL–45
40W	3–40	165LB	4P45	NUB	KL–45
40A2	4P45	165LC	4P45	P27287	KL–50E
40B2	4P45	165L4	4P45	R–1000	R–1000
4X300	4P45	165L8	4P45	R–3003A	R–3003A
42A	3–40	165L44	4P45	RR782	K26J218
42A1	50AB	165M4	4P45	TU–34	KL–45
42A2	50AB	165M8	4P45	TU–83	KL–45
42B2	50AB	165R	4P45	W–43357	KL–45
45W	4P45	165R4	4P45	W–45788	KL–45
46A1	46A1	165R8	4P45	W–46773	KL–45
46B1	46B1	165R44	4P45	W–46416	KL–45
49A	4P45	185A	4P45	W–46773	KL–45
49A1	50AB	185KB	4P45	X35–35	KL–45
49A2	50AB	185KC	4P45	X55B	KL–25
49B2	50AB	185L4	4P45	Y–TU–9	KL–45
50MG	KL–50S1	185L8	4P45		

CRYSTAL MICROPHONE CABLE

GENERAL PURPOSE: Low loss design for use with crystal, ribbon, dynamic and velocity microphones, photo-electric cells. Use No. 1248 FOR LAPEL MICROPHONES and phonograph pickups.

No.	Size	Strand	Capacity Per Ft.	O.D.	Put-up
1248	20	26/34	40 mmf.	.175″	100 Ft. Spool
1249	20	26/34	30 mmf.	.245″	100 Ft. Spool

Construction: Single conductor, extra flexible stranded tinned copper, cotton serve, insulated with special low loss SIC rubber compound, braided tinned copper shield, cotton serve, tough black rubber jacket overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED MICROPHONE CABLE

GENERAL PURPOSE: Adaptable for all indoor and outdoor crystal, carbon and condenser microphones as well as public address systems.

No.	Conductors	Size	Capacity Per Ft. Between Cond. & Shield	Capacity Per Ft. Between Conds.	O.D.	Put-up
1250	2	20	70 mmf.	38 mmf.	.290″	100 Ft. Spool
1250/18	2	18	75 mmf.	40 mmf.	.300″	100 Ft. Spool
1251	3	20	65 mmf.	38 mmf.	.305″	100 Ft. Spool
1251/18	3	18	65 mmf.	38 mmf.	.355″	100 Ft. Spool
1252	4	20	65 mmf.	36 mmf.	.345″	100 Ft. Spool
1253	5	20	60 mmf.	32 mmf.	.350″	100 Ft. Spool
1254	6	20	60 mmf.	30 mmf.	.375″	100 Ft. Spool
1254/18	6	18	60 mmf.	30 mmf.	.430″	100 Ft. Spool
1255	7	20	60 mmf.	30 mmf.	.380″	100 Ft. Spool
1255/8	8	20	60 mmf.	30 mmf.	.400″	100 Ft. Spool

Construction: Each conductor extra flexible stranded tinned copper, cotton wrap, .020″ "Hi-Tension" low capacity rubber, color coded, conductors twisted, cushioned with cotton fillers, braided tinned copper shield, cotton wrap, tough black rubber jacket overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED MULTIPLE CONDUCTOR CABLE

GENERAL PURPOSE: For indoor permanent or portable P.A. systems, photo electric cell circuits, sound recording and auto radios.

TINNED SHIELD OVERALL

No.	Conductors	Capacity Per Ft. Between Cond. & Shield	Capacity Per Ft. Between Conds.	O.D.	Put-up
1256	2	60.5 mmf.	32 mmf.	.215″	100 Ft. Spool
1256V	2	60.5 mmf.	32 mmf.	.170″	100 Ft. Spool
1257	3	54.0 mmf.	29 mmf.	.245″	100 Ft. Spool
1258	4	48.0 mmf.	26 mmf.	.270″	100 Ft. Spool

COTTON BRAID OVER SHIELD

No.	Conductors	Capacity Per Ft. Between Cond. & Shield	Capacity Per Ft. Between Conds.	O.D.	Put-up
1262	2	60.5 mmf.	32 mmf.	.225″	100 Ft. Spool
1262V	2	60.5 mmf.	32 mmf.	.190″	100 Ft. Spool
1263	3	54.0 mmf.	29 mmf.	.240″	100 Ft. Spool
1264	4	48.0 mmf.	26 mmf.	.275″	100 Ft. Spool

Construction:
Nos. 1256-7-8: Each conductor 20—10/30 stranded tinned copper, 1/64″ rubber, waxed cotton braid, color coded, conductors twisted, tinned copper shield overall.

No. 1256V—Two conductors 20—10/30 stranded tinned copper, 1/64″ plastic, color coded, conductors twisted, tinned copper shield overall.

Nos. 1262-3-4—Same as Nos. 1256-7-8 plus cotton braid over shield.

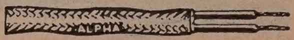
No. 1262V—Same as No. 1256V plus cotton braid over shield.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED TWISTED PAIR CABLE

GENERAL PURPOSE: Where small diameter is required for sound recording, photo electric cell circuits, public address systems, etc.

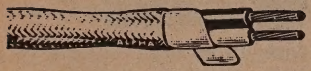
No.	Conductors	Size	Strand	O.D.	Put-up
1261	2	24	16/36	.115″	1000 Ft. Spool



Construction: Two conductors 24-16/36 extra flexible tinned copper, 1/64″ vinyl insulation, color coded, conductors twisted, very fine tinned copper shield overall.

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION



Construction: Two conductors 18-16/30 stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, paper wrap, close tinned copper shield overall.

No. 1266 same as No. 1265 except with waxed cotton braid over shield.

Alternate put-up use code: F = 1000 ft.

SHIELDED DUPLEX SPEAKER CABLE

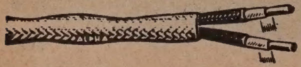
GENERAL PURPOSE: For P.A. systems, photo-electric cell circuits, master control sound systems, etc.

TINNED SHIELD OVERALL

No.	Conductors	Capacity Per Ft. Between Cond. & Shield	Capacity Per Ft. Between Conds.	O.D.	Put-up
1265	2	65 mmf.	23 mmf.	.250"	500 Ft. Spool

WAXED COTTON BRAID OVER SHIELD

1266	2	65 mmf.	23 mmf.	.280"	500 Ft. Spool



Construction: Two conductors 20 AWG solid tinned enameled copper, insulated, color coded, conductors twisted, close copper shield overall.

No. 1268 same as No. 1267 except with waxed cotton braid over shield.

Alternate put-up use code: F = 1000 ft.

SHIELDED TRANSMISSION LINE

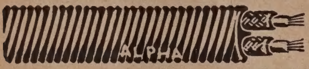
GENERAL PURPOSE: For inter-communication, short wave, P.A. systems, etc.

TINNED SHIELD OVERALL

No.	Conductors	Size	Capacity Per Ft.	O.D.	Put-up
1267	2	20 Solid	25 mmf.	.135"	500 Ft. Spool

WAXED COTTON BRAID OVER SHIELD

1268	2	20 Solid	25 mmf.	.165"	500 Ft. Spool



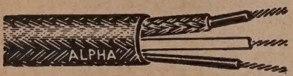
Construction: Two conductors parallel, 18-16/30 stranded tinned copper, rubber insulated, color coded, lacquered cotton braid, galvanized steel armor overall.

Alternate put-up use code: F = 1000 ft.

ARMORED DUPLEX SPEAKER CABLE

GENERAL PURPOSE: For P.A. systems, oil burner installations, automotive wiring, etc.

No.	Conductors	Size	Strand	O.D.	Put-up
1272	2	18	16/30	.132" x .182"	500 Ft. Spool



Construction: Three conductors 22-7/30 tinned copper, vinyl plastic insulation, color coded; tinned copper shield over one conductor, two conductors unshielded; cotton braid overall.

Alternate put-up use code: F = 1000 ft.

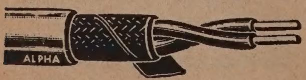
INTER-COMMUNICATION CABLE

3 CONDUCTORS

(1 SHIELDED – 2 UNSHIELDED)

GENERAL PURPOSE: This cable is ideal for general wiring from station to station where a shielded single conductor is essential to eliminate cross talk.

No.	Conductors	Size	Strand	O.D.	Put-up
1242	3	22	7/30	.155"	500 Ft. Spool



Construction: Two conductors 19 AWG solid tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, pure lead sheath overall.

LEAD SHEATHED CABLE

GENERAL PURPOSE: For P.A. systems, communications, traffic control, mines, railroads and many other uses where severe moisture conditions are encountered. For all outdoor use including underground and underwater.

No.	Conductors	Size	O.D.	Put-up
1271	2	19 Solid	.325"	1000 Ft. Reel

NOTE: See Page S-12B for ALPHA Prices and Other Information.

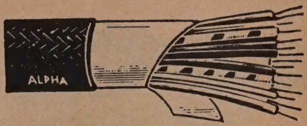
ALPHA WIRE CORPORATION

BRAIDED COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For interior use designed for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Conductors	Size	O.D.	Put-up
1276/2	2	4	22 Solid	.185″	1,000 Ft. Reel
1276/3	3	6	22 Solid	.210″	1,000 Ft. Reel
1276	6	12	22 Solid	.240″	1,000 Ft. Reel
1277	10	20	22 Solid	.300″	1,000 Ft. Reel
1277/13	13	26	22 Solid	.360″	1,000 Ft. Reel
1277/15	16	32	22 Solid	.380″	1,000 Ft. Reel
1277/25	26	52	22 Solid	.445″	1,000 Ft. Reel



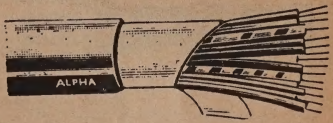
Construction: Each conductor 22 AWG solid tinned copper wire, two cotton reverse serves paraffined, color coded, conductors twisted into pairs, then covered with an impregnated double paper wrap, and overall a cotton braid saturated with a moisture-proof, flame retarding, rodent-proof compound.

LEAD-COVERED COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For use indoors, outdoors, underground and in pipes for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Conductors	Size	O.D.	Put-up
1289	6	12	22 Solid	.375″	1,000 Ft. Reel
1291	10	20	22 Solid	.450″	1,000 Ft. Reel
1293	16	32	22 Solid	.510″	1,000 Ft. Reel
1295	26	52	22 Solid	.560″	1,000 Ft. Reel



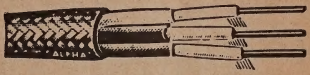
Construction: Similar to Braided Communication Cable above, but with lead antimony sheath instead of cotton braid over the twisted pairs.

INTER-COMMUNICATION CABLE

(BRAIDED)

GENERAL PURPOSE: Designed for interior use for connecting inter-communication systems, annunciators, thermostat controls of oil burners, air conditioners, etc.

No.	Conductors	Size	O.D.	Put-up
1274	2	18 Solid	.150″	500 Ft. Spool
1275	3	18 Solid	.165″	500 Ft. Spool
1275/4	4	18 Solid	.180″	500 Ft. Spool
1275/5	5	18 Solid	.200″	500 Ft. Spool
1275/6	6	18 Solid	.220″	500 Ft. Spool

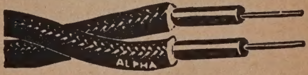


Construction: Each conductor 18 AWG solid bare copper wire, thermoplastic insulation, color coded, conductors twisted, waxed cotton braid overall.

OUTDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For outdoor and indoor use or in any damp location, for connecting communication systems, telephones, etc.

No.	Conductors	Size	O.D.	Put-up
1279	2	19 Solid	.200″	500 Ft. Coil
1280	3	19 Solid	.300″	500 Ft. Coil



Construction: Each conductor 19 AWG solid tinned copper, 1/64″ telephone compound rubber, heavy cotton braid with specially treated compound to make it weather-proof for resistance against rain, snow, hail and cold.

INDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For connecting sound and communication systems, telephones, etc.

No.	Conductors	Size	O.D.	Put-up
1269	2	22 Solid	.125″	500 Ft Spool

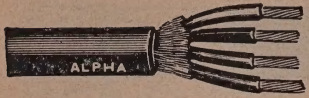
Construction: Two conductors twisted, each 22 AWG solid copper, insulated, color coded.

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

MULTI-CONDUCTOR FLEXIBLE CABLE

(RUBBER JACKETED)



Construction: Each conductor 20-26/34 extra flexible stranded tinned copper, cotton wrap, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cushioned with cotton fillers, cotton wrap, tough black rubber jacket overall.

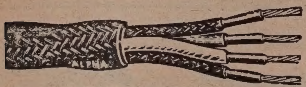
Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

GENERAL PURPOSE: For indoor and outdoor speakers, permanent or portable P.A. systems, sound recording and auto radios.

No.	Con-ductors	Size	Strand	Capacity Per Ft. Between Conductors	O.D.	Put-up
1244	2	20	26/34	22 mmf.	.250"	100 Ft. Spool
1245	3	20	26/34	20 mmf.	.300"	100 Ft. Spool
1246	4	20	26/34	18 mmf.	.320"	100 Ft. Spool
1247	5	20	26/34	17 mmf.	.370"	100 Ft. Spool
1247/6	6	20	26/34	16 mmf.	.400"	100 Ft. Spool
1247/8	8	20	26/34	16 mmf.	.460"	100 Ft. Spool

MULTI-CONDUCTOR FLEXIBLE CABLE

(COTTON BRAID)



Construction: Each conductor 20-10/30 stranded tinned copper, 1/64" thermoplastic insulation, color coded, conductors twisted, brown cotton braid overall.

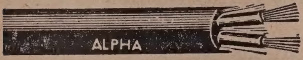
Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

GENERAL PURPOSE: For connecting speakers, analyzers, remote control units, P.A. systems or wherever a multiple circuit hook-up is required.

No.	Con-ductors	Size	Strand	Capacity Per Ft. Between Conductors	O.D.	Put-up
1182	2	20	10/30	31.5 mmf.	.135"	100 Ft. Spool
1183	3	20	10/30	31.0 mmf.	.170"	100 Ft. Spool
1184	4	20	10/30	30.0 mmf.	.180"	100 Ft. Spool
1185	5	20	10/30	29.5 mmf.	.205"	100 Ft. Spool
1186	6	20	10/30	29.2 mmf.	.225"	100 Ft. Spool
1187	7	20	10/30	28.8 mmf.	.240"	100 Ft. Spool
1188	8	20	10/30	28.5 mmf.	.255"	100 Ft. Spool
1189	9	20	10/30	27.9 mmf.	.275"	100 Ft. Spool
1190	10	20	10/30	27.6 mmf.	.310"	100 Ft. Spool
1192	12	20	10/30	27.0 mmf.	.340"	100 Ft. Spool

RUBBER SHEATHED SERVICE CORD

(UNDERWRITERS APPROVED)



Construction: Each conductor stranded bare copper, cotton separator, 1/32" rubber, color coded, conductors twisted, cushioned with jute fillers, 40% tough rubber jacket overall.

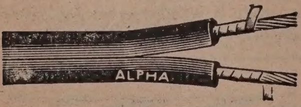
GENERAL PURPOSE: For amplifiers, sound systems, speakers, vacuum cleaners, electric tools, washing machines, refrigerators, appliances, trouble lights, garage lamps or wherever a rough usage power line is required.

No.	Con-ductors	Size	Type	Current Carrying Capacity	Voltage Rating	O.D.	Put-up
1951	2	18	SV	5 amps	300	.250"	250 Ft. Spool
1952	2	18	SJ	5 amps	300	.310"	250 Ft. Spool
1953	2	16	SJ	7 amps	300	.340"	250 Ft. Spool
1954	2	18	S	5 amps	600	.390"	250 Ft. Coil
1955	2	16	S	7 amps	600	.410"	250 Ft. Coil
1956	2	14	S	15 amps	600	.540"	250 Ft. Coil
1957	2	12	S	20 amps	600	.605"	250 Ft. Coil
1958	2	10	S	25 amps	600	.640"	250 Ft. Coil

Available with Additional Conductors. Also other sizes.

E-Z STRIP LAMP CORD—TYPE POSJ

(UNDERWRITERS APPROVED)



Construction: Two conductors parallel, 18-41/34 extra flexible bare copper, color coded, cotton serve, 40% tough rubber jacket overall. Slit in jacket to permit "E-Z" separation.

GENERAL PURPOSE: For line cord on radios, lamps, electric clocks, food mixers and other small devices.

No.	Conductors	Size	Strand	O.D.	Put-up
1966	2	18	41/34	.235" x .130"	100 Ft. Spool
1967	2	18	41/34	.235" x .130"	250 Ft. Spool

Standard Colors: Brown, Black and Ivory

ALPHA WIRE CORPORATION

TINNED COPPER SHIELDING

GENERAL PURPOSE: For shielding speaker leads, lead-ins, amplifier wires, auto radio installations. Also for bonding.

No.	Size of Wires	I.D.	Put-up
1229	36 AWG	1/8"	50 Ft. Spool
1230	36 AWG	3/16"	50 Ft. Spool
1231	36 AWG	1/4"	50 Ft. Spool
1232	36 AWG	3/8"	50 Ft. Spool
1233	36 AWG	5/8"	50 Ft. Spool
1234	36 AWG	3/4"	50 Ft. Spool
1235	36 AWG	1"	50 Ft. Spool

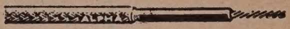
Construction: Composed of very fine soft annealed tinned copper wires braided and rolled flat.

Alternate put-up use code:
Q = 100 ft., D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED PHONO AND GRID WIRE

GENERAL PURPOSE: Extreme flexibility and limpness make this an ideal wire for phonograph pick-up arm cable and grid wire.

No.	Conductors	Size	Strand	Insulation	O.D.	Put-up
1200	1	24	16/36	.010"	.080"	1000 Ft. Spool
1201	1	24	16/36	.010"	.095"	1000 Ft. Spool
1202	2	24	16/36	.010"	.115"	1000 Ft. Spool

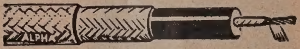


Construction:
No. 1200: Single conductor 24-16/36 extra flexible stranded tinned copper, vinyl plastic insulation, fine close tinned copper shield overall.
No. 1201 same as No. 1200 plus cotton braid over shield.
No. 1202 same as No. 1200 except two conductors with shield overall.

SHIELDED LOW LOSS CABLE

GENERAL PURPOSE: For auto radios, lead-ins, short wave receivers and for grid leads in the input stages of P.A. amplifiers.

No.	Size	Strand	O.D.	Put-up
1241	20	10/30	.225"	100 Ft. Spool



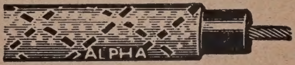
Construction: Single conductor 20-10/30 stranded tinned copper, heavy low loss insulation, white silk braid, tinned copper shield overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

7 MM LACQUERED CABLE

GENERAL PURPOSE: For high voltage leads in television receivers, cathode-ray tubes, oscilloscopes, etc.

No.	Size	Strand	Insulation	O.D.	Put-up
1981	16	19/29	3/32	.275"	100 Ft. Spool



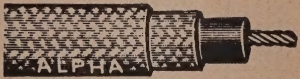
Construction: Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

7 MM SHIELDED IGNITION CABLE

GENERAL PURPOSE: For automotive and aircraft ignition systems requiring grounding to overcome interference.

No.	Size	Strand	Insulation	O.D.	Put-up
1193	16	19/29	3/32	.300"	100 Ft. Spool



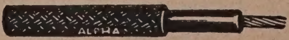
Construction: Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered, braided tinned copper shield overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

LACQUERED PRIMARY WIRE

GENERAL PURPOSE: For automobile head, tail, side, dashboard lamps, horn, spotlight, instrument leads and general high voltage and primary voltage applications.

No.	Size	Strand	Insulation	O.D.	Put-up
1989	18	16/30	1/64"	.110"	100 Ft. Spool
1991	18	16/30	1/32"	.125"	100 Ft. Spool
1995	16	26/30	1/32"	.140"	100 Ft. Spool
1997	14	41/30	1/32"	.170"	100 Ft. Spool
1999	12	19/25	1/32"	.190"	100 Ft. Spool
1983	10	19/23	1/32"	.208"	100 Ft. Spool



Construction: Single conductor stranded soft annealed tinned copper, insulated with rubber, highly lacquered braid. Oil, heat, and moisture resistant.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

JAN-C-76 HOOK-UP WIRE
TYPE SRIR (PLASTIC)

GENERAL PURPOSE:

Electronic Devices	Radio	Transmitters	Lighting and Power
Aircraft Instruments	Radar	Receivers	Rectifiers

SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

Size (approx. cir. mils) — 3/5

Minimum Strands — (7)

AWG Size — 22

*Color Code: 1st Digit—Base 2nd & 3rd Digits—Tracer — 924

***COLOR CODE**

0—Black
1—Brown
2—Red
3—Orange
4—Yellow
5—Green
6—Blue
7—Purple
8—Slate
9—White

ALPHA WIRE CORPORATION
ALPHA
ALPHA

CONSTRUCTION:

Single conductor, stranded and solid tinned copper with thermoplastic (Vinylite) insulation. FUNGUS PROOF.

CHARACTERISTICS:

High Dielectric Strength
Stability at High Temperatures
Flexibility at Low Temperatures
Resistant to: Acids, Alkalis, Oil, Flame, Moisture.

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Volt. Breakdown (60 cycles)	D.C. Insulation resistance/ft. (Megohms)	O.D.	Put-up
					STRANDED			
1550	2/5(7)-24	24	7/32	1/64"	8000	5000	.059"	1000 Ft. Spool
1551	3/5(7)-22	22	7/30	1/64"	8000	5000	.064"	1000 Ft. Spool
1552	3/5(7)-22	22	7/30	1/64"	8000	5000	.064"	100 Ft. Spool
1553	1(10)-20	20	10/30	1/64"	8000	5000	.073"	1000 Ft. Spool
1554	1(10)-20	20	10/30	1/64"	8000	5000	.073"	100 Ft. Spool
1555	1½(16)-18	18	16/30	1/64"	8000	5000	.084"	1000 Ft. Spool
1557	2½(26)-16	16	26/30	1/64"	8000	5000	.095"	1000 Ft. Spool
1559	4(41)-14	14	41/30	1/64"	12000	7500	.107"	1000 Ft. Spool
1560	6(65)-12	12	65/30	1/64"	12000	7500	.120"	1000 Ft. Spool
				SOLID				
1561	3/5(1)-22	22	1	1/64"	8000	5000	.060"	1000 Ft. Spool
1562	3/5(1)-22	22	1	1/64"	8000	5000	.060"	100 Ft. Spool
1563	1(1)-20	20	1	1/64"	8000	5000	.066"	1000 Ft. Spool
1564	1(1)-20	20	1	1/64"	8000	5000	.066"	100 Ft. Spool

STANDARD COLORS

Black	Green	Light Blue	White	Slate	Tan	Dark Blue
Red	Yellow	Brown	Orange	Purple	Pink	

Also available in various tracer combinations

NOTE: See Page S-12B for ALPHA Prices and Other Information.

JAN-C-76 HOOK-UP WIRE
TYPE WL

GENERAL PURPOSE:

Electronic Devices
Aircraft Instruments
Radio
Radar
Transmitters
Receivers
Lighting and Power
Rectifiers

SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

Size (approx. cir. mils)
Minimum Strands
AWG Size
*Color Code: 1st Digit—Base 2nd & 3rd Digits—Tracer

***COLOR CODE**

0—Black
1—Brown
2—Red
3—Orange
4—Yellow
5—Green
6—Blue
7—Purple
8—Slate
9—White

CONSTRUCTION:

Single conductor stranded tinned copper with thermoplastic (Vinylite) insulation, cotton or glass braid, lacquered. FUNGUS PROOF.

CHARACTERISTICS:

Stability at High Temperatures • Flexibility at Low Temperatures
Resistant to: Flame, Moisture.

COTTON BRAID

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Volt. Breakdown (60 cycles)	D.C. Insulation resistance/ft. (Megohms)	O.D.	Put-up
1480	3/5(7)-22	22	7/30	1/64″	5000	1000	.090″	1000 Ft. Spool
1481	1(10)-20	20	10/30	1/64″	5000	1000	.100″	1000 Ft. Spool
1482	1½(16)-18	18	16/30	1/64″	5000	1000	.115″	1000 Ft. Spool
1483	2½(26)-16	16	26/30	1/64″	5000	1000	.130″	1000 Ft. Spool
1484	4(41)-14	14	41/30	1/64″	5000	1000	.150″	1000 Ft. Spool
1485	6(65)-12	12	65/30	1/64″	5000	1000	.170″	1000 Ft. Spool

STANDARD COLORS

Black
Red
Green
Yellow
Blue
Brown
White
Orange
Slate
Purple

Also available in various tracer combinations

GLASS BRAID

1490	3/5(7)-22	22	7/30	1/64″	5000	1000	.085″	1000 Ft. Spool
1491	1(10)-20	20	10/30	1/64″	5000	1000	.095″	1000 Ft. Spool
1492	1½(16)-18	18	16/30	1/64″	5000	1000	.110″	1000 Ft. Spool
1493	2½(26)-16	16	26/30	1/64″	5000	1000	.125″	1000 Ft. Spool
1494	4(41)-14	14	41/30	1/64″	5000	1000	.145″	1000 Ft. Spool
1495	6(65)-12	12	65/30	1/64″	5000	1000	.165″	1000 Ft. Spool

STANDARD COLORS

White
White/Black
White/Red
White/Green
White/Yellow
White/Blue
White/Brown
White/Orange
White/Slate
White/Purple

Available in additional colors and other tracer combinations

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

"CL" PUSHBACK WIRE

GENERAL PURPOSE: Pushback hook-up wire in various bright colors for circuit identification; radio, radar, electronics, electrical toys, etc.

Construction: Single conductor stranded and solid tinned copper, heavy wrap of cellulose acetate, cotton braid with flame-retarding lacquer.

STANDARD COLORS:

Sizes 22-20-18—Stranded and Solid: Black, Red, Green, Yellow, Blue, Brown, White, Orange.

Sizes 16-14—Stranded and Solid: Black, Red.

Available in additional colors and tracer combinations.

STRANDED

No.	Size	Strand	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.	Put-up
1460	22	7/30	1000	200	.065"	1000 Ft. Spool
1461	20	10/30	1000	200	.070"	1000 Ft. Spool
1462	18	16/30	1000	200	.082"	1000 Ft. Spool
1463	16	26/30	1000	200	.093"	1000 Ft. Spool
1464	14	41/30	1000	200	.105"	1000 Ft. Spool

SOLID

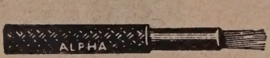
No.	Size	Strand	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.	Put-up
1465	22	Solid	1000	200	.060"	1000 Ft. Spool
1466	20	Solid	1000	200	.065"	1000 Ft. Spool
1467	18	Solid	1000	200	.075"	1000 Ft. Spool
1468	16	Solid	1000	200	.085"	1000 Ft. Spool
1469	14	Solid	1000	200	.095"	1000 Ft. Spool

Alternate put-up use code: Q = 100 Ft. Spool

LACQUERED HOOK-UP AND LEAD-IN WIRE

(HIGH GLOSS LACQUERED BRAID)

GENERAL PURPOSE: For point to point soldering connections on transformers, amplifiers, panel hook-up, etc., where a low loss dielectric is required. It is not a pushback wire but will strip easily.



Construction: Single conductor stranded tinned copper, free stripping insulation, single braid highly lacquered.

STANDARD COLORS:

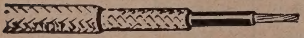
Black, Red, Green, Yellow, Blue, Brown, White.

Available in additional colors and tracer combinations.

No.	Size	Strand	Insulation	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.	Put-up
1513	20	10/30	1/64"	7000	290	.090"	100 Ft. Spool
1515	20	10/30	1/64"	7000	290	.090"	500 Ft. Spool
1523	18	16/30	1/64"	7000	300	.110"	100 Ft. Spool
1525	18	16/30	1/64"	7000	300	.110"	500 Ft. Spool
1533	18	16/30	1/32"	8500	460	.125"	100 Ft. Spool
1535	18	16/30	1/32"	8500	460	.125"	500 Ft. Spool
1543	16	26/30	1/32"	8500	460	.140"	100 Ft. Spool
1545	16	26/30	1/32"	8500	460	.140"	500 Ft. Spool
1546	14	41/30	1/32"	8500	460	.170"	500 Ft. Spool
1547	12	19/25	1/32"	8500	460	.190"	500 Ft. Spool
1548	10	19/23	1/32"	8500	460	.208"	500 Ft. Spool

SHIELDED HOOK-UP AND LEAD-IN WIRE

GENERAL PURPOSE: To reduce interference caused by motors, high tension wires, x-ray machines or other apparatus that radiates electrical impulses. Ideal for grid-lead use.



Construction: Single conductor stranded tinned copper, low loss insulation, highly lacquered braid, close tinned copper shield overall.

No.	Size	Strand	O.D.	Put-up
1194/22	22	7/30	.105"	1000 Ft. Spool
1194	20	10/30	.110"	1000 Ft. Spool
1196	18	16/30	.145"	1000 Ft. Spool
1197	16	26/30	.160"	1000 Ft. Spool
1198	14	41/30	.180"	1000 Ft. Spool
1199	12	19/25	.210"	1000 Ft. Spool
1199/10	10	19/23	.220"	1000 Ft. Spool

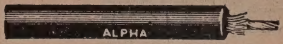
NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

KINKLESS TEST LEAD WIRE

GENERAL PURPOSE: As test leads in analyzers, oscillators and all other types of testing apparatus or wherever an EXTRA FLEXIBLE insulated wire is required.

No.	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Put-up
1633	20	41/36	3/64"	10,000	.140"	100 Ft. Spool
1635	20	41/36	3/64"	10,000	.140"	500 Ft. Spool
1636	18	65/36	3/64"	12,000	.150"	500 Ft. Spool



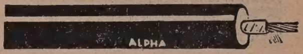
Construction: Single conductor extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 3/64" "Super Hi-Tension" rubber, satin finish.

STANDARD COLORS:
Red, Black.

HEAVY DUTY TYPE

GENERAL PURPOSE: For television, therapeutic equipment, analyzers, oscillators, etc., or wherever a heavy duty EXTRA FLEXIBLE high voltage line is required.

No.	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Put-up
1637	18	65/36	7/64"	22,000	.245"	100 Ft. Spool
1638	18	65/36	7/64"	22,000	.245"	500 Ft. Spool



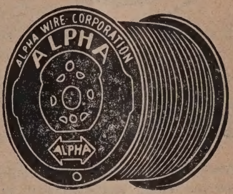
Construction: Single conductor 18-65/36 extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 7/64" "Super Hi-Tension" rubber, satin finish.

STANDARD COLORS:
Red, Black.

TINNED COPPER BUS-BAR WIRE

GENERAL PURPOSE: Winding of coils, antennas, point to point, bus bar, etc.

No.	Size	Circular Mils	O.D.	Put-up
292	10 AWG	10380	.103"	1000 Ft. Spool
289	12 AWG	6530	.082"	1000 Ft. Spool
286	14 AWG	4107	.065"	1000 Ft. Spool
295	16 AWG	2583	.051"	1000 Ft. Spool
296	18 AWG	1624	.040"	1000 Ft. Spool
297	20 AWG	1022	.033"	1000 Ft. Spool
298	22 AWG	642.4	.025"	1000 Ft. Spool
299	24 AWG	404.0	.020"	1000 Ft. Spool
299/1	26 AWG	254.1	.016"	1000 Ft. Spool
299/2	28 AWG	159.8	.013"	1000 Ft. Spool

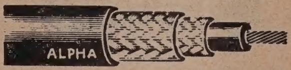


Construction: Pure electrolytic copper properly annealed and tinned for quick soldering.

DIATHERMY CABLE

GENERAL PURPOSE: Its extreme flexibility and tough rubber jacket give it long life. This cable is used as a lead on therapy apparatus, charging cable, battery lead, underground cable, etc.

No.	Size	Strand	Insulation	O.D.	Put-up
1623	14	104/34	3/64"	.300"	100 Ft. Spool
1625	14	104/34	3/64"	.300"	1000 Ft. Reel



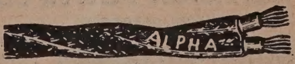
Construction: Single conductor 14-104/34 copper, paper serve, 3/64" ASTM performance grade rubber, double cotton braid, .040" oil resistant neoprene rubber jacket.

TWISTED PAIR TRANSMISSION LINE

(WEATHERPROOF BRAID)

GENERAL PURPOSE: For inter-com. hook-up. Also suitable for low løss coupling between antenna and receiver as doublet style twisted lead-in.

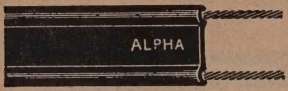
No.	Conductors	Size	Strand	O.D.	Put-up
1146	2	22	7/30	.175"	500 Ft. Spool
1135	2	18	16/30	.190"	500 Ft. Spool



Construction: Two conductors stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cotton braid overall, saturated weatherproof finish.

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION



TELEVISION AND FM TWIN-LEAD CABLE

GENERAL PURPOSE: For use especially in television and FM as the lead-in from the antenna to the receiver.

Construction: Two conductors parallel, each conductor 7/28 bare copper flexible stranding, low loss polyethylene plastic insulation, smooth satin finish. Standard color: brown.

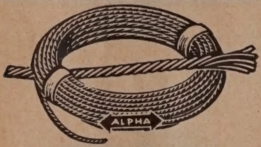
No.	Impedance (Ohms)	Capacity Per Ft.	O.D.	Put-up
1150	300	4.5 mmf.	.070" x .395"	1000 Ft. Spool
1151	150	9.5 mmf.	.060" x .190"	1000 Ft. Spool
1152	75	20.0 mmf.	.070" x .120"	1000 Ft. Spool

ROTARY TV-FM CABLE

GENERAL PURPOSE: Designed for use with TV or FM antenna rotators.

Construction: Conductors flat parallel, each conductor 7/30 stranded copper with one conductor bare and other conductors tinned. Durable rubber insulation. Very flexible.

No.	Conductors	O.D.	Put-up
1150/3	3	.085" x .265"	1000 Ft. Spool
1150/4	4	.085" x .345"	1000 Ft. Spool
1150/5	5	.085" x .425"	1000 Ft. Spool

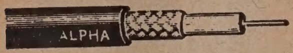


GUY WIRE

GENERAL PURPOSE: To prevent sway of FM, TV and radio receiver masts, poles or towers.

Construction: Stranded galvanized steel wires with great tensile strength.

No.	Strand	Breaking Strength	O.D.	Put-up
1168	6/18	650 Lbs.	.156"	1000 Ft. Spool
1169	6/20	470 Lbs.	.105"	1000 Ft. Spool
1170	6/20	470 Lbs.	.105"	100 Ft. Coil

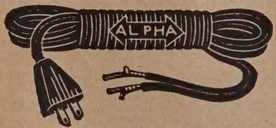


CO-AXIAL CABLE (RG-59U)

GENERAL PURPOSE: Co-axial cable is ideal for television, FM and facsimile reception. Is suitable for very high frequency and ultra high frequency ranges.

Construction: Single conductor No. 22 solid copperweld, polyethylene insulation, bare copper shield, black vinyl plastic jacket overall.

No.	Nom. Imp. (Ohms)	Nom. Cap.	Max. Oper. Volts RMS	O.D.	Put-up
1157	73	21 mmf./F+	2300	.242"	1000 Ft. Reel



ALPHA E-Z STRIP LINE CORD

UNDERWRITERS APPROVED

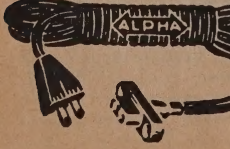
GENERAL PURPOSE: This is the modern and ideal power supply cord for replacement on radios, lamps, fans, etc.

Construction: E-Z strip rubber parallel cord (Type POSJ) with small unbreakable soft rubber attachment plug. Free end stripped and tinned ready to attach. Also available in other lengths.

No.	Conductors	Size	Strand	O.D.	Length
2106	2	18	41/34	.235" x .130"	6 Ft.
2109	2	18	41/34	.235" x .130"	9 Ft.
2112	2	18	41/34	.235" x .130"	12 Ft.

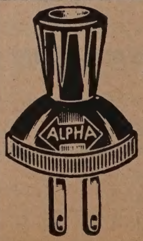
TELEVISION POWER CONNECTOR CORD

(UNDERWRITERS APPROVED)



Construction: E-Z Strip cord (Type POSJ), molded rubber plug attached to one end, TV molded rubber connector attached to other end. For replacement of worn out or damaged TV cords.

No.	Length
2126	6 Ft.



UNBREAKABLE SOFT RUBBER PLUG

Made of sturdy live soft rubber. Brass blades. Unbreakable, easy to attach.

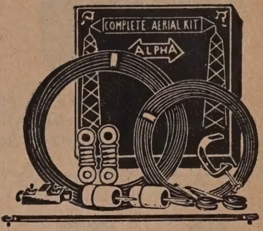
No.	Per Carton
1964	100

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

AERIAL KITS

Alpha Aerial Kits are designed to meet the requirements of the various types of radio installations. Each kit is complete and boxed attractively. 20 Per Carton.

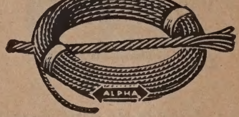


No. 301	No. 304
50 Ft. 7 Strand Copper Aerial	75 Ft. 7/24 Copper Aerial Wire
25 Ft. Lead-in Wire	25 Ft. Lead-in Wire
2 No. 2022 Insulators	1 No. 2001 Lightning Arrester
2 No. 2031 Nail Knobs	1 No. 2002 Lead-in-Strip
1 No. 2012 Ground Clamp	2 No. 2031 Nail Knobs
1 No. 2002 Lead-in Strip	1 No. 2012 Ground Clamp
	2 No. 2022 Insulators

PHOSPHOR BRONZE AERIAL WIRE

GENERAL PURPOSE: Recommended especially for ship, short wave and transmitting aerials where high tensile strength is required.

No.	Size	Strand	Breaking Strength	O.D.	Put-up
1160	14	7/22	420 Lbs.	.075"	500 Ft. Spool
1161	12	7/20	650 Lbs.	.100"	500 Ft. Spool
1163	10	7/18	1000 Lbs.	.122"	500 Ft. Spool
1164	8	7/16	1600 Lbs.	.150"	500 Ft. Spool
1165	6	7/14	2140 Lbs.	.190"	500 Ft. Spool
1166	4	7/12	3670 Lbs.	.240"	500 Ft. Spool

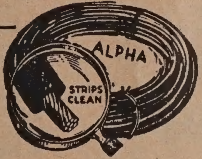


Construction: 7 strands Phosphor Bronze.

LEAD-IN AND GROUND WIRE

GENERAL PURPOSE: Lead-in, ground, hook-up, all purpose wire.

No.	Size	Strand	Insulation	O.D.	Put-up
1114	20	10/30	1/32"	.105"	1000 Ft. Spool
1114E	20	10/30	1/32"	.105"	500 Ft. Spool
1131	18	16/30	1/32"	.125"	500 Ft. Spool



Construction: Single conductor stranded tinned copper, insulated with live free stripping rubber, jet black waxed finish overall.

COPPER AERIAL WIRE

STRANDED—BARE

No.		Put-up
101	7/20	100 Ft. Coil
104	7/20	75 Ft. Coil
105	7/20	50 Ft. Coil
106	7/20	1000 Ft. Spool
107	7/22	100 Ft. Coil
110	7/22	75 Ft. Coil
111	7/22	50 Ft. Coil
112	7/22	1000 Ft. Spool
131	7/24	100 Ft. Coil
134	7/24	75 Ft. Coil
135	7/24	50 Ft. Coil
136	7/24	1000 Ft. Spool

STRANDED—TINNED

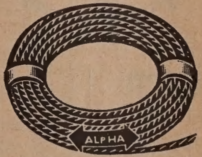
No.		Put-up
161	7/22	100 Ft. Coil
164	7/22	75 Ft. Coil
165	7/22	50 Ft. Coil
166	7/22	1000 Ft. Spool

SOLID—ENAMEL

No.		Put-up
269	14	100 Ft. Coil
274	14	1000 Ft. Spool
275	12	100 Ft. Coil
280	12	1000 Ft. Spool
281	10	100 Ft. Coil
283	10	1000 Ft. Spool

SOLID—TINNED

No.		Put-up
284	14	100 Ft. Coil
286	14	1000 Ft. Spool
287	12	100 Ft. Coil
289	12	1000 Ft. Spool
290	10	100 Ft. Coil
292	10	1000 Ft. Spool

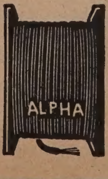


All Alpha Aerial Wire is pure electrolytic copper properly annealed to assure required flexibility and tensile strength.

AC-DC ANTENNA WIRE

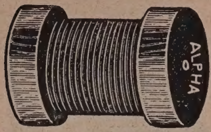
GENERAL PURPOSE: Ideal replacement wire for universal midgets, indoor aerials and loop antennas.

No.	Type	Size	Strand	O.D.	Put-up
1281	Cotton	24	16/36	.050"	25 Ft. Disc.
1281V	Plastic	24	16/36	.047"	25 Ft. Disc.
1284	Cotton	24	16/36	.050"	1000 Ft. Spool
1284V	Plastic	24	16/36	.047"	1000 Ft. Spool



Construction: Single conductor 24-16/36 extra flexible bare copper, covered with dark brown cotton braid or plastic insulation.

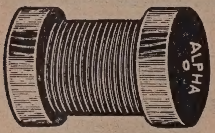
ALPHA WIRE CORPORATION



Construction: 42 strands (6 x 7 x .004) genuine phosphor bronze wire with a linen center for extra flexibility. Is guaranteed not to warp or stretch.

PHOSPHOR BRONZE DIAL CABLE

No.	Tensile Strength	O.D.	Put-up
1691	50 lbs.	.036"	100 Ft. Spool
1692	50 lbs.	.036"	500 Ft. Spool



Construction: Made of the finest linen obtainable. Composed of a very strong linen center over which is a smooth black braid.

BRAIDED LINEN DIAL CABLE

HEAVY

No.	Tensile Strength	O.D.	Put-up
1695	40 lbs.	.057"	100 Ft. Spool
1696	40 lbs.	.057"	500 Ft. Spool

LIGHT

No.	Tensile Strength	O.D.	Put-up
1698	22.5 lbs.	.036"	100 Ft. Spool
1699	22.5 lbs.	.036"	500 Ft. Spool

EXTRA-THIN

No.	Tensile Strength	O.D.	Put-up
1700	18 lbs.	.027"	25 Ft. Spool

FLEXIBLE VARNISHED TUBING AND SLEEVING

ALPHA
SPAGHETTI

RADIO VARNISHED TUBING — (Spaghetti). A sleeving with a heavy coat of varnish, in high gloss vivid colors. Average dielectric strength: 7,000 volts.

SATURATED SLEEVING — A fibre yarn sleeving saturated with high grade insulating varnish. Cuts clean and has a smooth interior wall. Average dielectric strength: 2,000 volts.

MAGNETO VARNISHED TUBING—The production of this type of tubing is under rigid control so as to insure a maximum in quality. It is thoroughly impregnated with a varnish of maximum insulating value. It is resistant to heat, oil, gas and acids. Colors are bright and vivid. Average dielectric strength: 7,000 volts.

No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.
20	.034"	15	.059"	10	.106"	5	.186"	0	.330"
19	.038"	14	.066"	9	.118"	4	.208"	3/8"	.375"
18	.042"	13	.076"	8	.133"	3	.234"	7/16"	.438"
17	.047"	12	.085"	7	.148"	2	.263"	1/2"	.500"
16	.053"	11	.095"	6	.166"	1	.294"	5/8"	.625"

Tolerances: Sizes:
0 to 2—plus or minus .005"
3 to 13—plus or minus .004"
14 to 20—plus or minus .002"

Standard Color: Black. Other colors to order.
Sizes follow the B & S System of gauging wires. For instance, a No. 10 tubing will fit over a No. 10 bare wire or any wire with an insulation of which the O.D. is equivalent to No. 10 B & S gauge. If in doubt, it is best to submit a sample of the wire or product to be covered.

LENGTHS—STANDARD 36" **LONGER LENGTHS AVAILABLE**

SPAGHETTI TUBING

A superior varnished tubing for radio work. It will retain its dielectric and flexibility indefinitely. Takes up to No. 14 wire.

Colors: Black, Red, Yellow, Green and Brown

No. 2091 — 36" Lengths

NOTE: See Page S-12B for ALPHA Prices and Other Information.

ALPHA WIRE PRODUCTS

NOTE: USEFUL INFORMATION FOR ORDERING

- All tests on specifications are approximate and subject to normal manufacturing tolerances.
- Lengths other than those regularly listed can be furnished.
- Other wires and cables made to specifications.
- Use the following symbols alongside catalog number for other than standard put-ups.

COILS	COILS	COILS	SPOOLS	SPOOLS	SPOOLS
25 Ft.........H	100 Ft.........K	500 Ft........B	25 Ft.........N	100 Ft.........Q	250 Ft........D
50 Ft.........Z	150 Ft.........L	1000 Ft........C	50 Ft.........T	150 Ft.........R	500 Ft........E
75 Ft.........J	200 Ft.........M	250 Ft........A	75 Ft.........P	200 Ft.........S	1000 Ft. ......F

G — LONGER LENGTHS ON SPOOLS OR REELS

The constant development of new and improved designs and manufacturing processes results in continually changing specifications. In every case where Alpha wires shipped are different in specifications from those shown in this catalog, an improvement will be noted.

Cat. No.	List Price
101	$ 2.78
104	2.13
105	1.45
106	27.00
107	1.55
110	1.20
111	.80
112	14.75
131	1.10
134	.88
135	.60
136	10.25
161	1.93
164	1.48
165	1.00
166	18.38
269	2.00
274	19.20
275	3.03
280	29.50
281	4.33
283	42.50
284	1.95
286	18.75
287	2.93
289	28.50
290	4.28
292	41.88
295	13.75
296	11.75
297	7.38
298	4.88
299	6.00
299/1	5.50
299/2	5.00
301	1.45
304	2.63
1114	9.35
1114E	5.00
1131	7.50
1135	32.50
1146	24.38
1150/3	50.00
1150/4	62.50
1150/5	77.50
1150	40.00
1151	37.50
1152	35.00
1157	187.50
1160	25.00
1161	42.50
1163	47.50
1164	65.00
1165	100.00
1166	155.00
1168	25.00
1169	16.25
1170	1.75
1182	5.00
1183	7.50
1184	9.50
1185	11.75
1186	13.75
1187	15.50
1188	17.25
1189	20.00
1190	22.50
1192	27.50
1193	15.00
1194/22	56.25
1194	$60.00
1196	67.50
1197	80.00
1198	100.00
1199	181.25
1199/10	237.50
1200	45.00
1201	55.00
1202	67.50
1229	2.75
1230	3.50
1231	3.75
1232	6.00
1233	9.75
1234	13.00
1235	16.25
1241	12.50
1242	52.50
1244	11.25
1245	13.25
1246	17.25
1247	20.00
1247/6	25.50
1247/8	33.25
1248	10.00
1249	12.25
1250	14.75
1250/18	18.75
1251	17.50
1251/18	24.50
1252	20.50
1253	25.75
1254	30.00
1254/18	42.50
1255	33.75
1255/8	37.50
1256	10.00
1256V	10.00
1257	12.50
1258	15.00
1261	67.50
1262	11.25
1262V	11.25
1263	15.00
1264	18.75
1265	57.50
1266	67.50
1267	29.38
1268	34.38
1269	17.50
1271	155.00
1272	50.00
1274	28.75
1275	30.00
1275/4	41.25
1275/5	52.50
1275/6	70.00
1276/2	100.00
1276/3	122.50
1276	215.00
1277	295.00
1277/13	375.00
1277/15	425.00
1277/25	662.50
1279	30.00
1280	45.00
1281	.30
1281V	.30
1284	8.75
1284V	8.75
1289	$462.50
1291	600.00
1293	762.50
1295	1025.00
1460	18.13
1460-Q	2.45
1461	21.25
1461-Q	2.75
1462	26.25
1462-Q	3.25
1463	35.00
1463-Q	4.13
1464	47.50
1464-Q	5.38
1465	15.50
1465-Q	2.18
1466	18.13
1466-Q	2.45
1467	23.13
1467-Q	2.95
1468	28.75
1468-Q	3.50
1469	38.75
1469-Q	4.50
1480	27.50
1481	32.00
1482	39.38
1483	50.00
1484	69.00
1485	105.50
1490	30.00
1491	35.00
1492	43.50
1493	53.75
1494	70.63
1495	115.00
1513	3.13
1515	13.75
1523	3.63
1525	16.25
1533	3.88
1535	17.50
1543	5.25
1545	23.75
1546	31.25
1547	36.25
1548	53.25
1550	13.75
1551	14.50
1552	2.08
1553	17.50
1554	2.38
1555	23.75
1557	35.00
1559	49.38
1560	123.75
1561	12.50
1562	1.88
1563	15.00
1564	2.13
1565	20.63
1567	26.25
1569	35.00
1571	26.25
1573	30.00
1575	38.13
1577	50.50
1579	67.75
1581	24.00
1583	28.75
1585	$36.25
1587	48.00
1589	61.88
1623	20.00
1625	187.50
1633	3.75
1635	16.88
1636	21.25
1637	7.50
1638	35.00
1691	4.13
1692	18.75
1695	3.88
1696	18.00
1697	1.00
1698	3.50
1699	16.88
1700	.68
1951	25.00
1952	28.75
1953	37.50
1954	42.50
1955	52.50
1956	90.00
1957	125.00
1958	165.00
1964	.15
1966	5.88
1967	13.75
1981	11.25
1983	10.63
1989	3.75
1991	3.88
1995	5.25
1997	6.25
1999	7.25
2091	21.55
2106	.60 ea.
2109	.75 ea.
2112	.95 ea.
2126	.80 ea.

RADIO VARNISHED TUBING

Cat. No.	Per C ft. List Price
24	$ 6.13
20	6.13
19	6.25
18	6.50
17	6.63
16	7.00
15	7.25
14	7.50
13	7.88
12	8.25
11	9.18
10	9.75
9	10.50
8	11.00
7	11.75
6	12.63
5	13.75
4	15.38
3	16.88
2	18.38
1	20.63
0	$24.75
3/8	31.00
7/16	35.13
1/2	41.25
5/8	47.50

MAGNETO VARNISHED TUBING

Cat. No.	Per C ft. List Price
24	$ 6.65
20	6.65
18	6.65
19	6.65
17	6.65
16	7.15
15	7.50
14	7.90
13	8.15
12	8.25
11	9.65
10	10.40
9	11.25
8	11.90
7	13.00
6	14.25
5	15.40
4	16.75
3	18.00
2	19.40
1	20.65
0	24.75
3/8	31.00
7/16	35.15
1/2	41.25
5/8	47.50

SATURATED SLEEVING

Cat. No.	Per C ft. List Price
24	$ 4.00
20	4.00
19	4.40
18	4.40
17	4.40
16	4.50
15	4.75
14	5.15
13	5.25
12	5.65
11	6.00
10	6.65
9	7.15
8	7.40
7	7.50
6	7.75
5	8.15
4	8.65
3	9.75
2	10.90
1	12.00
0	13.90
3/8	18.25
7/16	22.00
1/2	24.65
5/8	28.15

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ANTENNAS *Master Mobile* MOUNTS

All the prime requisites of a reliable, long lasting mobile antenna system are incorporated into MASTER MOBILE MOUNTS through scientific engineering, high quality of materials and workmanship. . . . AND THE PRICES ARE RIGHT.

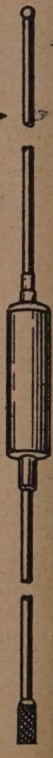
MOUNT SPECIFICATIONS: Packaged and sealed at factory. Ship wt. Approx. 3 lbs.

Model	TYPE (All types are tapped for 3/8" stud fitting on Antenna end)	Net Price	List Price
126	Body Mount—Straight Spring—Swivel Base	$ 8.75	$14.60
126X	Body Mount—Heavy Duty—Straight Spring—Swivel Base	9.40	15.67
132	Body Mount—Double Tapered—Spring Swivel Base	8.75	14.60
132X	Body Mount—Heavy Duty—Double Tapered—Spring Swivel Base	9.85	16.42
132S	Body Mount—Stainless Steel—Double Tapered—Spring Swivel Base	10.75	17.92
132XS	Body Mount—Heavy Duty Stainless Steel—Double Tapered—Spring Swivel Base	11.85	19.75
138	Bumper Mount—Straight Spring	6.55	10.92
138X	Bumper Mount—Heavy Duty—Straight Spring	7.65	12.75
140	Bumper Mount—Double Tapered Spring	6.55	10.92
140X	Bumper Mount—Heavy Duty—Double Tapered Spring	7.65	12.75
140S	Bumper Mount—Stainless Steel—Double Tapered Spring	8.65	14.42
140XS	Bumper Mount—Heavy Duty Stainless Steel—Double Tapered Spring	9.65	16.10
142	Bumper Mount—Less Spring, with Insulators for Direct Mounting by Series BumperMount— 100 Antennas or 92 Extension and 106 Antennas	3.25	5.42

WHIP ANTENNA SPECIFICATIONS: Postage rate 10 lbs. minimum. 3 lbs. on all other whip antennas.

MODEL Stainless Steel	Overall Length	Base Specifications	Net Price	List Price
100-60S	60"	Threaded 3/8" Stud to fit all Mounts	$4.95	$8.25
100-72S	72"	Threaded 3/8" Stud to fit all Mounts	4.95	8.25
100-78S	78"	Threaded 3/8" Stud to fit all Mounts	5.00	8.35
100-86S	86"	Threaded 3/8" Stud to fit all Mounts	5.15	8.58
100-90S	90"	Threaded 3/8" Stud to fit all Mounts	5.20	8.67
100-96S	96"	Threaded 3/8" Stud to fit all Mounts	5.25	8.75
106-60S	60"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-72S	72"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-78S	78"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.20	7.00
106-86S	86"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.35	7.25
106-90S	90"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.40	7.34
106-96S	96"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.50	7.50

ALL BAND MOBILE ANTENNA →



SEPARATE SPRINGS FOR ANTENNA MOUNTS

100 Reg. NET—$4.50 LIST—$7.50 100X—Heavy Duty. NET—$5.50 LIST—$9.15

MODEL 92 EXTENSION — 18" NET — $3.25 LIST — $5.42

MODEL 94 EXTENSION — 36" NET — $4.25 LIST — $7.10

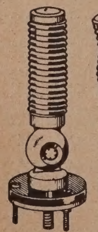
ALL BAND MOBILE ANTENNA

- *Center-loaded antenna* comes with one coil — 20, 40 or 75 meters. Change coils to any band 80 through 20. . . . *For 10 meter operation*, short coil in use.
- Fits any MASTER MOUNT or 3/8" SAE thread. Hammertone or Chrome finish (if available).
- Height: 8' 10". Weight: 28 oz. Shipping wt.: 3 lbs.

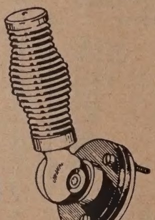
NET PRICE: $8.75 LIST PRICE: $14.60 Specify freq. coil desired. Less spring mount.
Extra Coils—20, 40 or 75 meters: NET—$3.30 LIST—$5.50
CIVIL AIR PATROL ANTENNA: 2374 KC. NET PRICE: $9.95 LIST: $16.60. With coil-less mount.
Extra Coils—2374 KC: NET—$3.60 LIST—$6.00

MODEL 113 ROOF MOUNT ANTENNA

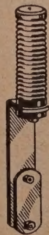
For fire, police services, etc., using 140 to 165 megacycles. Installed entirely from outside. With 10' of RG-58/U coaxial cable Approx. wt.: 1 lb.
NET—$4.95 LIST—$7.40. EXTRA ROD: NET—75c LIST—$1.10.



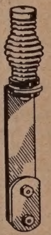
MODEL 126



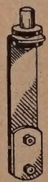
MODEL 132



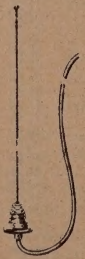
MODEL 138



MODEL 140



MODEL 142



MODEL 113

Extension Model 92

Series 106

Series 100

ORDER FROM YOUR DEALER OR WRITE. Dealer Inquiries Invited. • *Prevailing Discounts To Distributors And Amateurs.*

P O. Box 1817 • Los Angeles 36, California. Warehouse & Shipping Address: 1306 Bond Street

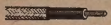
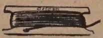
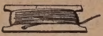
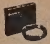
Master Mobile Mounts, Inc.

5200 WILSHIRE BOULEVARD
LOS ANGELES 36, CALIFORNIA

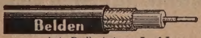
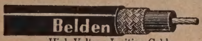
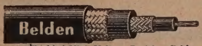
Belden

RADIO • TELEVISION WIRE

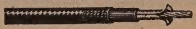
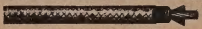
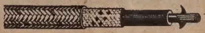
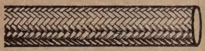
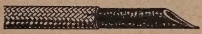
accessories

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
			litz wire			
8817	100'S		For rewinding antenna primaries and for hand-wound r-f coils. 5x44 Celenamel with a wrap of Nylon.	5x44		.008
			lead-in wire 			
8206	250'S	18	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield	7x27	.040"	.156
			voice coil lead wire 			
8127	***10'	25	Bare copper wire braided ***Packaged 10 ft on card, 5 cards in carton.	32x40		.024
			indoor aerial wire — EXTRA FLEXIBLE 			
8014	**25' 500'SK	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation **Packaged 25 ft on card, 5 cards in carton.	13x36	.010"	.044
			aerial wire			
•8000	50'C 75'C 100'C 1000'S	7x22	STRANDED BARE COPPER			
8002	50'C 75'C 100'C 1000'S	7x24				
			SOLID BELDENAMEL 			
8008	100'CK 200'S 500'S	12				
8009	100'CK 500'S	14				
			SOLID TINNED COPPER (BUS BAR WIRE)			
8011	100'CK	12				
8012	100'CK	14				
8013	100'CK	16				

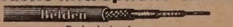
auto and aircraft radio wires and shielding

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
			 Auto Radio Antenna Lead-In		
8664	100'S Black	26	Tinned copper, solid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket; NOMINAL CAPACITANCE Per Ft 15.0 MMF	solid	.245
			 High-Voltage Ignition Cable		
8667	100'S Black	16	Tinned copper, flexible stranding; rubber insulation; cotton braid; lacquer coating	19x29	.280
			 Shielded High-Voltage Ignition Cable		
8665	100'S Black	19	Stainless steel alloy, flexible stranding; rubber insulation; glass yarn web braid; neoprene jacket; tinned copper braid shield; neoprene jacket; NOMINAL CAPACITANCE Per Ft 33.0 MMF	6x.013" + 1x.011" steel alloy	.365

auto and aircraft radio wires and shielding (cont'd)

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
			 Heavy-Duty Hook-Up Wire		
8833	100'S 1000'S Black Blue Green Red Yellow	18	Tinned copper, flexible stranding; paper wrap; rubber insulation; cellulose acetate yarn braid; lacquer coating	16x30	.136
			 Heavy-Duty Hook-Up Wire		
8652	100'S Black with one White Tracer	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; lacquer coating	19x29	.140
8651	100'S Green with two White Tracers	14		19x27	.170
8650	100'S Red with three White Tracers	12		19x25	.200
			 Shielded Heavy-Duty Hook-Up Wire		
8656	100'S	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x29	.170
			 Shielding and Bonding Braid		
8660	50'SK 250'S		Tinned copper braid in form of tubing	96x34	13/64 ID
8668	50'SK 250'S			120x34	1/8 ID
8661	50'SK 250'S			192x34	3/8 ID
8669	50'S 250'S			336x34	1/2 ID
8662	50'S 250'S			576x34	25/32 ID
			 Shielded Flexible Conduit		
8657	50'CK		Tinned copper braid shield over fabric loom		3/16 ID
8658	50'CK				5/16 ID

microphone cables

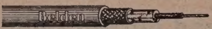
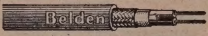
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
			plastic microphone cable  For lapel microphones			
8411	25'CK 100'S 500'S Chrome	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; chrome vinyl plastic jacket	3x33 copper plus 4x33 steel	.144	37

• Also for TV grounding   CK—Coiled in carton   K—Carton   CR—Crate reel   S—Spool   C—Coil   SK—Spooled in carton

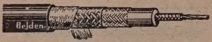
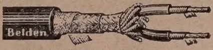
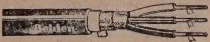
BELDEN RADIO · TELEVISION WIRE

microphone cables (cont'd)

plastic microphone cable (Cont'd)

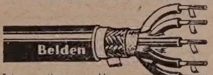
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8401	25'CK 50'CK 100'S 500'S Chrome	25-1	 For crystal, ribbon, and carbon microphones	3x33 copper plus 4x33 steel	.200	25
8422	25'CK 50'CK 100'S 500'S Chrome	22-2	 For carbon microphones Tinned copper, flexible stranding; polyethylene insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; chrome vinyl plastic jacket	16x34	.225	**32

rubber microphone cable

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8410	25'CK 50'CK 100'S 500'S Black	25-1	 For crystal, ribbon, and carbon microphones Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; rubber insulation; rayon braid; tinned copper braid shield; rayon wrap; black rubber jacket	3x33 copper plus 4x33 steel	.245	33
8412	25'CK 50'CK 100'S 500'S Black	20-2	 For carbon microphones Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.280	**68
8423	50'CK 250'S Black	20-3	 For carbon microphones	26x34	.280	**54

** Between one conductor and remaining conductors connected to shield.

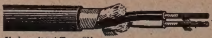
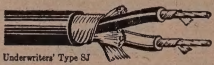
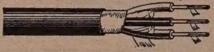
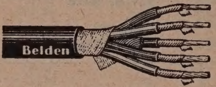
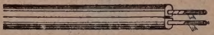
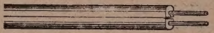
shielded multiple conductor cables

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Insulation Thick. (inches)	Nom. Jacket Thick. (inches)	Nom. Diam (inches)
***8424**	50'CK 250'S Black	20-4	 Interconnecting power cable for all electronic uses Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.020	.040	.305
8425	50'CK 250'S Black	20-5		26x34	.020	.040	.335
8426	100'S Black	20-6		26x34	.020	.040	.355
8427	100'S Black	20-7		26x34	.020	.040	.370

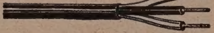
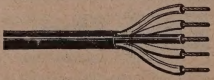
* Also used as microphone cable.

multiple conductor cables

rubber-jacketed portable cord

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8452	100'S 500'S Black	18-2	 Underwriters' Type SV Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	41x34	1/64	1/32	.245
8472	250'S Black	16-2	 Underwriters' Type SJ	65x34	1/32	1/32	.325
8453	100'S 500'S Black	18-3		41x34	1/64	1/32	.265
8454	100'S 500'S Black	18-4		41x34	1/64	1/32	.265
8455	100'S 250'S Black	22-3 18-2		16x34 41x34	1/64	1/32	.280
8462	100'S 250'S Brown	18-2	 Underwriters' Type POSJ-64 Bare copper, flexible stranding; cotton wrap, color coded; parallel conductors with rubber insulation and jacket integral	41x34	1/32		.123x .223
8888	250'S Black	18-2	 Underwriters' Type POT-64 One bare and one tinned copper conductor, flexible stranding; parallel conductors with vinyl plastic insulation and jacket integral	41x34	1/32		.114x .231

plastic-insulated cable

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8443	100'S 500'S Brown	22-3	 Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; over-all tubed brown vinyl plastic jacket	7x30	.010		.149
8444	100'S 500'S Brown	22-4		7x30	.010		.158
8445	100'S 500'S Brown	22-5		7x30	.010		.170

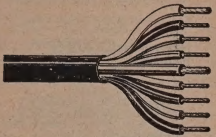
† CK—Coiled in carton   K—Carton   CR—Crate reel   S—Spool   C—Coil   SK—Spooled in carton

See Page S-19 for BELDEN Prices.

BELDEN RADIO · TELEVISION WIRE

multiple conductor cables (cont'd)

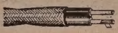
plastic-insulated cable (Cont'd)



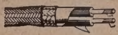
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8446	100'S Brown	22-4 18-2		7x30 16x30	.010 .018		.212
8447	100'S Brown	22-5 18-2		7x30 16x30	.010 .018		.236
8448	100'S Brown	22-6 18-2		7x30 16x30	.010 .018		.240
8449	100'S Brown	22-7 18-2		7x30 16x30	.010 .018		.262

transmission line cables

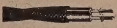
NOMINAL ELECTRICAL PROPERTIES



Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8204	500'S White	18 7x26	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; white cotton braid treated with weather-resistant compound. **For extension speakers.**	.190					



Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8209	500'S White	18 7x26	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; paper wrap; tinned copper braid shield; white cotton braid, treated with weather-resistant compound. **For long runs in extension speaker installations.**	.235					



Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8205	500'S Black	22 7x30	Tinned copper, flexible stranding; rubber insulation, color coded; two conductors cabled; black cotton braid, treated with weather-resistant compound. **For extension speaker and control circuits.**	.165					

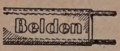
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8222	100'SK 500'S Brown	20 7x28	Bare copper, flexible stranding; conductors parallel; polyethylene plastic insulation. **For use with receiving antenna at high frequencies.**	.075 x.128	100. 200. 300. 400.	7.7 11.0 13.6 15.9	72	69	20.3

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8223	100'SK 500'S Brown	20 7x28	Same as 8222. **For use with receiving antenna, matching transformer, connecting link between electronic units, and experimental applications at high frequencies.**	.075 x.143	100. 200. 300. 400.	5.1 7.2 8.9 10.3	100	72	14.4

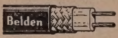
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8224	100'S 500'S Brown	20 7x28	Same as 8222. **For use with receiving antenna, matching transformer, and experimental applications at high frequencies.**	.075 x.182	100. 200. 300. 400.	2.8 4.2 5.4 6.4	150	76	9.0

transmission line cables (cont'd)

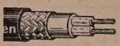
NOMINAL ELECTRICAL PROPERTIES



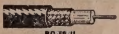
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8225	100'S 500'S 1000'S 3500'CR Clear Brown	20 7x28	Same as 8222. **For use with television and FM receiving antenna. Exceptionally low losses at high frequencies.**	.072 x.400	100. 200. 300. 400.	1.1 1.7 2.2 2.7	300	85	4.6



Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8226	100'S 500'S Black	20 7x28	One bare and one tinned copper conductor, flexible stranding; conductors parallel; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket. **For use with television and FM antenna to reduce noise pickup.**	.190 x.310	100. 200. 300. 400.	8.3 12.0 14.8 17.2	100	64	16.0*

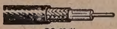


Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8227	100'S 250'S Black	20 7x28	One bare and one tinned copper conductor, flexible stranding; polyethylene plastic insulation; two conductors cabled; polyethlene plastic jacket; tinned copper braid shield; black vinyl plastic jacket. **For use with television and FM antenna in extremely noisy locations.**	.325	100. 200. 300. 400.	4.1 6.4 8.4 10.2	100	62	15.5*



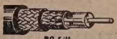
RG-59/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8241	100'S 500'S Black	22 solid	Bare "Copperweld" solid; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. Puncturing voltage 20,000 volts. **For use with television antenna.**	.242	100. 200. 300. 400.	3.75 5.60 7.10 8.30	73	66	21.0



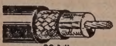
RG-58/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8240	100'S 500'S Black	20 solid	Bare copper, solid; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket. Puncturing voltage 20,000 volts. **For use with radio Frequency Transmission, video, test equipment, and pulse transmission.**	.195	100. 200. 300. 400.	4.10 6.20 8.00 9.50	53.5	66	28.5



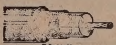
RG-5/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8236	100'S 500'S Black	16 solid	Bare copper, solid; polyethylene plastic insulation; bare copper double braid shield; black vinyl plastic jacket	.332	100. 200. 300. 400.	2.65 3.85 4.80 5.60	52.5	66	28.5



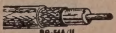
RG-8/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8237	100'S 500'CR Black	13 7x21	Bare copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket	.405	100. 200. 300. 400.	2.10 3.30 4.10 4.50	52	66	29.5



RG-11/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8238	100'S 500'CR Black	18 7x26	Tinned copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket	.405	100. 200. 300. 400.	1.90 2.85 3.60 4.35	75	66	20.5



RG-54A/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8239	100'S 500'S Clear	18 7x.0152	Bare copper, flexible stranding; polyethylene plastic insulation; tinned copper braid shield; polyethylene plastic jacket	.250	100. 200. 300. 400.	2.90 4.20 5.50 6.70	58	66	26.5

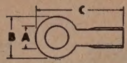
*Capacitance between conductors

†CK—Coiled in carton　K—Carton　CR—Crate reel　S—Spool　C—Coil　SK—Spooled in carton

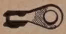
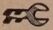
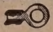
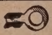
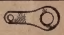
See Page S-19 for BELDEN Prices.

BELDEN RADIO·TELEVISION WIRE

terminals • magnet wire



terminals

Trade Number	Quantity and †Package	For Screw Size	Dimensions—Inches A Hole Size or Space Opening	 B Over-all Width	 C Over-all Length
Tinned; easy to solder					
 8989	*25c pkg. 100K 1000K	12	.219	3/8	13/16
 8992	*25c pkg. 100K 1000K	8	.165	11/32	25/32
 8993	*25c pkg. 100K 1000K	10	.191	5/16	9/16
 8995	*25c pkg. 100K 1000K	8	.165	5/16	9/16
 8996	*25c pkg. 100K 1000K	10	.191	5/16	9/16
 8997	*25c pkg. 100K 1000K	8	.165	11/32	11/16
 8998	*25c pkg. 100K 1000K	8	.172	1/4	1/2
 8999	*25c pkg. 100K 1000K	8	.172	5/16	3/4
8994	100K	100 Assorted Belden Terminals including **20-8995, 25-8997, 10-8996, 10-8998, 35-8999**			

*25c Package — Sealed Cellophane Envelopes
20 Envelopes in Carton

magnet wire

BELDENAMEL

Size	Turns Per Linear Inch	Turns Per Square Inch	Approx. Length in Feet ¼-Lb Spool	 ½-Lb Spool
14	15.2	231	...	40
16	19.1	365	...	62
18	23.9	571	...	100
20	29.9	894	...	160
22	37.4	1399	...	250
24	46.9	2200	...	400
26	59.0	3481	...	638
28	73.8	5446	505	1010
30	92.2	8501	805	1610
32	114.0	12996	1270	2540
34	144.0	20736	2015	4030
36	180.0	32400	3200	6400
38	225.0	50625	5070	...
40	290.0	84100	8050	...

SINGLE COTENAMEL

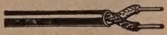
14	14.1	199	...	39
16	17.4	303	...	61
18	21.4	458	...	97
20	26.1	681	...	154
22	31.9	1018	...	241
24	38.6	1490	...	376
26	46.4	2153	295	590
28	55.1	3036	458	916
30	64.7	4186	710	1420
32	74.6	5565	1090	2180
34	86.6	7500	1606	...
36	97.6	9526	2425	...

SINGLE NYLTEXENAMEL

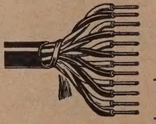
22	34.9	1218	...	248
24	43.1	1857	...	390
26	52.9	2798	309	618
28	64.5	4160	487	974
30	78.1	6059	770	1540
32	93.4	8723	1202	2404
34	113.0	12769	1892	...
36	134.2	18009	2854	...

intercommunicating and sound system cables

For Station-to-Station and Extension Wiring
(Unshielded)



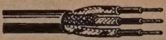
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8740	100'S 500'S	22- 2	1	Bare copper, solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid		.145
8741	100'S 500'S	22- 4	2		None	solid		.205
8742	100'S 500'S	22- 6	3		None	solid		.230



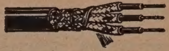
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8743	100'S 500'S	22-12	6	Tinned copper, solid; vinyl plastic insulated; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid	.010	.265
8744	100'S 500'S	22-18	9		None	solid	.010	.320
8745	100'S 500'CR	22-30	15		None	solid	.010	.380
8746	100'S 500'CR	22-54	27		None	solid	.010	.510

intercommunicating and sound system cables (cont'd)

For Station-to-Station and Extension Wiring
(Shielded)

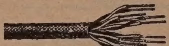


Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8734	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; one conductor tinned copper braid shield; and two conductors unshielded; over-all tubed brown vinyl plastic jacket	Over 1 conductor	7x30	.012	.210



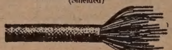
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8735	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 3 conductors	7x30	.012	.220
8737	100'S 500'S	22- 2	1	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 2 conductors	7x30	.012	.220

For Station-to-Terminal Wiring
(Unshielded)



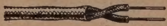
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8747	100'S	22-12	6	Tinned copper, flexible stranding; vinyl plastic insulation; color coded; conductors cabled in pairs; over-all brown cotton braid; lacquer coating	None	7x30	.010	.275
8748	100'S	22-18	9		None	7x30	.010	.335
8749	100'S	22-30	15		None	7x30	.010	.435
8750	100'S	22-54	27		None	7x30	.010	.565

For Station-to-Terminal Wiring
(Shielded)

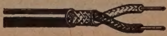


Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8751	100'S	25-12 16- 2	Not paired	Bare copper, flexible stranding; vinyl plastic insulation; parallel thread for color coding; 12 conductors 25-ga individually shielded; cabled (not paired) with 2 conductors 16-ga unshielded; over-all brown cotton braid; lacquer coating	Over each 25-ga conductor only	7x33 19x29	.015 .012	.335
8752	100'S	25-22 16- 2	Not paired	Same construction as 8751 except 22 conductors 25-ga individually shielded and 2 conductors 16-ga unshielded	Over each 25-ga conductor only	7x33 19x29	.015 .012	.485

broadcast audio cables



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8738	100'S 500'S	22- 2	1	Bare copper, solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.135



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8739	100'S 500'S	22- 2	1	Same as 8738 plus over-all tubed brown vinyl plastic jacket	Over 2 conductors	solid		.175

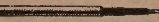
†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

See Page S-19 for BELDEN Prices.

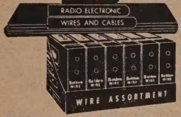
BELDEN RADIO · TELEVISION WIRE

hook-up and lead wires (cont'd)

shielded hook-up wire

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8885	25'CK 100'SK 500'S	20	 Tinned copper, flexible stranding; rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating; tinned copper braid shield	10x30	.015	.117	5000	4000

display Belden assortments



8864 Contents: 6—25' Coils 8941. Size 20 solid; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**

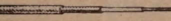
8865 Contents: 6—25' Coils 8943. Size 20 flexible; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**

instrument and lead wires

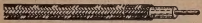
photoelectric cell cable (sound projectors)

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8221	100'S Black	25	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket	3x33 copper plus 4x33 steel	.240	20

phonograph pickup arm cable

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8431	*15' 100'S Brown	24	 Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield; fine brown cotton braid	16x36	.015	.095
8014	*25' 500'SK Chrome	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation *Packaged on card, 5 cards in carton	13x36	.010	.044

high-voltage and cathode-ray tube lead cable

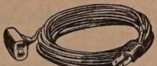
Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8869	100'S Red with Two White Tracers	20	 Tinned copper, flexible stranding; flame retardant polyethylene plastic insulation, red cellulose acetate yarn braid with 2 white tracers; lacquer coating. Suggested Voltage Rating (volts) 10000	7x28	.035	.136
8868	100'S Red	20	Same as 8869 except heavier insulation and solid red braid. Suggested Voltage Rating (volts) 20000	7x28	.065	.198

test prod wire

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8899	†† 14'CK 100'S 1000'S Black Red	18	Tinned copper, extra flexible stranding; cotton wrap; rubber insulation. Suggested Voltage Rating (volts) 5000	65x36	.043	.140
8898	100'S 500'S Black Red	18	Suggested Voltage Rating (volts) 10000 ††7' Black and 7' Red	65x36	.088	.230

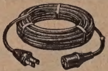
replacement and extension cords

Trade Number	†Package	Lengths & Color
1701	1 K	10 Ft Brown
1702	1 K	15 Ft Brown
1705	1 K	6 Ft Brown



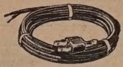
Extension Cord — Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord. Both ends unbreakable rubber. Does not mar floors or furniture. Safe for use on table tops. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
1751	1 K	20 Ft Black



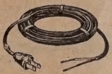
Extension Cord — Size 18, Type SV. All-rubber portable cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
1725	1 K	7 Ft 6 In. Brown



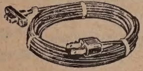
Replacement Cord — Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For lamps, radios, small appliances.

Trade Number	†Package	Lengths & Color
1749	1 K	6 Ft 3 In. Black



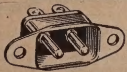
Replacement Cord — Size 18, Type SV. All-rubber portable cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For amplifiers, test equipment, and small appliances.

Trade Number	†Package	Lengths & Color
8874	1 K	6 Ft Brown



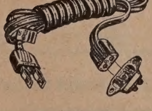
Television Power Supply Connector Cord. Original equipment on most television sets. Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
8125	10 K	



Male Connector — Flush mounting for use with 8874 and 1777 cord connector sets.

Trade Number	†Package	Lengths & Color
1777	1 K	6 Ft Brown



Connect-A-Cord. 6 Ft. Size 18, Type POSJ-64. All-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end, Belden rubber connector and flush mounting receptacle. Underwriters' Flag Type Blue Cord Set Label.

† CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden Manufacturing Company • Chicago, Illinois

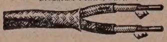
See Page S-19 for BELDEN Prices.

BELDEN RADIO · TELEVISION WIRE

intercommunicating and sound system cables (Cont'd)

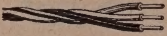
broadcast audio cables (cont'd)

P.A. Cable Amplifier-to-Speaker
Broadcast Control Cable



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8799	100'S 500'S	18- 2	1	Bare copper, solid; baked enamel film; cotton wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.165

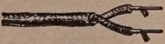
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8432	100'S 500'S	20- 2	1	Tinned copper; flexible stranding; paper wrap; rubber insulation; cotton braid; lacquer coating; color coded; conductors cabled; tinned copper braid shield	Over-all	10x30	.015	.215
8433	100'S 500'S	20- 3	Not paired		Over-all	10x30	.015	.230



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8482	S-1000	19- 2	1	Bare copper, solid; vinyl plastic insulation, color coded; conductors cabled	None	solid	.012	.105
8483	S-1000	19- 3	Not paired		None	solid	.012	.120

Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8437	100'S 500'S	22-2	1	Tinned copper, solid; baked enamel film; heavy cellulose acetate yarn wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; 22 A.W.G. tinned solid copper wire parallel to twisted pair under shield; tubed black vinyl plastic jacket	Over 2 conductors	solid		.210

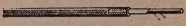
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8438	100'S 500'S	20-2	1	Tinned copper, solid; baked enamel film; cotton wrap; cotton braid, waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.160



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (Inches)	Nom. Diam (Inches)
8439	100'S 500'S	20-2	1	Tinned copper, solid; heavy cellulose acetate yarn wrap, cellulose acetate yarn braid; lacquer coating; color coded, conductors cabled; tinned copper braid shield	Over-all	solid		.160

hook-up and lead wires

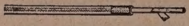
cellulose braid lacquered



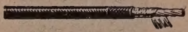
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8941	25'CK 100'SK 1000'S	20	Tinned copper, solid; heavy cellulose acetate yarn wrap, cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	solid		.072	200	1000
8945	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	solid		.080	200	1000

hook-up and lead wires (cont'd)

cellulose braid lacquered (Cont'd)



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8943	25'CK 100'SK 1000'S	20	Tinned copper, flexible stranding; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	10x30		.076	200	1000
8947	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	16x30		.087	200	1000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8942	100'SK 1000'S	16	Colors: **Black, Green, Red**	26x30		.099	200	1000
8938	100'SK 500'S	14	Colors: **Black, Red**	41x30		.115	200	1000

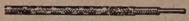
plastic insulated

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8901	100'SK 1000'S	20	Tinned copper, solid; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	solid	.015	.066	5000	8000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8905	100'SK 1000'S	20	Tinned copper, flexible stranding; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.015	.073	5000	8000

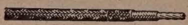
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8913	100'SK 1000'S	20	Colors: **Black, Blue, Green, Red, Yellow**	10x30	.025	.091	5000	12000
8918	250'S 1000'S	18	Colors: **Black, Green, Red, Yellow**	16x30	.031	.112	5000	12000

R-F push-back wire CELLULOSE ACETATE BRAID WAXED



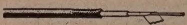
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8841	100'SK 1000'S	20	Tinned copper, solid; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	solid		.067	1000	1000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8839	100'SK 1000'S	20	Tinned copper, flexible stranding; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	10x30		.072	1000	1000



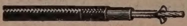
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8844	100'SK 1000'S	18		16x30		.092	1000	1000

rubber-insulated push-back



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8837	100'SK 1000'S	20	Tinned copper, solid; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	solid	.010	.075	2000	2000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8838	100'SK 1000'S	20	Tinned copper, flexible stranding; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.010	.081	2000	2000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8833	100'S 1000'S	18	Tinned copper, flexible stranding; paper wrap; rubber-insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	16x30	.031	.135	10000	8000

† CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

See Page S-19 for BELDEN Prices.

BELDEN • Price List

Belden Trade Number	Unit Package & Length**	Suggested List Price Each
1701	Brown	$1.30
1702	Brown	1.45
1705	Brown	1.20
1706	Brown	2.40
1709	Brown	2.75
1712	Brown	3.00
1715	Brown	3.25
1725	Brown	.55
1749	Black	.70
1751	Black	2.15
*1777		.90
8000	50′	.70
8000	75′	1.00
8000	100′	1.25
8000	1000′	11.40
8002	50′	.53
8002	75′	.70
8002	100′	.90
8002	1000′	7.75
8008	100′	1.95
8008	200′	3.75
8008	500′	9.00
8009	100′	1.35
8009	500′	6.00
8011	100′	1.95
8012	100′	1.40
8013	100′	1.05
8014	25′	.30
8014	500′	.015′
8125		.20
8126		.15
8127	10′	.23
8200	100′	.015′
8200	500′	.015′
8200	1000′	.015′
8204	500′	.04′
8205	500′	.03′
8206	250′	.02′
8209	500′	.08′
8210	100′	.07′
8210	500′	.07′
8221	100′	.09′
8222	100′	.02′
8222	500′	.02′
8223	100′	.02′
8223	500′	.02′
8224	100′	.03′
8224	500′	.03′
8225	100′	.04′
8225	500′	.04′
8225	1000′	.04′
8226	100′	.09′
8226	500′	.09′
8227	100′	.14′
8227	250′	.14′
8228	100′	.07′
8228	500′	.07′
8229	100′	.08′
8229	500′	.08′
8235	100′	.08′
8235	500′	.08′
8309		2.30
8320		7.50
8321		4.25
8322		12.65
8401	25′	1.90
8401	50′	3.75
8401	100′	.08′
8401	500′	.08′
8410	25′	2.50
8410	50′	5.00
8410	100′	.10′
8410	500′	.10′
8411	25′	1.55
8411	100′	.06′
8412	25′	2.40
8412	50′	4.75
8412	100′	.10′
8412	500′	.10′
8422	25′	2.25
8422	50′	4.50
8422	100′	$ .09′
8422	500′	.09′
8423	50′	5.00
8423	250′	.11′
8424	50′	6.25
8424	250′	.14′
8425	50′	7.25
8425	250′	.16′
8426	100′	.20′
8427	100′	.21′
8431	100′	.04′
8432	100′	.07′
8432	500′	.07′
8433	100′	.09′
8433	500′	.09′
8443	100′	.045′
8443	500′	.045′
8444	100′	.06′
8444	500′	.06′
8445	100′	.07′
8445	500′	.07′
8446	100′	.10′
8447	100′	.11′
8448	100′	.12′
8449	100′	.12′
8452	100′	.05′
8452	500′	.05′
8453	100′	.07′
8453	500′	.07′
8454	100′	.08′
8454	500′	.08′
8455	100′	.10′
8455	250′	10′
8462	100′	.03′
8462	250′	.03′
*8472		.08′
*8482		.015′
*8483		.025′
8484	500′	.045′
8484	1000′	.045′
8650	100′	.08′
8651	100′	.06′
8652	100′	.05′
8654	100′	.10′
8656	100′	.07′
8660	50′	.035′
8660	250′	.035′
8661	50′	.05′
8661	250′	.05′
8662	50′	.19′
8662	250′	.19′
8664	100′	.09′
8665	100′	21′
8667	100′	.09′
8668	50′	.05′
8668	250′	.05′
8669	50′	.15′
8669	250′	.15′
8734	100′	.09′
8734	500′	.09′
8735	100′	.09′
8735	500′	.09′
8737	100′	.07′
8737	500′	.07′
8738	100′	.04′
8738	500′	.04′
8739	100′	.06′
8739	500′	.06′
8740	100′	.03′
8740	500′	.03′
8741	100′	.06′
8741	500′	.06′
8742	100′	.07′
8742	500′	.07′
8743	100′	.09′
8743	500′	.09′
8744	100′	.13′
8744	500′	.13′
8745	100′	.21′
8745	500′	.21′
8746	100′	.34′
8746	500′	.34′
8747	100′	.13′
8748	100′	.18′
8749	100′	.28′
8750	100′	.48′
8751	100′	.40′
8752	100′	.65′
8799	100′	.05′
8799	500′	.05′
8817	100′	.40
8833†	100′	.03′
8833†	1000′	.03′
8837†	25′	.50
8837†	100′	1.95
8837†	1000′	.02′
8838†	25′	.55
8838†	100′	2.00
8838†	1000′	.02′
8839†	25′	.55
8839†	100′	2.00
8839†	1000′	.02′
8841†	25′	.50
8841†	100′	1.85
8841†	1000′	.02′
8844†	25′	.60
8844†	100′	2.25
8844†	1000′	.025′
8864		2.70
8865		3.00
8868	25′	1.55
8868	100′	.055′
8869	25′	1.00
8869	100′	.03′
8872		1.25
8873		1.15
8874		.70
8885	25′	1.00
8885	100′	.04′
8885	500′	.04′
8888	250′	.05′
8890		30
8895		1.10
8896		.55
8898†	100′	.04′
8898†	500′	.04′
8899†	14′	.50
8899†	100′	.025′
8899†	1000′	.025′
8901†	100′	1.00
8901†	1000′	.015′
8905†	25′	$ .40
8905†	100′	1.25
8905†	1000′	.015′
8913†	25′	.45
8913†	100′	1.55
8913†	1000′	.015′
*8918	250′	.025′
*8918	1000′	.025′
8920		1.25
8921		1.25
8922		1.25
8923		1.25
8924		1.25
8925		1.25
8929		1.25
8938†	100′	2.90
8938†	500′	.015′
8941†	25′	.45
8941†	100′	1.65
8941†	1000′	.015′
8942†	100′	2.40
8942†	1000′	.025′
8943†	25′	.50
8943†	100′	1.80
8943†	1000′	.02′
8945†	25′	.50
8945†	100′	1.90
8945†	1000′	.02′
8947†	25′	.55
8947†	100′	2.10
8947†	1000′	.025′
8976		1.25
8977		1.25
8989	25c pkg.	.25
8989	100	.75
8989	1000	5.00
8989	25c pkg.	.25
8992	100	.75
8992	1000	5.00
8993	25c pkg.	.25
8993	100	.65
8993	1000	3.75
8994		.65
8995	25c pkg.	.25
8995	100	.65
8995	1000	3.75
8996	25c pkg.	.25
8996	100	.65
8996	1000	3.75
8997	25c pkg.	.25
8997	100	.65
8997	1000	3.75
8998	25c pkg.	.25
8998	100	.50
8998	1000	2.50
8999	25c pkg.	.25
8999	100	.50
8999	1000	3.10

*New Item. †Specify Color. All prices subject to change without notice.

**Please indicate length desired, immediately following trade number, when more than one length is listed under the same trade number.

BELDENAMEL MAGNET WIRE

Size	Suggested List Price ¼ lb. Spools	Suggested List Price ½ lb. Spools
14	—	$.70
16	—	.70
18	—	.70
20	—	.70
22	—	.70
24	—	.70
26	—	.75
28	$.50	.80
30	.50	.95
32	.55	.95
34	.60	1.05
36	.75	1.30
38	.95	—
40	1.35	—

SINGLE COTENAMEL MAGNET WIRE

Size	Suggested List Price ¼ lb. Spools	Suggested List Price ½ lb. Spools
14	—	$.75
16	—	.80
18	—	.85
20	—	.90
22	—	.95
24	—	1.05
26	$.65	1.15
28	.70	1.30
30	.85	1.60
32	1.00	1.85
34	1.35	—
36	1.60	—

SINGLE NYLTEXENAMEL MAGNET WIRE

Size	Suggested List Price ¼ lb. Spools	Suggested List Price ½ lb. Spools
18	—	—
20	—	—
22	—	$1.10
24	—	1.25
26	$.80	1.45
28	.90	1.70
30	1.15	2.15
32	1.35	2.50
34	1.70	—
36	2.50	—

CORNISH RADIO AND TELEVISION WIRE PRODUCTS

P-A WIRES and CABLES

HOLLYWOOD MICROPHONE CABLES
(Shielded-Jacketed)

Substantially made to withstand rough usage. Special low capacity color coded conductors. Braided with tinned copper shield. Tough weatherproof polished jacket overall.

Single Conductor — unusually low capacity. Can be used up to 100 ft. with high impedance ribbon microphones and up to 50 ft. with crystal microphones.

Cat. No.	Conductors	Approx. Feet on Spool	Approx. Outside Diam.	List Price M ft.
1105	1	100	.260″	$85.00
2104	1	500	.260″	82.00
2101	1	1000	.260″	80.00

Two Conductor, for low impedance microphones and transmission lines.

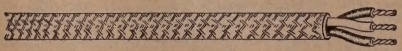
Cat. No.	Conductors	Approx. Feet on Spool	Approx. Outside Diam.	List Price M ft.
1152	2	100	.280″	$105.00
1153	2	250	.280″	102.00
2152	2	500	.280″	100.00
1154	3	100	.280″	130.00
1155	3	250	.280″	127.00
2153	3	500	.280″	125.00
1156	4	100	.305″	160.00
1157	4	250	.305″	157.00
2154	4	500	.305″	155.00

LAPEL MICROPHONE CABLE

Similar to No. 2101 except smaller in diameter.

Cat. No.	Conductors	Approx. Feet on Spool	Approx. Outside Diam.	List Price M ft.
1160	1	100	.175″	$75.00
1161	1	500	.175″	72.00
2160	1	1000	.175″	70.00

SHIELDED CABLES



These cables are recommended for sound recording equipment and P.A. systems where a flexible shielded cable is necessary. Each conductor consists of multi-strand copper wire cotton served, rubber covered and braided with color-coded cotton. Conductors No. 20 gauge unless otherwise specified.

Cat. No.	Put-Up	List Price per M ft.
1114	100′ Spool 2 Conductor	$ 78.00
1115	250′ Spool 2 Conductor	75.00
1116	100′ Spool 3 Conductor	108.00
1117	250′ Spool 3 Conductor	105.00
1118	100′ Spool 4 Conductor	135.00
1119	250′ Spool 4 Conductor	132.00
1120	100′ Spool 5 Conductor	161.00
1121	250′ Spool 5 Conductor	158.00
1122	100′ Spool 6 Conductor	183.00
1123	250′ Spool 6 Conductor	180.00

SHIELDED CABLES—COTTON BRAID OVERALL

Cat. No.	Put-Up	List Price per M ft.
1125	250′ Spool 2 Conductor	$ 95.00
1127	250′ Spool 3 Conductor	132.00
1129	250′ Spool 4 Conductor	160.00
1131	250′ Spool 5 Conductor	190.00
1133	250′ Spool 6 Conductor	220.00

RADIO BATTERY CABLE AND DYNAMIC SPEAKER EXTENSION CABLE

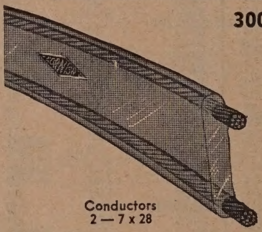
Multi-conductor cables having flexible conductors with overall heavy cotton braid. Individual conductor consists of stranded copper, rubber covered with color-coded cotton braid. Suitable to all types of P.A. Systems. Conductors No. 20 gauge.

Cat. No.	Put up in spool	List Price per M ft.	Cat. No.	Put up in spool	List Price per M ft.
228	3 Wire-100 Ft.	$ 70.00	241	7 Wire-100 Ft.	$137.00
219	4 Wire-100 Ft.	85.00	222	8 Wire-100 Ft.	153.00
221	5 Wire-100 Ft.	100.00	223	9 Wire-100 Ft.	170.00
231	6 Wire-100 Ft.	120.00	224	10 Wire-100 Ft.	188.00

SHIELDED LEAD-IN AND GROUND WIRE

These products are made of flexible stranded copper conductors insulated with a substantial wall of high grade rubber with an overall of close tinned copper shield. They are most frequently used as a shielded down lead to ground out interference noises.

No. 20 1/32" R.C.	List Price	No. 18 1/32" R.C.	List Price
1143— 50 Ft. Coil	$ 1.80	1146— 50 Ft. Coil	$ 2.10
1144— 250 Ft. Spool	8.00	1147— 250 Ft. Spool	9.25
1145—1000 Ft. Spool	30.00	1148—1000 Ft. Spool	35.00



300-OHM TELEVISION DOWN-LEAD

Furnished in three web thicknesses shown below, in order to meet all weather and operating conditions.

Supplied in brown and clear.

Cat. No.	Web Thickness	List Price per M Ft. 250′ Spool	1000′ Spool	*Mill Reel	Approx. Wt. per M Ft.
500	.045″	$28.25	$27.50	$26.75	17 lbs.
501	.065″	30.75	30.00	29.25	20 lbs.
502	.100″	40.75	40.00	39.25	28 lbs.

TELEVISION ANTENNA ROTATOR CABLE

Consists of 4 conductors, each 7 x 28 (3 bare and 1 tinned), poly-ethylene insulated, ribbed to permit easy stripping.

Cat. No.	List Price per M Ft. 250′ Spool	1000′ Spool	*Mill Reel	Approx. Wt. per M Ft.
510	$40.75	$40.00	$39.25	30 lbs.

BRAIDED TINNED COPPER TUBULAR SHIELDING

Recommended for wires up to 3/16″ O.D.

Cat. No.	Put-Up	Width	List Price Each
1109	100 Ft. Spool	¼″	$ 6.25
1110	250 Ft. Spool	¼″	14.00

*About 2500 Feet.

CORNISH RADIO AND TELEVISION WIRE PRODUCTS

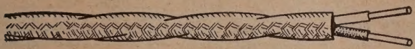
INTERCOMMUNICATION CABLES

MULTI-PAIRED CABLES

Conductors are No. 22 solid tinned copper insulated with either vinyl plastic or double cotton impregnated braid—cabled in color-coded twisted pairs—with overall cotton braid.

Cat. No.	Put-Up	Width	List Price per M ft.
1225	2 Pair	(O.D. approx. 3/16")	$ 54.00
1226	6 Pair	(O.D. approx. 5/16")	153.00
1227	13 Pair	(O.D. approx. 7/16")	325.00
1228	26 Pair	(O.D. approx. 5/8")	640.00

TWO CONDUCTOR SHIELDED CABLE



Consists of two No. 20 stranded tinned copper plastic insulated conductors, color-coded and twisted with overall close tinned copper shield.

No. 1230 ....$45.00

THREE CONDUCTOR CABLE

3 Conductors are No. 20 solid tinned copper, plastic insulated, color-coded, twisted, with overall treated cotton braid.

No. 1231 ....$42.00

THREE CONDUCTOR (One Shielded)

Consists of a twisted pair of No. 20 solid tinned copper plastic insulated wires, and a single No. 20 solid tinned copper plastic insulated and shielded, all twisted, with over-all dry cotton braid.

No. 1232 ....$75.00
No. 1233—Same as No. 1232 except conductors are No. 22 solid $63.00

FLEXIBLE CORDS (Fixture Wires — Lamp Cords)

Fixture wires often used as all-purpose radio and lead-in wire. Lamp cords used for power supply and extension cords. Colors: Brown, Black, Ivory.

Cat. No.		Put-Up	List Price per M ft.
3050	—No. 18 Single, Type F, Cotton	1000 ft.	$17.50
*3020	—No. 18 Parallel, Type PO, Rayon	250 ft.	40.00
*3000	—No. 18 Parallel, Type POSJ, All Rubber	250 ft.	32.50
*3300	—No. 18 All Rubber Service Cord, Type SJ	250 ft.	60.00
*3500	—Replacement Cord Set—6 ft. 18/2, POSJ, 1/64 with Molded Rubber Plug		.40 ea.

*Has Underwriter's Labels.

AERIAL WIRE

STRANDED BARE WIRE — Copper

No.	Ft.	Size	List Price
40A	75-ft. coil	7/22	$ 1.07
40	100-ft. coil	7/22	1.40
40B	1000-ft. spool	7/22	14.00
42A	75-ft. coil	7/24	.75
42	100-ft. coil	7/24	.95
42B	1000-ft. spool	7/24	9.50

LEAD-IN WIRE

STRANDED—Rubber Covered

No.	Ft.	Size	List Price	No.	Ft.	Size	List Price
300	50′ coil	18-1/32"	$ .60	302	500′ spool	18-1/32"	$5.50
301	100′ spool	18-1/32"	1.10	303	1000′ spool	18-1/32"	10.50

LEAD-IN WIRE

SOLID—Rubber Covered

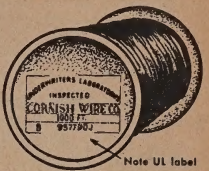
No.	Ft.	Size	List Price	No.	Ft.	Size	List Price
320	25′ coil	18-3/64"	$ .32	330	25′ coil	20-3/64"	$ .28
321	50′ coil	18-3/64"	.57	331	50′ coil	20-3/64"	.51
322	500′ spool	18-3/64"	5.25	332	500′ spool	20-3/64"	4.75
323	1000′ spool	18-3/64"	10.00	333	1000′ spool	20-3/64"	9.00

TWISTED PAIR DOWNLEAD

Two conductors, each No. 22 stranded copper, 1/32" rubber-covered (one black, one red), twisted and covered with overall black weatherproof braid.

No. 122—List Mft. $30.00

"NOFLAME-COR"—
The Television Hook Up Wire



For the first time a hook-up wire for the trade with Underwriters' Label attached. The famous "NoFlame-Cor" wire is approved for 90°C—600 volt usage.

SOLID				STRANDED			
Cat. No.	Size	Put-up	List Each	Cat. No.	Size	Put-up	List Each
470	22	100′ spool	$2.25	473	22	100′ spool	$2.45
471	20	"	2.55	474	20	"	2.80
472	18	"	3.15	475	18	"	3.40

RADIO HOOK-UP WIRE

"CORLAC" HOOK-UP WIRE

Special under-insulation makes this hook-up wire moisture-proof and gives voltage break-down of 3100 volts (as per certified report of Electrical Testing Laboratory, N. Y. C.). Excellent push-back in waxed finish. Tinned copper conductors.

WAXED			LACQUERED		
Cat. No.	Put-Up	List Each	Cat. No.	Put-Up	List Each
		No. 22 SOLID			
434—	25 Ft. Cartons...	$ .40	452—	25 Ft. Cartons...	$ .46
436—	1000 Ft. Spools....	10.60	454—	1000 Ft. Spools....	12.50
		No. 20 SOLID			
437—	25 Ft. Cartons...	.48	455—	25 Ft. Cartons...	.56
439—	1000 Ft. Spools....	13.00	457—	1000 Ft. Spools....	16.00
		No. 22 STRANDED			
443—	25 Ft. Cartons...	.44	461—	25 Ft. Cartons...	.50
445—	1000 Ft. Spools....	12.00	463—	1000 Ft. Spools....	14.00
		No. 20 STRANDED			
446—	25 Ft. Cartons...	.52	464—	25 Ft. Cartons...	.58
448—	1000 Ft. Spools....	14.50	466—	1000 Ft. Spools....	17.00
		No. 18 STRANDED			
449—	25 Ft. Cartons...	.64	467—	25 Ft. Cartons...	.72
451—	1000 Ft. Spools....	19.00	469—	1000 Ft. Spools....	22.50

AC-DC ANTENNA WIRE

Flexible Bare copper conductor with brown cotton braid.

661	1000 Ft. Spools	$10.00
661A	25 Ft. on Fibre	.33

TEST LEAD WIRE

A super flexible conductor covered with heavy live rubber. Will not wear, kink or crack. Made in Black and Red. Mention color when ordering. O.D.—.140".

1140	100 Ft. Spools	$ 3.00
1141	500 Ft. Spools	13.00
1142	1000 Ft. Spools	25.00

Birnbach

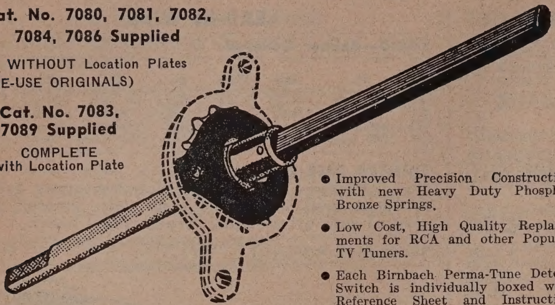
New Perma-Tune Detent Switch Controls
TV Antenna Accessories

Cat. No. 7080, 7081, 7082, 7084, 7086 Supplied

WITHOUT Location Plates
(RE-USE ORIGINALS)

Cat. No. 7083, 7089 Supplied

COMPLETE
with Location Plate



- Improved Precision Construction with new Heavy Duty Phosphor Bronze Springs.
- Low Cost, High Quality Replacements for RCA and other Popular TV Tuners.
- Each Birnbach Perma-Tune Detent Switch is individually boxed with Reference Sheet and Instruction Sheet.

*CAT. No. 7080—(Short Shaft)

Replaces RCA Part No. 71463 (Short Shaft)

621TS
630TS
641TV
648PV
648PTK
8TV41
8PCS41
8TCS41C

CAT. No. 7081—(Long Shaft)

Replaces RCA Part No. 72743 (Long Shaft)

RCA CHASSIS NUMBERS:

721TS 721TCS 730TCS 730TV2 8TS30

CAT. No. 7082—(Extra Long Shaft)

Replaces Admiral Part No. 76B14
(Extra Long Shaft)

As used in late series Admiral chassis Models 30A and 8C. Some early model Admirals use short shaft—Admiral Part No. A158294A5. The Birnbach replacement for this is Cat. No. 7080.

Also replaces Capehart Part No. 461-P12

Also replaces RCA Part No. 71531

REPLACEMENT DETENTS FOR TELETONE

Some Teletone models use detents with either 3/16″ or ¼″ shaft diameters.

Chassis numbers do not indicate which size shaft was used, so check shaft diameter before ordering.

Cat. No. 7084 (without location plate)—Replaces ¼″ diam. brass shaft detent.

Cat. No. 7086 (without location plate)—Replaces $\frac{3}{16}$″ brass shaft detent. (Thin)

CAT. No. 7088—(Magnavox)

Replaces Magnavox Part No. 633722-1

CAT. No. 7089—(All Phenolic Shaft)

(COMPLETE)

For use with RCA Chassis Numbers:

2T51
2T60
2T81
6T54
6T65
6T71
6T74
6T76
6T77
6T79
6T84
6T86
6T87
9T57
9T89

CAT. No. 7083—BIRNBACH PERMA-TUBE DETENT SWITCH

COMPLETE ALL-PHENOLIC SHAFT — RCA Part No. 73440 Replacement

This complete All-Phenolic Shaft Detent No. 7083 is designed for use with RCA TV Tuner Type No. 74941, 73435, and 74571.

The following is a list of RCA Chassis Models using the Birnbach Detent No. 7083 and its corresponding RCA TV Tuner Numbers:

RCA TV Tuner Type No. 73435
Chassis Numbers:

T120
T121
TC124
TC125
TC127
8TR29
8TK29
8T241
8T243
8T244
8TV321
8TV323
9T240
9T240K
9TC245
9TC247
9TC249
9TW309
9TW333

RCA TV Tuner Type No. 74941
Chassis Numbers:

S1000
T164
TC165
TC166
TC167
TC168
8TC270
8TC271
8TK320
9TW390
9TC240
9TC270
9TC272
9TC275

RCA TV Tuner Type No. 74571
Chassis Numbers:

9T246
9T256
T100

*Other TV Sets Using BIRNBACH CAT. No. 7080 DETENT Replacement for RCA Part No. 71463:

AIRKING
A1000
A1001
A2000
A2001
A2002

DE WALD
BT100
CT101
CT102
CT103
CT104

CORONADO
94TV2-43-8970
94TV2-43-8971
94TV2-43-8985
94TV2-43-8986

CAPEHART
610P
651P
661P
501P
502P
504P
461P

EMERSON
545
585
608
617
618

FADA
TV30
930
899
880
799

GAROD
920
940
1020
1030
1120
1130
1220
1230

OLYMPIC
TV104
TV105
TV106
TV922
TV923
TV-928
TV944
TV945
TV946

PACKARD BELL
894
1091
1291
1391
3191
3192
3193
3194
3381
4580
4691

PHILMORE
PC030

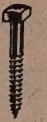
REGAL
1030
1031
1230
1631

TECH-MASTER
930
1530
1630

TRUETONE
D1991
D1993
D1994

US TELEVISION
T10823
T10925
T12823
T15823
T15925
CFM15925
KRF15933

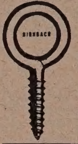
BIRNBACH LAG BOLTS



Galvanized steel. Screws easily into wood, brick, etc. For permanently holding brackets, etc., in place. Available in four sizes—1″, 1½″, 2″, 3″. Specify size.

Cat. No.	St. Pkge.
7043—1″	100
7043—1½″	100
7043—2″	100
7043—3″	100

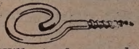
SCREW EYE BOLT



Use this sturdy, steel eye-bolt for guy wire on TV mast installation. Overall length 2½″. Shank length 1⅜″. Thread length 1$\frac{1}{16}$″. Inside diameter $\frac{23}{32}$″.

Cat. No.	St. Pkge.
T10	100

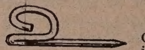
BRIDLE RING



Ruggedly constructed. Will stand up under maximum strain. Made of galvanized steel.

Cat. No.	St. Pkge.
7037	100

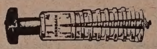
DRIVE RING



Can be used for securing guy wire. Made of steel galvanized. When hammered in at an angle will remain secure under any condition.

Cat. No.	St. Pkge.
7036	100

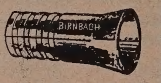
LAG SCREW EXPANSION SHIELDS



Used widely in television installations. Will fit ¼″ lag screws. Completely rust-proofed. Provides greater load strength and the outside corrugations add additional strength on masonry. T17 is used with the Birnbach No. 7043—(1″). T18 is used with No. 7043—(1½″) lag screw.

Cat. No.	St. Pkge.
T17—1″ x ½″ O.D.	100
T18—1½″ x ½″ O.D.	100

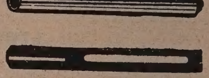
BIRNBACH LEAD ANCHORS
FOR WOOD SCREWS



Small installation holes can be made with these anchors. Very popular for wood screws. Takes No. 10-12-14 wood screw and are $\frac{5}{16}$″ O.D. Will fit ¼″ and $\frac{5}{16}$″ holes.

Cat. No.	St. Pkge.
T19—(¾″ long)	100
T19—(1″ long)	100
T19—(1½″ long)	100

BIRNBACH TAMPING TOOLS



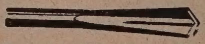
Special Tamping Tool for anchoring eye bolts and pipe bolts.

Cat. No. 7046

Tamping Tool for ¼″ anchor bolts.

Cat. No. 7047

BIRNBACH STAR DRILLS



Made of hand tempered and hand forged high grade tool steel for hand drilling in brick, stone and concrete.

Cat. No.	St. Pkge.
7049A—¼″—12″ long	12
7049B—$\frac{5}{16}$″—12″ long	12
7049 —⅜″—12″ long	12
7050 —½″—12″ long	12

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

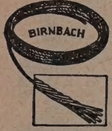
Aluminum Ground Wire, Guy Wire, Stand-offs, Twin Leads, Switches, TV Accessories

ALUMINUM GROUND WIRE

Approved method for grounding. (Soft drawn). Size No. 8 (⅛" O.D.) Recommended for use by National Electric Code. For grounding mast to ventpipes, gutters, ground rods, etc. against lightning and electrical disturbances.

Cat. No.	
7061	50 ft. coil
7062	100 ft. coil
7063	500 ft. spool
7064	1000 ft. spool

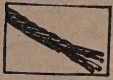
GUY WIRE



Galvanized steel stranded twisted wire. Made of 6 strands No. 20. Fully weather-proofed. 450 lbs. tensile strength.

Cat. No.	
19	25 ft. coil
20	50 ft. coil
221	100 ft. coil
220	500 ft. spool
1220	1000 ft. spool

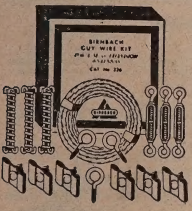
ECONOMY BRAND GUY WIRE



4 strands of No. 20 high tensile twisted steel galvanized wire. Fully weather-proofed. 225 lbs. tensile strength.

Cat. No.		Cat. No.	
20A	50 ft.	220A	500 ft.
221A	100 ft.	1220A	1000 ft.

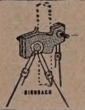
BIRNBACH TV-FM GUY WIRE KIT



Simple and complete directions with each individually boxed kit. Contains 50 ft. 6 strands heavy No. 20 Guy Wire—3 Birnbach No. 764 Springs — 6 Birnbach Vibration-proof No. 762 Clamps, and Guy Wire Ring.

Cat. No.	St. Pkge.
226	24

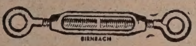
UNIVERSAL GUY WIRE CLAMP



Heavy gauge cadmium plated steel fastens anywhere on mast. Fits up to 1½" O.D.

Cat. No.	St. Pkge.
T7	50

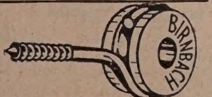
BIRNBACH TURNBUCKLES



Constructed of rust-proofed, galvanized steel. Used to take up any slack guy wire. Convenient, durable, dependable.

Cat. No.	Sizes of Turnbuckles	St. Pkge.
763—3	3½"	100
763—5	5½"	100
763—7	7½"	50

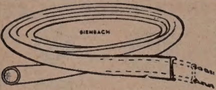
BIRNBACH SCREW EYES



Porcelain screw eye handles up to 300 ohm line. Bakelite screw eye can take any size coaxial cable.

Cat. No.	St. Pkge.
PORCELAIN EYES	
663— 3"	100
664— 7"	50
667—12"	25
BAKELITE EYES	
963— 3"	100
964— 7"	50
967—12"	25

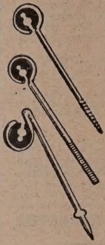
CLEAR VINYL TUBING FOR TV



For 300 ohm line. Protects it from grounding when going over corners and eaves of buildings. Waterproofs line and eliminates loss of signal.

Cat. No.		St. Pkge.
321BC	100 ft. coils	8

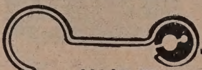
UNIVERSAL SCREW EYE STANDOFFS



Insulated twin lead standoff constructed of low loss polyethylene and universal for both 300 ohm line and RC59U cable. Completely weatherproofed. No. 1965—3½" machine screw standoff designed for mounting in metal mast—uses a 10-32 thread. No. 1968 — 3½" Drivin Insulators.

Cat. No.	St. Pkge.
1963—3½"	100
1964—7½"	100
1967—12½"	100
1965—3½" M.S.	100
1968—3½" Drive-in	100

BIRNBACH "SNAP-ON" MAST STANDOFF CLAMP

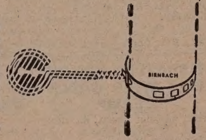


Snaps on masts in a jiffy. One piece construction for added strength; has universal polyethylene insert for both twin lead and coax cable. Constructed of .120 spring alloy music wire, heavily zinc plated for preventing rust.

Cat. No.	St. Pkge.
T100—to fit 1" masts 4$\frac{5}{16}$" long	100
T101—to fit 1¼" masts 4$\frac{7}{16}$" long	100
T102—to fit 1½" masts 4$\frac{7}{16}$" long	100

BIRNBACH STRAP CLAMP

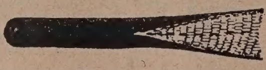
For Standoff Insulator



Just bend this clamp around a mast or vent pipe and screw in any wood screw standoff to tighten. No tools required. Adjustable ⅜" to 2" diam.

Cat. No.	St. Pkge.
629	100

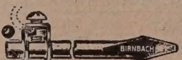
BIRNBACH TELEVISION LOOM



⅜" Non-Metallic Loom used for the protection of Twin Lead and Coax Cable on television installations.

Cat. No.	Spool
1013	25 ft.
1014	50 ft.
1015	100 ft.

BIRNBACH GROUND RODS



Highly efficient. For FM and TV antennas.

Cat. No.	St. Pkge.
616—4 ft.	12
618—6 ft.	12
619—8 ft.	12

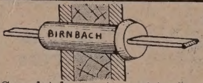
AIRPLANE INSULATORS

BIRNBACH
BIRNBACH

Used on mobile and aircraft and also with guy wire on TV installations. Shaped for the least air resistance; have very high tensile strength and low loss. Nos. 473 and 474 made of white glazed low absorption porcelain. No. 472 made of wetprocess glazed brown

Cat. No.	St. Pkge.
472—2¼" (brown)	25
473—2" (white)	100
474—1½" (white)	100

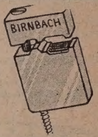
TWIN LEAD PORCELAIN TUBE



Completely water-resistant; fits ¾" hole. Brings twin lead directly into house. Lengths specified are from underhead.

Cat. No.	St. Pkge.
T44—4"	100
T46—6"	100
T48—8"	50

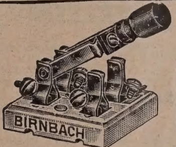
TV PORCELAIN SCREW TWIN-LEAD KNOB



Use this standoff insulator for keeping line away from wall and to anchor the end of the line. Complete with screw.

Cat. No.	St. Pkge.
T669—Screw Twin-Lead Knob	100

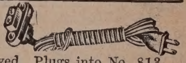
BIRNBACH KNIFE SWITCHES



Made of special nickel-plated spring brass on a rugged base. Screw terminals located conveniently for easy connections in circuit. Two mounting holes.

Cat. No.	Description	St. Pkge.
6100	S.P. S.T.	10
6102	S.P. D.T.	10
6103	D.P. S.T.	10
6104	D.P. D.T.	10
6105	T.P. D.T.	10

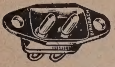
TELEVISION SAFETY CORD



6 Ft. UL approved. Plugs into No. 813.

815—TV Safety Cord St. Pkge. 100

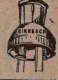
MALE AC INTERLOCK PLUG



Designed to mount on TV receiver cabinet and serves as socket for Safety Cord No. 815.

813—AC Interlock Plug St. Pkge. 100

MALE RUBBER PLUGS

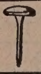


Brass prongs. Rated 15 amps at 125 Volts. ⅜" hole.

St. Pkge.

814—Rubber Male Plug 100

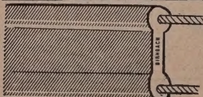
INSULATED WIRING NAILS



Perfected for twin lead indoors. Low capacity effect. Fully insulated.

Cat No. T42—White or Brown (100 to box) - (1000 to carton)

TWIN-LEAD 300 OHM TRANSMISSION LINE



FM - Television

Smooth Polyethylene insulation resists water, alkalies, oil, acids and abrasions—superior in resistance to sunlight and moisture.

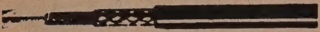
Cat. No.		St. Pkge.
7028—	50 ft. coils	25
7029—	100 ft. coils	12
7030—	1000 ft. spool	8

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

TV Antenna Mounting Accessories
Coax • Twin Lead • TV Accessories

RG59/U—72 OHM COAXIAL CABLE



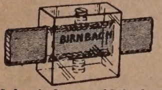
Low impedance assures efficient transfer of energy with negligible interference from local noise, auto ignition and other electrical disturbances.

Attenuation—D.B. per 100 ft.

10MC	30MC	100MC	300MC	400MC	3000MC
1.0	2.0	3.8	7.0	8.9	29

Nominal Impedance 72
Nominal Capacitance MMF/Ft. 21

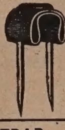
Cat. No.		St. Pkge.
907—	100 ft. spool	10
908—	250 ft. spool	4
909—	500 ft. spool	4
910—	1000 ft. reel	1



TWIN LEAD CONNECTOR

Made of clear, molded plastic this connector easily splices twin leads. Weather proof.
Cat. No. 112....................St. Pkge. 100

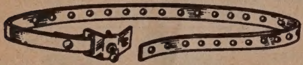
INSULATED STAPLES



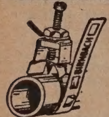
Essential for securing lead-in, ground, and other wires for installation.

Cat. No.	St. Pkge.
R100—Plain Staples, 100 to box	1000
D50—Plain Staples, 50 to box	1000

VENT PIPE MOUNTING STRAP



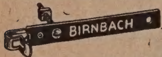
For securing poles of television or mast antennas to vent pipes. Cadmium plated steel, 24" long.
Cat. No. 626......................St. Pkg. 25



SADDLE GROUND CLAMPS

Have hard pointed screw which digs through rust and makes a positive contact. Fits ⅜" to 2" pipe.

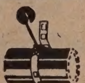
Cat. No. 625.....St. Pkge. 50



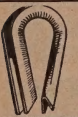
COPPER STRAP CLAMP

Will takes ⅜" to 2" pipe. Made of copper with Birnbach clip riveted and soldered to strap. Complete with nut and bolt.
Cat. No. 600......................St. Pkge. 50

MAST STAND-OFF ASSEMBLY



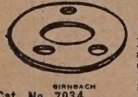
For fast mounting of twin lead or coaxial cable. Complete with polyethylene universal insert. Fits all size masts from ⅜" to 2" pipes. Fully weatherproofed.
Cat. No. 628.............................St. Pkge. 50



GUY WIRE THIMBLE

Hot dip galvanized with rounded points and deep scores. Prevents wire from fraying and loosening.

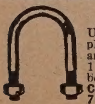
Cat. No.	St. Pkge.
T6—(½" width)	100



FLOATING GUY WIRE RING

Free floating; can be placed at any point on mast by use of clamp underneath. Fits 1", 1⅛", 1¼" O.D. masts. Specify size desired.
Cat. No. 7034......................St. Pkge. 50

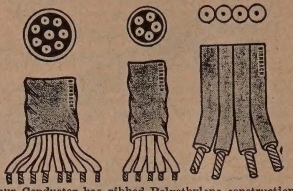
BIRNBACH U-BOLT



Useful for mounting poles to steel, plates, wooden sections, etc. Nuts and washers supplied. 4" overall; 1¼" thread length, 1½" distance between legs, ¼-20 size thread.

Cat. No.	St. Pkge.
7035—4" U-Bolt	50

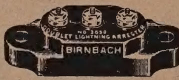
ANTENNA CONTROL ROTOR CABLE



Four Conductor has ribbed Polyethylene construction to facilitate making of connections in compact housings and control boxes. Separates like zip wire. Cable has one tinned conductor for coding identity. 4 conductors No. 7/28 stranded.
Five conductor is color coded and twisted with round plastic jacket overall. 5 cond. No. 20 - 7/28 stranded.
Eight Conductor is color coded and twisted with round plastic jacket overall as used widely for Radiart. 8 cond. No. 22 - 7/30 stranded.

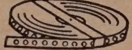
Cat. No.		
1874A—	500 ft. spool	4 cond. Flat Rotor Cable
1874 —	1000 ft. spool	4 cond. Flat Rotor Cable
1875A—	500 ft. spool	5 cond. Round Rotor Cable
1875 —	1000 ft. spool	5 cond. Round Rotor Cable
1878A—	500 ft. spool	8 cond. Round Rotor Cable
1878 —	1000 ft. spool	8 cond. Round Rotor Cable

DOUBLET LIGHTNING ARRRESTOR



Air gap type, accepted means of protecting doublet antennas from lightning. Complete with mounting screws. Instructions printed on box.
Cat. No. 2650...................St. Pkge. 25

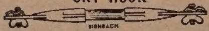
PERFORATED HANGER STRAPPING



For mounting Antenna Masts to various odd shaped objects such as chimneys, towers, etc. Made of ¾" x .023 galvanized steel strap. Tough but flexible.

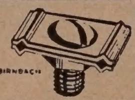
7032—	12 ft. Coil—Strapping	St. Pkge. 25
7033—	100 ft. Coil—Strapping	St. Pkge. 8

ANTENNA STABILIZER
"SKY HOOK"

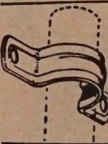


Used on conical antennas to take the chatter and wow from the vibrating elements. Superior rigid universal construction handles various sized elements; prevents loosening and breakage of dipoles.
Cat. No. T104—Antenna Stabilizer...St. Pkge. 50

VIBRATION-PROOF GUY WIRE CABLE CLAMP



For positive grip on guy wire. Weatherproofed.
762—Guy Wire Clamp....St. Pkge. 100

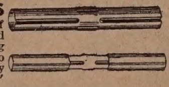


PIPE HANGERS

Galvanized steel. Can be used for fastening poles, masts to walls, roofs, gables, etc. Two sizes: 1", 1¼"; specify size.

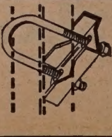
Cat. No.	St. Pkge.
7038	100

MAST COUPLERS



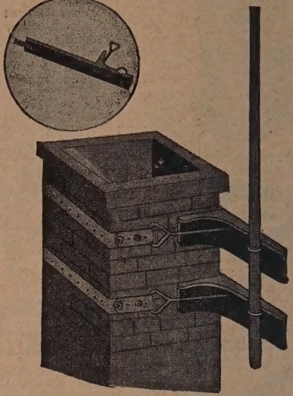
Will join 2 sections of mast easily, quickly and permanently, allowing an additional mast to be added without any trouble. Takes 1¼" Masts.
Cat. No. T103—Mast Coupler.......St. Pkge. 25

U-BOLT MAST COUPLER

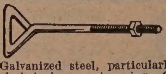


Galvanized steel bracket couples mast securely. Will take two masts. Also permits fast and secure attachment of crossarms to masts up to 1½".
Cat. No. T8....St. Pkge. 50

CHIMNEY MOUNT ANTENNA BASE
New Model No. 6000



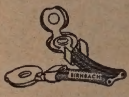
Simple, one-man installation. No drilling. No special tools. Fits all chimneys. Two separate sections. Base castings made of strong corrosion resistant hardware. 2—12 ft. steel strapping, etc. Fits masts ⅝" to 1½" O.D.
6000—Chimney Mount.............St. Pkge. 12



STRAP EYE BOLT

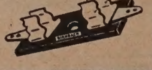
Galvanized steel, particularly suited for taking up slack in hanger strapping. Overall length 4". Supplied with nut and washer.
Cat. No. T9—Eye Bolt............St. Pkge. 100

FOLD-OVER SOLDERLESS TERMINAL LUGS



Use this lug for easy, positive vibration-proof terminal connections at antenna mast and for permanent connections at receiver. Simply lay bare wire into groove and fold over. No special tools necessary. For No. 10 hole.

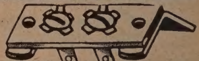
Cat. No.	Quan. in Pkge.	St. Carton
1017-10	10 (Envelope)	25 Pkgs.
1017-50	50 (Envelope)	25 Pkgs.
1017-100	100 (Envelope)	12 Pkgs.
1017-1000	1000 (Box)	10 Pkgs.



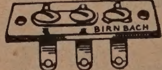
FUSE MOUNT BASE

Protects high voltage and similar type circuits. Takes 3 AG auto fuse. ⅛" bakelite.
T15.......St. Pkge. 50

TERMINAL STRIPS 2 POST



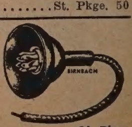
Excellent mounting for twin lead transmission lines. Brass hot tiined lugs spaced $\frac{7}{16}$" center to center. $\frac{1}{16}$" bakelite. $1\frac{15}{16}$" mounting center.
Cat. No. T16.....................St. Pkge. 50



BIRNBACH 3 POST

A synchronizing lock strip for RCA type television receivers. Brass hot tinned lugs. Spaced $\frac{7}{16}$" center to center. Mounting center 1¾". $\frac{1}{16}$" bakelite.
Cat. No. T16A.....................St. Pkge. 50

Hi-Voltage Anode Cap with Lead



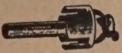
Dependable protection from high voltages found on cathode ray tubes. Supplied with 18" lead.

Cat. No.	St. Pkge
T14—Hi-Volt Anode Cap with Lead..... For RCA, G.E., and Sylvania Tubes.	25

See Pages S-38 and S-39 for Birnbach Prices

Birnbach TV Accessories • Tube Masks • Glass Braid Insulated • Thermoplastic • Hookup Wire

PHONO ATTACHMENT PLUG



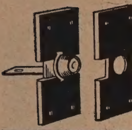
To be used with recording and reproducing equipment, record players, etc. Large hole in cap for coaxial cable and extra long pin for new type jacks.

Cat. No.	St. Pkge.
248—Phono Plug (Long Pin)..........	100
248S—Phono Plug (Short Pin)........	100

PHONO JACK

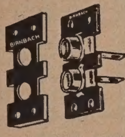
Designed to fit No. 248 Plug. Positive grip, single prong. Mounted on 1/16″ bakelite. 11/16″ mounting centers.

Cat. No.	St. Pkge.
249—Phono Jack ...	100
249A—Phono Jack ..	100



Cat. No. 249A is a single jack, mounted on rectangular bakelite base. Mtg. centers ½″ x 1 3/16″, with top insulator.

DUAL PHONO JACK



Used on phono players and recording units, etc., where dual application is needed. Mounted on 1/16″ bakelite. Double mounting holes are spaced ½″ x 1 3/16″. 9/16″ center to center of jacks.

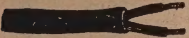
Cat. No.	St. Pkge.
T250—Dual Phono Jack	100
T250A—With top insulator	100

HALF-MOON DUO-DECAL SOCKET

For CR Television tubes. Solid moulded black bakelite provides 100% insulation around clip and lead. Multi-colored lead-in wires. 19″ leads supplied.

Cat. No.	St. Pkge.
T20—Duo-Decal Socket...	25

COMMERCIAL TYPE TWISTED PAIR



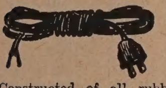
(Transmission Line)

Used for low loss transmission line between receiver and antenna as doublet lead-in wire and for intercom setup. Consists of two wires with 1/32″ wall rubber color coded with a cotton braided weather-proof finish overall.

Cat. No.	Spool Ft.	No. of Conds.	Gauge	Stranding	Insul.
951	100	2	22	7/30	1/32
952	500	2	22	7/30	1/32
919	500	2	18	16/30	1/32
920	1000	2	18	16/30	1/32

Cat. No.	Cap. Bet. Conds.	Freq. KC	O.D.
951	21.8 mmf	3.75	.200
952	21.8 mmf	3.75	.200
919	21.8 mmf	3.75	.225
920	21.8 mmf	3.75	.225

BIRNBACH SERVICE LINE CORD

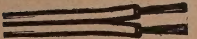


Underwriters Approved

Constructed of all rubber parallel UL approved wire with rubber plug on one end and with the other end stripped, tinned and hanked ready for use. Available in black and brown.

Cat. No.	Ft.
816	6
817	7½
819	10

POSJ ALL RUBBER LAMP CORD



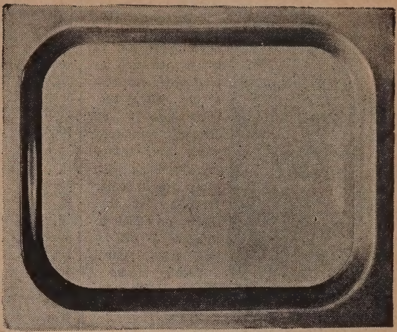
(Underwriters Approved)

An all purpose approved, very flexible rubber covered parallel cord which is easily separated by slit in jacket; has color coded cotton serve.

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	O.D.
570	100	2	18	41/34	.135 x .235
572	250	2	18	41/34	.135 x .235
573	500	2	18	41/34	.135 x .235

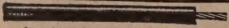
COLORS: Brown, Black, Ivory

BIRNBACH TV TUBE MASKS



Plastic Masks for Television, perfect for all conversion and custom built jobs. Made of the finest unbreakable clear Acrylic to provide precision optical perfection. They are sturdy and rugged and framed in quality gold leaf finish. Molded to fit the television tube perfectly. Unique design provides an anti-static distortion free picture and serves as a protective shield for the TV tube.

T105-14..........	14″ rectangular
T105-16..........	16″ rectangular
T105-16R	16″ round
T105-17..........	17″ rectangular
T105-19R	19″ round
T105-20..........	20″ rectangular



TYPE SRIR — 1000-VOLT (Fungus Proof)

SPECIFICATION JAN-C-76

The following items meet all requirements of Army-Navy joint specifications JAN-C-76 Type SRIR for plain resin construction where highest resistance to fungus growth is required. Has high dielectric strength, high temperature stability, low temperature flexibility, low moisture absorption, high flame resistance; resists all common solvents.

STRANDED

Cat. No.	Spool Ft.	Size AWG	JAN-C-76 Type Designation	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft-Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7024	1000	24	2/5(16)-24	16 Wires .005″	.015″	5000	8000	.054″
7024-1	100	24	2/5(16)-24	16 Wires .005″	.015″	5000	8000	.054″
7001	1000	22	3/5(7)-22	7 Wires .010″	.017″	5000	8000	.069″
7001-1	100	22	3/5(7)-22	7 Wires .010″	.017″	5000	8000	.069″
7003	1000	20	1 (10)-20	10 Wires .010″	.017″	5000	8000	.077″
7003-1	100	20	1 (10)-20	10 Wires .010″	.017″	5000	8000	.077″
7005	1000	18	1-½(16)-18	16 Wires .010″	.017″	5000	8000	.086″
7005-1	100	18	1-½(16)-18	16 Wires .010″	.017″	5000	8000	.086″
7007	1000	16	2-½(26)-16	26 Wires .010″	.017″	5000	8000	.098″
7007-1	100	16	2-½(26)-16	26 Wires .010″	.017″	5000	8000	.098″
7009	1000	14	4 (41)-14	41 Wires .010″	.033″	7500	12000	.148″
7009-1	100	14	4 (41)-14	41 Wires .010″	.033″	7500	12000	.148″
7011	1000	12	6 (65)-12	65 Wires .010″	.033″	7500	12000	.171″
7011-1	100	12	6 (65)-12	65 Wires .010″	.033″	7500	12000	.171″

SOLID

Cat. No.	Spool Ft.	Size AWG	JAN-C-76 Type Designation	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft-Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7000	1000	22	3/5(1)-22	.0253 Solid	.017″	5000	8000	.064″
7000-1	100	22	3/5(1)-22	.0253 Solid	.017″	5000	8000	.064″
7002	1000	20	1(1)-20	.032 Solid	.017″	5000	8000	.071″
7002-1	100	20	1(1)-20	.032 Solid	.017″	5000	8000	.071″
7004	1000	18	1-½(1)-18	.0403 Solid	.017″	5000	8000	.079″
7004-1	100	18	1-½(1)-18	.0403 Solid	.017″	5000	8000	.079″

COLORS: Black, White, Red, Green, Gray, Blue, Yellow, Orange, Brown, Dark Blue, Purple, Tan, Pink.

In addition to above standard colors we can furnish Cat. No. 7001 - 22 stranded in the following spiral tracer colors: White with Blue; White with Black; White with Red; White with Orange; White with Yellow; White with Green.

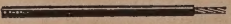
TYPE WL GLASS BRAID — 600-VOLT (Fungus Proof)

SPECIFICATION JAN-C-76

Extensively used on electronic devices, aircraft instruments, lighting and power, transmitters, radar, etc. Constructed of one conductor stranded copper tinned, high heat vinyl insulation, glass braid with a heavily lacquered coating which is fungus proof and flame resistant.

Cat. No.	Spool Ft.	Size AWG	JAN-C-76 Type Designation	Stranding	Nom. Wall	Nom. DC Ins. Res/Ft-Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7022	1000	22	3/5(7)-22	7 Wires .010″	.012″	1000	5000	.077″
7022-1	100	22	3/5(7)-22	7 Wires .010″	.012″	1000	5000	.077″
7020	1000	20	1(10)-20	10 Wires .010″	.012″	1000	5000	085″
7020-1	100	20	1(10)-20	10 Wires .010″	.012″	1000	5000	085″
7018	1000	18	1-½(16)-18	16 Wires .010″	.013″	1000	5000	.096″
7018-1	100	18	1-½(16)-18	16 Wires .010″	.013″	1000	5000	.096″
7016	1000	16	2-½(26)-16	26 Wires .010″	.015″	1000	5000	.112″
7016-1	100	16	2-½(26)-16	26 Wires .010″	.015″	1000	5000	.112″

COLORS:
White
White/Black
White/Brown
White/Red
White/Orange
White/Yellow
White/Green
White/Blue
White/Purple
White/Grey
White/Black/Red
White/Black/Yellow
White/Black/Blue
White/Black/Green
White/Black/Orange
White/Black/Brown
White/Black/Gray



THERMOPLASTIC INSULATED HOOK-UP WIRE

90°C—600-VOLT RATING UL APPROVED

Especially designed for the chassis, sub chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL approved for 90°C (194°F) operating temperature. Has high electrical characteristics. All wires are annealed tinned copper.

Cat. No.	Spool Ft.	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs./Ft.	Max. O.D.
7201	1000	22	7/.010	.032″	18000	5000	.100″
7201-1	100	22	7/.010	.032″	18000	5000	.100″
7203	1000	20	10/.010	.032″	18000	5000	.104″
7203-1	100	20	10/.010	.032″	18000	5000	.104″
7205	1000	18	16/.010	.032″	18000	5000	.112″
7205-1	100	18	16/.010	.032″	18000	5000	.112″
7207	1000	16	26/.010	.032″	18000	5000	.129″
7207-1	100	16	26/.010	.032″	18000	5000	.129″
7202	1000	22	Solid	.032″	18000	5000	.095″
7202-1	100	22	Solid	.032″	18000	5000	.095″
7204	1000	20	Solid	.032″	18000	5000	.102″
7204-1	100	20	Solid	.032″	18000	5000	.102″

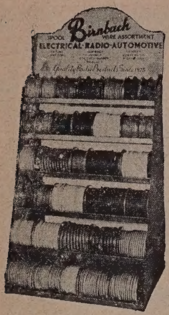
COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple.

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Test Lead, Lacquered, Filament Wire
Hookup Wire • Service Cord • Lamp Cord

BIRNBACH SPECIAL SPOOL ASSORTMENT

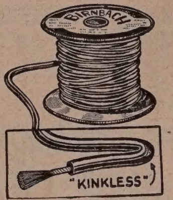


FREE DISPLAY

One Display is given with each initial order for 100 spools. Each Display made of strong, reinforced steel, mahogany crackle finish with attractive 3 color Display at top. Space provided to indicate YOUR resale price. Extra Display Racks available.

Cat. No.	Ft.	Size	Type
3000	65	22	Solid Pushback
3001	55	20	Solid Pushback
3002	45	18	Solid Pushback
3003	35	16	Solid Pushback
3004	30	14	Solid Pushback
3005	55	22	Stranded Pushback
3006	45	20	Stranded Pushback
3007	40	18	Stranded Pushback
3008	30	16	Stranded Pushback
3009	20	14	Stranded Pushback
3010	50	18	Colored Rubber
3011	35	16	Colored Rubber
3012	30	14	Stranded Leadin
3013	60	18	Solid Leadin
3014	65	18	Stranded Leadin
3015	35	18	Stranded Lacquered
3016	75		Brown & White AC-DC Wire
3017	30		Kinkless Wire
3018	20	18	Twisted Lamp Cord
3019	35	18	Single Fix. Wire
3020	20	18	Parallel Silk
3021	15	18	Blk, Wht, Brn Zip Cord
3022	100	18	Solid Tinned
3023	75	18	Bell Wire
3024	15	20	Phono Pickup Wire

KINKLESS TEST LEAD WIRE

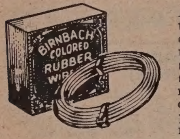


An extremely flexible wire with a wall of abrasion resisting live rubber that will not kink or break down in service under rough usage and repeated bendings. Has found wide use in laboratory test equipment, analyzers, oscillators, etc.

Cat. No.	Spool Ft.	Size	Strand-ing	Insul.	Volt. Breakdown 60 Cycles	O.D.
61	100	20	41/36	3/64	12,000	.140
62	500	20	41/36	3/64	12,000	.140
66	100	18	66/36	3/64	12,000	.150
67	500	18	66/36	3/64	12,000	.150
	High Voltage Kinkless Test Lead Wire					
68	100	18	66/36	5/64	16,500	.210
69	500	18	66/36	5/64	16,500	.210

COLORS: Red and Black

STRANDED COLORED RUBBER WIRE



Annealed stranded tinned copper conductors with a cotton wrap, and insulated with a special grade of non-cracking live colored rubber compound. It strips readily.

Cat. No.	Ft.	Size	Wire Strand-ing	Current Carrying Capac-ity Amps.	Punct. Volt. 60 Cy. AC	O.D.
1225	1000	18-1/64	16-30	3	5500	.087
440	50	16-1/32	26-30	6	8000	.135
1440	100	16-1/32	26-30	6	8000	.135
2440	500	16-1/32	26-30	6	8000	.135

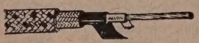
COLORS: Red, Black, White, Brown, Green

FILAMENT WIRE (High Amperage)

Cat. No.	Ft.	Size	Wire Strand-ing	Current Carrying Capac-ity Amps.	Punct. Volt. 60 Cy. AC	O.D.
782	25	14-1/32	26-28	15	8500	.145
786	500	14-1/32	26-28	15	8500	.145
784	25	12-3/64	41-28	20	12,000	.190
787	500	12-3/64	41-28	20	12,000	.190

COLORS: Red and Black

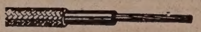
VARNISHED CAMBRIC WIRE



Widely used in automotive wiring because of oil and waterproof construction. Consists of tinned stranded conductor with two layers of varnished cambric over which a lacquered cotton braid is woven.

Cat. No.	Spool Ft.	Size	Stranding	Puncture V.	O.D.
3420	100	20	10/30	1000	.094
3418	100	18	16/30	1000	.097
3416	100	16	26/30	1000	.108

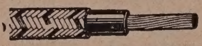
RAYON BRAID LACQUERED WIRE



Constructed of stranded tinned copper with heavy wall of live rubber over which is woven a rayon braid and a high gloss lacquered finish over braid. Easy to solder and strip.
COLORS: Black, Red, Green, Yellow, Brown, Blue and White.

Cat. No.	Ft.	Size	Strand	Insul.	Punc. Volts	DC Ins. Res./Ft. Meg.	O.D.
3425	25	18	16/30	1/32	9000	460	.125
3450	50	18	16/30	1/32	9000	460	.125
3460	100	18	16/30	1/32	9000	460	.125
3600	500	18	16/30	1/32	9000	460	.125

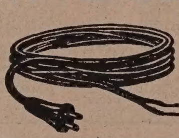
BIRNBACH HI VOLTAGE LACQUERED PRIMARY WIRE



Recommended for use as leads for wiring high voltage devices, auto head, tail, dashboard, lamps, horns, spotlight, instrument leads and for all primary voltage applications. Constructed of soft drawn, tinned copper, with a wall of rubber and covered with a highly lacquered cotton braid, making it oil, heat and moisture resistant.

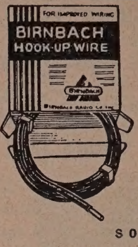
Cat. No.	Spool Ft.	Size	Strand-ing	Insul.	Puncture V.	O.D.
2818	100	18	16/30	1/32	9500	.125
2816	100	16	26/30	1/32	9500	.140
2814	100	14	41/30	1/32	9500	.170
2812	100	12	19/25	1/32	9500	.190
2810	100	10	19/23	1/32	9500	.208

BIRNBACH
HEAVY DUTY SERVICE CORD



A heavy rubber jacketed cable, Underwriters Approved for replacement in refrigerators, washing machines and electrical appliances. Cat. Nos. 309 and 312 consist of 2 No. 18 S.V. Stranded Conductors with a soft rubber plug at one end; the other end is stripped and tinned ready for use. Cat. No. 248 consists of 8 ft. 2 Cond. No. 16 S.J. all rubber hanked, stripped and tinned with all rubber plug.

Cat. No.	Conds.	Ft.	Type	Stranding	O.D.
348	2	8	SJ	65/34	.325
309	2	9	SV	41/34	.250
312	2	12	SV	41/34	.250



BIRNBACH BIRNTEX SLIPBACK WIRE

This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. Pushes back easily.

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Yellow.

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 50 Cy. AC	O.D.
		SOLID			
70	25 Coil	22	Solid	1500	.060
72	100 Spool	22	Solid	1500	.060
74	500 Spool	22	Solid	1500	.060
76	1000 Spool	22	Solid	1500	.060
80	25 Coil	20	Solid	1500	.065
84	100 Spool	20	Solid	1500	.065
88	500 Spool	20	Solid	1500	.065
92	1000 Spool	20	Solid	1500	.065
82	25 Coil	18	Solid	1500	.075
86	100 Spool	18	Solid	1500	.075
90	500 Spool	18	Solid	1500	.075
94	1000 Spool	18	Solid	1500	.075
		STRANDED			
71	25 Coil	22	7/30	1500	.065
73	100 Spool	22	7/30	1500	.065
75	500 Spool	22	7/30	1500	.065
77	1000 Spool	22	7/30	1500	.065
81	25 Coil	20	10/30	1500	.070
85	100 Spool	20	10/30	1500	.070
89	500 Spool	20	10/30	1500	.070
93	1000 Spool	20	10/30	1500	.070
83	25 Coil	18	16/30	1500	.080
87	100 Spool	18	16/30	1500	.080
91	500 Spool	18	16/30	1500	.080
95	1000 Spool	18	16/30	1500	.080

BIRNBACH RADEX SLIPBACK HOOKUP WIRE

FOR IMPROVED WIRING
BIRNBACH
HOOK-UP WIRE

It has a covering of .010 rubber over a cotton wrap and is then covered with a bright color cotton braid and dipped into paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. It has a high dielectric strength and will withstand all climatic changes without breakdown.

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 50 Cy. AC	O.D.
		SOLID			
280	25 Coil	20	Solid	2000	.090
380	100 Spool	20	Solid	2000	.090
480	500 Spool	20	Solid	2000	.090
580	1000 Spool	20	Solid	2000	.090
282	25 Coil	18	Solid	2100	.098
382	100 Spool	18	Solid	2100	.098
482	500 Spool	18	Solid	2100	.098
582	1000 Spool	18	Solid	2100	.098
284	25 Coil	16	Solid	2100	.108
384	100 Spool	16	Solid	2100	.108
484	500 Spool	16	Solid	2100	.108
584	1000 Spool	16	Solid	2100	.108
286	25 Coil	14	Solid	2100	.122
386	100 Spool	14	Solid	2100	.122
486	500 Spool	14	Solid	2100	.122
586	1000 Spool	14	Solid	2100	.122
288	25 Coil	12	Solid	2200	.135
388	100 Spool	12	Solid	2200	.135
488	500 Spool	12	Solid	2200	.135
588	1000 Spool	12	Solid	2200	.135
		STRANDED			
281	25 Coil	20	10/30	2100	.093
381	100 Spool	20	10/30	2100	.093
481	500 Spool	20	10/30	2100	.093
581	1000 Spool	20	10/30	2100	.093
283	25 Coil	18	16/30	2200	.103
383	100 Spool	18	16/30	2200	.103
483	500 Spool	18	16/30	2200	.103
583	1000 Spool	18	16/30	2200	.103
285	25 Coil	16	26/30	2200	.118
385	100 Spool	16	26/30	2200	.118
485	500 Spool	16	26/30	2200	.118
585	1000 Spool	16	26/30	2200	.118
287	25 Coil	14	41/30	2200	.135
387	100 Spool	14	41/30	2200	.135
487	500 Spool	14	41/30	2200	.135
587	1000 Spool	14	41/30	2200	.135
289	25 Coil	12	65/30	2300	.155
389	100 Spool	12	65/30	2300	.155
489	500 Spool	12	65/30	2300	.155
589	1000 Spool	12	65/30	2300	.155

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Orange.

See Pages S-38 and S-39 for Birnbach Prices

Birnbach Multiple Conductor Cables • Mike Cable Speaker Cable • Diathermy Cable

BIRNBACH RUBBER MULTIPLE CONDUCTOR CABLES

(Not Shielded)

Used for permanent or portable PA systems, sound recording, indoor and outdoor speakers where it will stand up under all weather conditions and rough usage. Consists of No. 20 Stranded 26/34 flexible tinned copper cotton wrap, .022 low capacity rubber color coded, twisted, cotton filler, cotton wrap with a tough rubber jacket overall.

MULTIPLE CABLE COLOR CODING CHART

1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Conds. mmf	O.D.
788	100	2	20	26/34	22	.275
789	250	2	20	26/31	22	.275
790	100	3	20	26/34	20	.285
791	250	3	20	26/34	20	.285
792	100	4	20	26/34	18	.305
793	250	4	20	26/34	18	.305
794	100	5	20	26/34	16	.335
795	250	5	20	26/34	16	.335
796	100	6	20	26/34	15	.355
797	250	6	20	26/34	15	.355
798	100	7	20	26/34	15	.370
749	100	8	20	26/34	14	.395

LONGER LENGTHS AVAILABLE

BIRNBACH RUBBER SERVICE CORD

Heavy Duty U.L. Approved

For power line requirement where rough usage is indicated as for amplifiers, speakers, vacuum cleaners, tools, refrigerators, washing machines,, trouble lights, etc. All color coded. Underwriters approved.

Cat. No.	Spool Ft.	Cds	Size No.	Type		Amp. Rating	Volt Rating	O.D.
701	250	2	18	SV	41/34	7	300	.250
574	250	2	18	SJ	41/34	7	300	.300
578	250	2	16	SJ	65/34	10	300	.325
702	250	2	18	S	41/34	7	600	.390
703	250	2	16	S	65/34	10	600	.410
704	100	2	14	S	41/30	15	600	.540
705	100	2	12	S	65/30	20	600	.590

Longer lengths and additional conductors also available.

BIRNBACH RUBBER SHIELDED MICROPHONE CABLE

Used for indoor and outdoor crystal, carbon and condenser mikes and for all sound systems. Consists of extra flexible tinned copper conductors, each insulated with a wall of .022 low capacity rubber, color coded, twisted, cotton fillers, braided tinned copper shielding, cotton wrap with a tough weatherproof black rubber jacket overall which will withstand hard and rough usage.

Microphone Cable Color Coding Chart

1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Shield and Cond. mmf	Cap. Bet. Cond. mmf	O.D.
772	100	2	20	26/34	50	40	.280
1772	250	2	20	26/34	50	40	.280
772/18	100	2	18	41/34	55	45	.300
773	100	3	20	26/34	55	38	.290
1773	250	3	20	26/34	55	38	.290
774	100	4	20	26/34	60	35	.300
1774	250	4	20	26/34	60	35	.300
775	100	5	20	26/34	60	31	.330
1775	250	5	20	26/34	60	31	.330
776	100	6	20	26/34	60	30	.350
1776	250	6	20	26/34	60	30	.350
777	100	7	20	26/34	60	30	.365
1777	250	7	20	26/34	60	30	.365
778	100	8	20	26/34	60	30	.390

Longer Lengths Available

CRYSTAL MICROPHONE CABLE

Used with crystal, dynamic, velocity, ribon microphones, and photoelectric cells. Birnbach No. 870 used widely for lapel microphones and phono pickups. Constructed of extra flexible, stranded, tinned copper, cotton serve—insulated with new low loss rubber compound, braided tinned copper shield cotton serve and covered with tough black rubber jacket.

Cat. No.	Spool Ft.	Cond.	Size No.	Stranding	Cap/ft.	O.D.
870	100	1	20	26/34	40 mmf	.175″
1870	250	1	20	26/34	40 mmf	.175″
872	100	1	20	26/34	30 mmf	.245″
1872	250	1	20	26/34	30 mmf	.245″

Longer Lengths Available

BIRNBACH MULTIPLE CONDUCTOR FLEXIBLE CABLE

(Cotton Braid Overall)

Constructed of individual 1/64 rubber wall No. 20 stranded, tinned cotton braid; color coded; conductors twisted and with a closely woven brown cotton braid overall. Used widely for P.A. systems, analyzers, remote control units, etc.

COLOR CODING CHART

1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—White/Black Tracer
10—Red/Black Tracer,
11—Green/Black Tracer
12—Orange/Black Tracer

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Rubber Insul.	O.D.
172	100	2	20	10/30	1/64	.205
173	100	3	20	10/30	1/64	.245
174	100	4	20	10/30	1/64	.265
175	100	5	20	10/30	1/64	.290
176	100	6	20	10/30	1/64	.310
177	100	7	20	10/30	1/64	.325
178	100	8	20	10/30	1/64	.360
179	100	9	20	10/30	1/64	.395
180	100	10	20	10/30	1/64	.425
182	100	12	20	10/30	1/64	.440

MULTIPLE CONDUCTOR THERMO-PLASTIC CABLE

(Cotton Braid Overall)

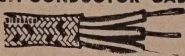
Constructed of individual No. 22 stranded tinned copper, 1/64 thermoplastic insulation, color coded; conductors twisted with brown cotton braid overall. Used widely for P.A. systems, remote control units, multiple circuit hookups and whenever a small diameter cable is indicated.

COLOR CODING CHART

1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—Purple, 10—Pink,
11—Gray, 12—Dk. Blue.

Cat. No.	Spool Ft.	No. of Conds.	Size No.	Stranding	Thermoplastic Insul.	O.D.
263	100	3	22	7/30	1/64	.165
264	100	4	22	7/30	1/64	.175
265	100	5	22	7/30	1/64	.200
266	100	6	22	7/30	1/64	.215
267	100	7	22	7/30	1/64	.235
268	100	8	22	7/30	1/64	.250
269	100	9	22	7/30	1/64	.265
270	100	10	22	7/30	1/64	.300
272	100	12	22	7/30	1/64	.330

BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE



THERMOPLASTIC INSULATION
TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972S	2	20	10/30	1/64	50	28	.170
973S	3	20	10/30	1/64	48	21	.192
WAXED COTTON BRAID OVER SHIELD							
972B	2	20	10/30	1/64	50	28	.180

BIRNBACH SHIELDED TWO WIRE SPEAKER CABLE

Used widely for master control sound systems, photo electric circuits, public address systems, etc. The No. 972A consists of 2 conductors twisted No. 18—16/30 tinned copper with a 1/32″ wall of color coded low capacity rubber with paper wrap covering the two conductors and a closely woven tinned copper shield overall. The No. 1972A has same construction as the 972A with a waxed cotton braid over the shield.

COLOR CODING CHART

1—Black; 2—Red

TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972A	2	18	16/30	1/32	65	23	.250
Tinned Shield with Cotton Braid Overall							
1972A	2	18	16/30	1/32	65	23	.275

BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE

(Tinned Braid Overall)

Consists of No. 20, 10/30 flexible tinned copper with 1/64″ rubber wall, color coded cotton braid, twisted, with tinned copper shield woven over cable. Generally used indoors to prevent interference pickup on P.A. systems, recording equipment, photo electric circuits, etc. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972	2	20	10/30	1/64	60	32	.215
973	3	20	10/30	1/64	55	30	.220
974	4	20	10/30	1/64	48	26	.250
975	5	20	10/30	1/64	45	23	.280
976	6	20	10/30	1/64	40	23	.290
977	7	20	10/30	1/64	40	20	.315
978	8	20	10/30	1/64	35	20	.350

COLOR CODING CHART

1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

SHIELDED MULTIPLE CONDUCTOR CABLE

(Cotton Braid Overall)

Constructed of individual tinned stranded copper with a 1/64″ wall of rubber covered with a colored cotton braid. A tinned copper shield follows and a brown cotton braid covers this cable. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
1972	2	20	10/30	1/64	60	32	.225
1973	3	20	10/30	1/64	55	30	.230
1974	4	20	10/30	1/64	48	36	.260
1975	5	20	10/30	1/64	45	23	.290
1976	6	20	10/30	1/64	40	23	.300

COLOR CODING CHART

1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

BIRNBACH DIATHERMY CABLE

Especially designed for use with electrotherapy apparatus, charging cable battery lead and underground cable. It is made of size No. 14 stranded double cotton braid and with an extremely flexible special grade of tough, live rubber jacket.

Cat. No.	Spool Ft.	No. Conds.	Size	Stranding	O.D.
756	100	1	14	104/34	.300
757	1000	1	14	104/34	.300

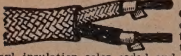
See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Intercom • Hookup • Lead-In Wires • Phono Pickup Tinned, Enamelled Copper Wire • Bus Bar

BIRNBACH

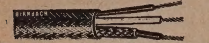
SHIELDED TWISTED PAIR CABLE



Consists of two conductors #24, 16/36 tinned copper, twisted with .015 vinyl insulation color coded and with tinned copper shield overall. For public address systems, phono pickups, sound recording and various electronic circuits. **COLOR CODE:** Red and Black.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Insul.	O.D.
826	1000	2	24	16/36	.015	.115

INTER-COM CABLE 3 CONDUCTORS

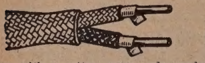


1 Shielded
2 Unshielded

Used for single shielded wire in station to station wiring in order to eliminate cross talk. Consists of 3 conductors #22 stranded tinned copper wire with vinyl insulation, color coded and twisted—one conductor with tinned copper shield, the other two unshielded; with cotton braid overall.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	O.D.
923	500	3	22	7/30	.155

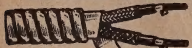
SHIELDED TWISTED PAIR



Cat. No. 822 and 824 are constructed of solid enameled wire with a cotton wrap, color coded cotton braid, twisted pair waxed and bare copper braid woven overall. Cat. No. 825 is composed of two conductors twisted #20 solid tinned copper enamel baked, cotton wrap waxed; color coded and twisted with a bare copper braid shield overall.

Cat. No.	Spool	Conds.	O.D.
822	500 Ft.	2 - 22 Solid	.125
824	500 Ft.	2 - 19 Solid	.145
825	500 Ft.	2 - 20 Solid	.135

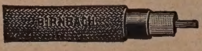
ARMORED SPEAKER CABLE



Constructed of 2 conductor parallel #18—16/30 stranded tinned copper 1/64" wall rubber, color coded cotton braid lacquered, and spiral steel armor overall.

Cat. No.	Spool Ft.	Size	Stranding	O.D.
1111	250	18	16/30	.155 x .240
1112	500	18	16/30	.155 x .240
1113	1000	18	16/30	.155 x .240

7MM HIGH TENSION CABLE



UNSHIELDED

Useful in reducing interference from auto secondary circuits. Also used as photoelectric cell leads, high voltage leads in television receivers, cathode-ray tubes, etc. Single conductor #16 stranded rubber insulation with cotton braid and heavy coats of lacquer.

Cat. No.	Spool	Size	Stranding	O.D.
1600	100 Ft.	16	19/29	.275

7MM SHIELDED SECONDARY WIRE

Used for auto and aircraft ignition systems where grounding is necessary for effective elimination of interference. Same construction as #1600 with a shielded, tinned copper braid overall.

Cat. No.	Spool	Size	Stranding	O.D.
781	100 Ft.	16	19/29	295

BIRNBACH PHONO PICKUP WIRE

EXTRA FLEXIBLE

Where small diameter, limpness and extreme flexibility is necessary as for use on phono pickup arms and grid wire. Constructed of #24 gauge flexible stranded copper wire with rubber insulation and a close tinned copper braid shield overall. No. 1825 and 1825M have same construction with fine brown cotton braid over shield.

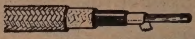
Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1824	500	24	16/36	.015	.080
1824M	1000	24	16/36	.015	.080
1825	500	24	16/36	.015	.095
1825M	1000	24	16/36	.015	.095

PHONO PICKUP WIRE

Used on phono pickup arms and grid leads where extreme flexibility is not of paramount importance. Constructed of #22—7/30 tinned copper wire with 1/64 wall of vinyl plastic insulation and a closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1822	100	22	7/30	1/64	.090
1822B	500	22	7/30	1/64	.090
1822C	1000	22	7/30	1/64	.090

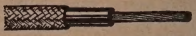
SHIELDED GRID LEAD WIRE



High insulation of this wire will reduce loss in shielded grid circuits. Tinned copper stranded wire with rubber insulation, lacquered cotton braid with closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Ins. Under-shield	Cap/Ft. mmfd.	O.D.
820	100	20	10/30	.085	70	.140
818	100	18	16/30	.085	75	.150

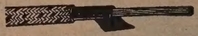
SHIELDED HOOK-UP AND LEAD-IN WIRE



Used to prevent and reduce interference caused by motors, high tension wires, X-ray machines and man-made static. Consists of stranded tinned copper, a wall of low loss live rubber over which is woven a tinned copper shield.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Cap/Ft. mmfd	O.D.
810	500	20	10/30	1/64	105	.095
809	100	18	16/30	1/64	125	.125
803	250	18	16/30	1/64	125	.125
851	100	16	26/30	1/32	90	.145
802	250	16	26/30	1/32	90	.145
806	100	14	19/27	3/64	95	.185
801	250	14	19/27	3/64	95	.185

SHIELDED VARNISHED CAMBRIC WIRE



Used where an oil and water resistant wire with a shielded covering is required. Constructed of tinned stranded conductor with 2 layers of varnished cambric and a lacquered cotton braid with a tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Cap/Ft. mmfd	O.D.
1820	100	20	10/30	100	.125
1818	100	18	16/30	102	.131
1800	100	16	26/30	142	.145

Stranded Bare Copper Wire

Cat. No.			
7/20			
493	100	ft.	coil
7/22 (14 B&S)			
1640	75	ft.	coil
1670	100	ft.	coil
1639	1000	ft.	spool
7/23 (15 B&S)			
1643	75	ft.	coil
1673	100	ft.	coil
1634	1000	ft.	spool
7/24 (16 B&S)			
1646	75	ft.	coil
1680	100	ft.	coil
1647	1000	ft.	spool
7/26			
647	75	ft.	coil
681	100	ft.	coil
1648	1000	ft.	spool
7/27			
740	75	ft.	coil
700	100	ft.	coil
1741	1000	ft.	spool

Stranded Tinned Copper Wire

Cat. No.			
7/20			
495	100	ft.	coil
7/22 (14 B&S)			
1641	75	ft.	coil
1671	100	ft.	coil
1638	1000	ft.	spool
7/23 (15 B&S)			
1644	75	ft.	coil
1674	100	ft.	coil
1633	1000	ft.	spool
7/24 (16 B&S)			
1697	75	ft.	coil
1696	100	ft.	coil
1628	1000	ft.	spool

Solid Tinned Copper Wire

SOFT DAWN

Cat. No.			
No. 8			
1433	100	ft.	coil
No. 10			
1401	50	ft.	coil
1402	100	ft.	coil
1403	1000	ft.	spool
No. 12			
1405	50	ft.	coil
1406	100	ft.	coil
1407	1000	ft.	spool
No. 14			
1409	50	ft.	coil
1410	100	ft.	coil
1411	1000	ft.	spool
No. 16			
1413	50	ft.	coil
1414	100	ft.	coil
1415	1000	ft.	spool
No. 18			
1417	50	ft.	coil
1418	100	ft.	coil
1419	1000	ft.	spool
No. 20			
1421	50	ft.	coil
1422	100	ft.	coil
1423	1000	ft.	spool
No. 22			
1434	1000	ft.	spool

Phosphor Bronze

Twice the strength of copper. Used extensively on Master Antenna Systems, airports, ships, where strength and resistance to the elements are important.

Cat. No.	Ft.	Size
527	100	7/16
499	100	7/18
524	100	7/20
526	100	7/22

Special Lengths available on order.

Stranded Enamel Copper Wire

Cat. No.			
7/22 (14 B&S)			
1642	75	ft.	coil
1672	100	ft.	coil
1637	1000	ft.	spool
7/23 (15 B&S)			
1645	75	ft.	coil
1675	100	ft.	coil
1631	1000	ft.	spool
7/24 (16 B&S)			
1683	75	ft.	coil
1682	100	ft.	coil
1627	1000	ft.	spool

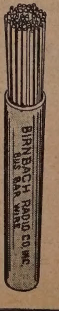
Solid Bare Copper Wire

SOFT DRAWN

Cat. No.			
No. 10			
1561	50	ft.	coil
1562	100	ft.	coil
1563	1000	ft.	spool
No. 12			
1565	50	ft.	coil
1566	100	ft.	coil
1567	1000	ft.	spool
No. 14			
1569	50	ft.	coil
1570	100	ft.	coil
1571	1000	ft.	spool
No. 16			
1573	50	ft.	coil
1574	100	ft.	coil
1575	1000	ft.	spool

Solid Enamel Copper Wire

Cat. No.			
No. 10			
697	50	ft.	coil
497	100	ft.	coil
1497	1000	ft.	spool
No. 12			
292	50	ft.	coil
492	100	ft.	coil
492-A	150	ft.	coil
492-B	200	ft.	coil
1492	1000	ft.	spool
No. 14			
290	50	ft.	coil
490	100	ft.	coil
490-A	150	ft.	coil
490-B	200	ft.	coil
1490	1000	ft.	spool



Birnbach Tinned Bus Bar Wire

For hooking up all types of transmitters, especially ultra short wave equipment. All Bus Wire is made of hard drawn copper, tinned, straightened, and cut 2 ft. lengths.

(100 to Std. Pkg.)

Cat. No.	
2010	10 Round
2012	12 Square
2013	12 Round
2014	14 Square
2015	14 Round
2016	16 Round

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

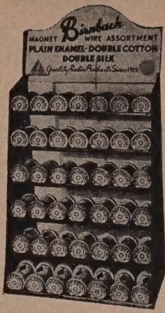
Magnet Wire • Copperweld Wire
Tubing • Special Spool Assortments

BIRNBACH
RADIO CO. INC.

BIRNBACH MAGNET AND TINNED WIRE
SPECIAL SPOOLS

Attractive Spools, even sizes from 14 to 40 inclusive in Double Cotton, Plain Enamel, Double Silk and Solid Tinned. This display on the counter is a Silent Salesman bringing you real profits the year around.

FREE DISPLAY One Display Given with each initial order of 100 spools. Display made of strong, reinforced steel. Mahogany crackle finish. 3-color display at top. Space for YOUR resale price. Extra Display Racks available.


MAGNET Birnbach WIRE ASSORTMENT
PLAIN ENAMEL-DOUBLE COTTON
DOUBLE SILK
Quality Radio Products Since 1925

Length of Wire of Special Spools

Size B&S	Plain Enamel Ft.	Double Cotton Ft.	Double Silk Ft.	Solid Tinned Ft.
10	11	—	—	11
12	15	9	—	15
14	26	20	11	26
16	34	34	19	34
18	56	44	23	56
20	86	56	29	86
22	112	75	37	112
24	184	97	56	184
26	244	116	71	244
28	401	131	90	401
30	525	158	112	525
32	675	180	124	675
34	900	195	131	900
36	1275	206	142	1275
38	1725	240	116	1725
40	1950	265	125	1950

BIRACO TUBING
(Extruded Vinyl)

Synthetic plastic tubing especially designed for electronic and electrical insulation work. Extremely flexible and high resistance to abrasion. Has high dielectric strength, average 10,000 volts and high tensile strength. Will not support combustion, soften up to 257°F. or crack at —75°F. Its dielectric strength: 1100 volts per mil at room temperature when dry and 1000 volts per mil when wet. Impervious to water, oil, alkalies, alcohol, solvents, etc. Meets all ASTM specs.

COLORS: Black, Red, Green, White, Yellow, Blue, Brown, Orange and Clear. (36" lengths)

Cat. No.	B&S Gauge Size No.	Approx. I.D.
313	20	.034
314	18	.042
315	16	.053
316	14	.066
317	12	.085
325	10	.106
318	8	.135
326	6	.166
319	4	.208
320	2	.263
321	5/16	.3125
322	3/8	.375
323	1/2	.500
324	5/8	.625

VARNISHED TUBING

Constructed of high quality rayon braid with heavy coatings of varnish applied. The inside is also coated for easy insertion of stranded wires. It is impervious to oil, acid and water. Extremely flexible; it will not crack after aging. Average dielectric strength 5000 volts. Meets all ASTM and VTA No. B-1 Specifications.

COLORS: Black, Red, Green, Yellow, Blue, Brown, Orange. (30" Lengths)

Cat. No.	B&S Gauge Size No.	Approx. I.D.
291	20	.034
293	18	.042
294	16	.053
295	14	.066
300	12	.085
307	10	.106
301	8	.133
302	6	.166
297	3/16	.208
298	1/4	.263
303	5/16	.3125
304	3/8	.375
299	1/2	.500
296	5/8	.625

TUBING IN HANDY SPOOLS

Both the Biraco Extruded Vinyl Tubing and Varnished Tubing are now available on convenient spools, in special length spools and 100-ft. spools in a variety of assorted colors. It is a perfect item for servicemen, laboratories and for manufacturing purposes.

BIRNBACH BIRACO TUBING
(Extruded Vinyl)

Cat. No.	B&S Gauge Size No.	Approx. I.D.	Length Spool
313B	20	.034	25 Ft.
314B	18	.042	25 Ft.
315B	16	.053	25 Ft.
316B	14	.066	25 Ft.
317B	12	.085	25 Ft.
325B	10	.106	15 Ft.
318B	8	.135	15 Ft.
326B	6	.166	15 Ft.
319B	4	.208	10 Ft.
320B	2	.263	10 Ft.
313BC	20	.034	100 Ft.
314BC	18	.042	100 Ft.
315BC	16	.053	100 Ft.
316BC	14	.066	100 Ft.
317BC	12	.085	100 Ft.
325BC	10	.106	100 Ft.
318BC	8	.135	100 Ft.
326BC	6	.166	100 Ft.
319BC	4	.208	100 Ft.
320BC	2	.263	100 Ft.
321BC	5/16	.3125	100 Ft.
322BC	3/8	.375	100 Ft.
323BC	1/2	.500	100 Ft.
324BC	5/8	.625	100 Ft.

COLORS: Red, Black, Green, White, Yellow, Blue, Brown, Clear and Orange.

BIRNBACH VARNISHED TUBING
Radio and Electronic Grade

Cat. No.	B&S Gauge Size No.	Approx. I.D	Length Spool
291V	20	.034	25 Ft.
293V	18	.042	25 Ft.
294V	16	.053	25 Ft.
295V	14	.066	25 Ft.
300V	12	.085	25 Ft.
307V	10	.106	20 Ft.
301V	8	.135	15 Ft.
302V	6	.166	10 Ft.
305V	4	.208	10 Ft.
306V	2	.263	10 Ft.
291VC	20	.034	100 Ft.
293VC	18	.042	100 Ft.
294VC	16	.053	100 Ft.
295VC	14	.066	100 Ft.
300VC	12	.085	100 Ft.
307VC	10	.106	100 Ft.
301VC	8	.135	100 Ft.
302VC	6	.166	100 Ft.
305VC	4	.208	100 Ft.
306VC	2	.263	100 Ft.
303VC	5/16	.3125	100 Ft.
304VC	3/8	.375	100 Ft.
299VC	1/2	.500	100 Ft.
296VC	5/8	.625	100 Ft.

COLORS: Black, Red, Green, White, Yellow, Blue, Brown, and Orange.

PLAIN ENAMEL

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573

DOUBLE COTTON

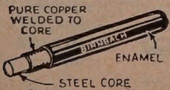
Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
12	12	24	49
14	19	39	78
16	31	62	123
18	48	97	194
20	78	157	304
22	119	238	477
24	134	269	538
26	284	568	1136
28	435	871	1742
30	641	1284	2569
32	976	1953	3906
34	1365	2735	5470
36	1827	3654	7309
38	2738	5476	10952
40	3405	6811	13623

DOUBLE SILK

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
12	12	24	49
14	19	39	78
16	31	62	125
18	49	99	198
20	78	157	314
22	123	247	495
24	195	390	781
26	303	606	1212
28	478	956	1912
30	739	1479	2958
32	1136	2272	4545
34	1712	3424	6849
36	2551	5102	10204
38	3770	7541	15082
40	5040	10080	20161

SOLID TINNED (Soft Drawn)

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573



BIRNBACH COPPERWELD ENAMEL ANTENNA WIRE

Steel core covered with copper and heavily enameled. Will not elongate because of its high tensile strength . . . which is several times that of enameled copper wire. It has low R.F. resistance and is ideal for transmitting doublet and directional antenna systems as it will maintain the frequency characteristics of the antenna because of its stretchless qualities.

Cat. No.	Size B&S	Available in Following Footages:	Size B&S	Ft. per Lb.	Tensile Strength
710	10	100 ft. coils; 250 ft., 500 ft.,	10	34½	1130 lbs.
712	12	1000 ft., 2500 ft. spools	12	54	720 lbs.
714	14	Specify Length Desired Next to Cat. No.	14	85	400 lbs.

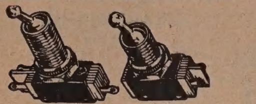
See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Toggle • Rotary • Push Button • Plugs
Slide Switches • Jacks • Alligator Clips

BIRNBACH

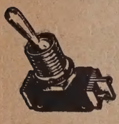
BIRNBACH TOGGLE SWITCHES



A very small, high grade UL approved switch. Well adapted for use on small motors, radio and electronic devices. Rated at 3 amps. at 125 volts. Mfd. by H. & H. for Birnbach. Switches nickel plated and supplied with ring and mounting nut. Laminated type.

Cat. No.	Description	Shank Length	Std. Pkge.
6200	SPST	15/32"	25
6201	SPST	3/4"	25
6202	SPDT	15/32"	25
6203	SPDT	3/4"	25
6204	DPST	15/32"	25
6205	DPST	3/4"	25
6206	DPDT	15/32"	25
6207	DPDT	3/4"	25
6208	ON-OFF Toggle Switch Plates Only		10

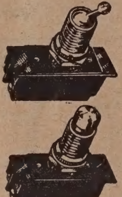
BIRNBACH BAT HANDLE TOGGLE SWITCHES



Available in nickel-plated finish and supplied with ring and mounting nut. Made by H. & H. for Birnbach. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6220	SPST	15/32"	25
6221	SPDT	15/32"	25
6222	DPST	15/32"	25
6223	DPDT	15/32"	25

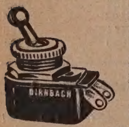
BIRNBACH POWER SWITCH



DPST switch rated at 12 amps at 125 volts per pole. When a single pole switch is required, the rating can be doubled. The push button power switch has the same rating. Primarily intended as a safety switch to be used as an interlock connection on doors of dangerous high voltage devices. Mfd. by H. & H. for Birnbach. UL approved.

Std. Pkge.
6225—Toggle Switch 25
6226—Push Button Switch 25

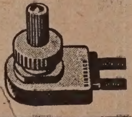
SMALL APPLIANCE SWITCH



Rated high—3 amps. at 250 volts; 6 amps. at 125 volts. Small molded compact switch 15/32" shank; brass nickel plated with solder lugs and complete with hex nut and ring. One hole mounting. UL approved.

Cat. No.	Descrip.	Std. Pkge.
6244	SPST	25

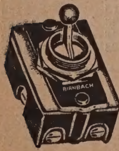
CANOPY SWITCH



Has a 3 amp., 125 volts; 1 amp., 250 volts rating. 6" leads. CSA approved.

Cat. No. Std. Pkge.
6249—Canopy Switch ..50

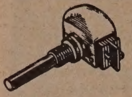
HEAVY DUTY POWER SWITCH



Recommended for use in transmitters, amplifiers, movie equipment and motors where heavy currents are carried. Made by H. & H. for Birnbach. Nickel plated and rated 10 amps., 125 volts. Neutral off in center position. 2" L., 1" H., 1¼" W. Mounting sleeve diam. ¾". UL approved.

Cat. No.	Description	Std. Pkge.
6227	DPDT	25
6228	3PDT	25
6229	4PDT	10

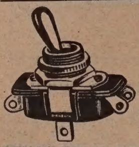
BIRNBACH ROTARY SWITCHES



Made by H. & H. for Birnbach. Rated at 1 amp., 250 volts; 3 amps., 125 volts. Nickel plated and supplied with mounting nut. UL approved.

Cat. No.	Description	Shank Length	Overall Length of Shaft Incl. Shank	Std. Pkg.
6210	SPST	⅜"	1½"	25
6211	SPST	1"	2½"	25
6212	SPDT	⅜"	1½"	25
6213	SPDT	1"	2½"	25
6214	DPST	⅜"	1½"	25
6215	DPST	1"	2½"	25
6216	DPDT	⅜"	1½"	25
6217	DPDT	1"	2½"	25

BIRNBACH DPDT CENTER OFF SWITCH

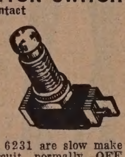


Rated at 1 amp., 125 volts. Has lug terminal with bat handle. 15/32" diam. shaft, nickel plated.

6243........St. Pkg. 25

BIRNBACH PUSH BUTTON SWITCH

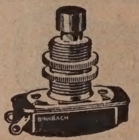
Momentary Contact



Made by H. & H. for Birnbach. Slow make and quick break. Laminated type with solder lugs. No. 6224 is a two circuit slow momentary make and quick break momentary contact switch. One circuit is normally ON and the other is OFF. Pushing the button reverses the circuits in use. Used on many testers and analyzers. Cat. No. 6230 and 6231 are slow make and break switches with circuit normally OFF and push to make. Has 9/16" slotted sleeve, 15/32" diam. Complete with 1 hex nut and one knurled nut. Rated 1 amp., 125 volts. UL approved. Nickel plated.

Cat. No.	Description	Std. Pkge.
6224	DPST	25
6230	SPST	25
6231	DPST	25
6232	Button Only—Red or Black	20

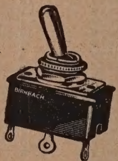
MOMENTARY PUSH BUTTON SWITCH



Molded momentary push button switch with solder lugs. Rated at 1 amp. ,125 volts. With 15/32" shank. Normally OFF—push to make. Nickel plated.

Cat. No.	Description	Std. Pkge.
6233	SPST	25
6234	SPDT	25
6235	DPST	25
6236	DPDT	25

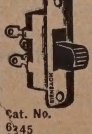
BAKELITE MOLDED MOMENTARY CONTACT SWITCH



Made by H. & H. for Birnbach. Rated at 3 amps., 250 volts; 6 amps., 125 volts. Molded ith 15/32" diam., Molded with 15/32" diam.. Has momentary contact bat handle. Circuit normally OFF. Used on intercoms. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6241	SPST	15/32"	25
6242	DPDT	15/32"	25

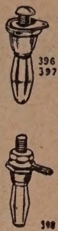
BIRNBACH SLIDE LEVER SWITCH



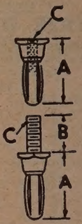
Popular for phonographs, tone controls, auto lights, test instruments. Rated at 1½ amps., 110 volts; ½" wide by 1⅜" long. Mounting centers 1⅛".

Cat. No.	Description	Std. Pkge
6245	SPST	25
6246	SPDT	25
6247	DPST	25
6248	DPDT	25

BIRNBACH GIANT PLUGS

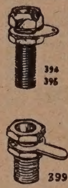


The Giant Plugs are intended for use where heavy current is used. They are rated at 25 amps. The long life nickel silver alloy spring is secured over a pin preventing a collapse of the spring and also maintaining the full spring action of the spring when inserted into the jack. The No. 398A plug has a hole in the thread shank to permit soldering to it. It is used extensively on diathermy electrode pad cables.

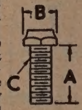


Cat. No.		Std. Pkg.	A	B	C
396	Plug	25	1-5/32	—	10-32
397	Plug	25	1-7/16	—	¼-20
398	Plug	25	1-5/32	⅝	¼-28
398A	Plug	25	1-5/32	⅝	¼-28

BIRNBACH GIANT JACKS

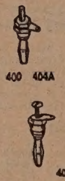


Carefuly milled with the central hole being reamed to size to insure a tight and wobble free fit with all Giant Plugs. The No. 394 and No. 399A have a 10-32 thread tapped at the end permitting connection to be made there with the use of a screw and lug. Made of brass and nickel-plated. Complete with nut and lug.



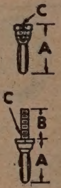
Cat. No.		Std. Pkg.	A	B	C
394	Jack	25	1-1/16	½	⅜-24
395	Jack	25	11/16	½	⅜-24
399	Jack	25	⅞	⅝	½-20
399A	Jack	25	1¼	⅝	½-20

BIRNBACH BANANA PLUGS



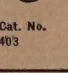
Large area of contact is one of the outstanding features of these jacks and plugs. The No. 400 series of plugs have a nickel silver contact spring secured over a full length central pin, making these plugs non-collapsible and assuring a low resistance contact.

Capacity 5 Amperes.



Cat. No.		Std. Pkg.	A	B	C
400	Plug	100	¾	½	6-32
401	Plug	100	31/32	—	6-32
404A	Plug	100	¾	⅜	¼-28

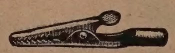
BIRNBACH No. 403 BANANA JACK



Accurately milled. Precision reamed hole helps maintain the tight and smooth action of the plug. Brass nickel plated. With nut and lug.

Cat. No.	Std. Pkg.	A	B	C
403	100	½	⅜	¼-28

No. 31 ALLIGATOR CLIP



Nickel plated steel.

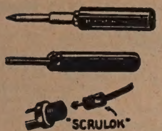
Cat. No.	Length	Std. Pkge.
31	2"	50

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Insulated Phone Tips • Plugs Jacks • Alligator Clips

BIRNBACH INSULATED PHONE TIP (SCRULOK)

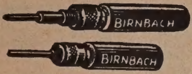


1" long, 5/16" dia. Connection is made by threading wire through the Scrulok threaded bushing (see drawing).

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No. **Std. Pkge.**
412—Scrulok Pin Tip, 1-9/16" Long.......50
419—Scrulok Pin Tip, 1-15/16" Long.......50

INSULATED Solderless PHONE TIPS

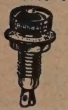


They have insulated handles ⅜" dia. by 1" long fitted to solderless phone tips. The wire can be easily attached by threading through the hole in the handle and tightening the knurled nut.

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No. **Std. Pkge.**
409—Insulated Sr. Solderless Tip 2¼" Long 50
415—Insulated Jr. Solderless Tip 1-13/16" Long 50

No. 407 INSULATED TIP JACK

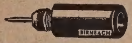


7/16" insulated top; mounts in a 5/16" dia. hole. The specially designed bronze springs hold the phone tip tight and straight.

COLORS: Red, Black, Yellow, Green.

Cat. No. **Std. Pkge.**
407—Insulated Phone Tip Jack...100

No. 330 INSULATED NEEDLE POINT PLUG

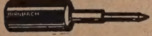


The insulated sleeve is ¾" long. Positive contact is assured with the sharp needle point phone tip. Body of plug accommodates all standard banana type plugs; easily pierces insulation.

Available in Black or Red.

Cat. No. **Std. Pkge.**
330—Insulated Needlepoint Plug............50

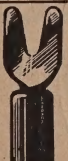
No. 331 INSULATED PHONE TIP PLUG



Plugs into all standard phone tip jacks. The ¾" long insulated sleeve is designed to accommodate all standard banana type plugs. Overall length 1½". Available in Black, Red, Yellow and Green.

Cat. No. **Std. Pkge.**
331 —Insulated Phone Tip Plug............50
331A—Tip Only 50

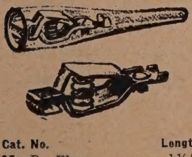
No. 332 INSULATED SPADE LUG



Sleeve measures ¾" long by ⅜" diameter. Barrel accommodates all standard banana type plugs. Available in Red or Black.

Cat. No. **Std. Pkge.**
332 —Insulated Spade Lug.....50
332A—Spade Only 50

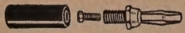
TEST CLIPS



The No. 27-C is a solid copper clip with a brass screw designed for high frequency work.

Cat. No.	Length	Jaw Spread	Std. Pkg.
27—Pee Wee	1½"	⅜"	50
28—Midget	2"	9/16"	50
29—Medium	2⅞"	1"	50
30—Large	4"	1¼"	50
27C—Pee Wee Copper..	1½"	⅜"	50
27R—Rubber Sleeve—Red or Black..........			50

No. 404 INSULATED BANANA PLUG

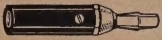


It has the Scrulok solderless connection and the non-collapsible special alloy springs assembled on a pin preventing collapse of the plug spring. The handle is made of phenolic resin and is ⅜" wide by 1" long.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404.................... Std. Pkg. 50

No. 404B SPRING BANANA PLUG

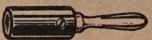


Same construction as No. 404 above except with small side screw for wire connection.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404B...................Std. Pkg. 50

No. 604 BANANA PLUG

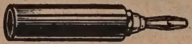


Solid brass nickel-plated, with the end slotted. Cast phenolic handle is 1" long by ⅜" dia. and is held on by the screw that secures wire to plug.

COLORS: Red, Black, Yellow, Green and Blue.

Cat. No. 604....................Std. Pkg. 50

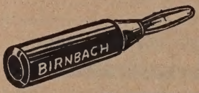
No. 341 INSULATED BANANA PLUG



This plug consists of our No. 404A plug with a larger handle 1⅞" long by ½" dia. Used on therapeutic apparatus and test equipment. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 341....................Std. Pkg. 50

No. 392 INSULATED GIANT PLUG



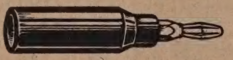
No projecting edges are exposed.

Connection is made by soldering into the hole at the end of the threaded shank of the plug. Handle is 1⅞" long by ⅝" dia.; length overall 3".

COLORS: Red or Black.

Cat. No. 392....................Std. Pkg. 50

No. 342 HARD RUBBER INSULATED GIANT PLUG

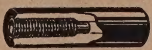


Designed for use with diathermy cables. It has a ⅝" dia. hole in the handle to take the largest cable. Polished black hard rubber. The handle is 3" long by ⅞" dia. Overall length is 4$\frac{13}{16}$".

COLORS: Red or Black

Cat. No. 342....................Std. Pkg. 50

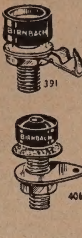
No. 605 HANDLE JACK



Consists of a banana jack inside an insulated sleeve. Connection is made by soldering to the end of the jack. Handle is made of cast phenolic resin ⅜" dia. by 1¼" long. **COLORS:** Red, Black, Yellow and Green.

Cat. No. 605....................Std. Pkg. 50

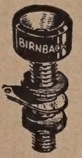
Nos. 391 and 406 INSULATED BANANA JACKS



½" dia. insulated head admits all of the exposed metal part of the metal plug when inserted. Mounts in a 5/16" dia. hole on a panel up to ⅜" thick. No. 406 Jack has a 7/16" dia. insulated top. It fits into 5/16" dia. hole and takes up to a ⅜" panel. Both with insulating shoulder washer, nut and lug.

Cat. No. **Std. Pkg.**
391—Insulated Jack—Red, Black, Yellow, Green...50
406—Insulated Jack—Red, Black, Yellow, Blue, Green 50

No. 393 INSULATED GIANT JACK

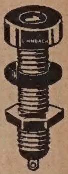


Designed to leave no metal part exposed on the panel. The ⅜-24 brass nickel plated sleeve has a 10-32 threaded hole at the end permitting a connection at the end of the jack or to the lug under the head. Either assembly available complete with nut, insulating shoulder washer, lock-washer and lug. Length overall 1⅜".

COLORS: Red or Black.

Cat. No. **Std. Pkg.**
393 —Insulated Giant Jack lug under head.......50
393A—Insulated Giant Jack lug at end..........50

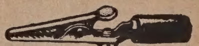
No. 333 INSULATED COMBINATION JACK



Accommodates all standard plugs of the phone tip or banana type construction. ¼" hole mounting in panels up to ½" thick. Overall length 1⅜". Supplied complete with insulating shoulder, washer and nut. Insulated head comes in following colors: Black, Red, Green or Yellow.

Cat. No. 333........Std. Pkg. 50

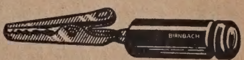
No. 310 INSULATED ALLIGATOR CLIP



Steel nickel plated. The insulated handle is ⅜" dia. and ¾" long and 2¼" overall and comes in Red or Black.

Cat. No. 310...................Std. Pkg. 50

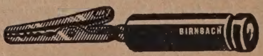
No. 334 ALLIGATOR CLIP WITH PHONE TIP JACK



1" long insulated handle houses a tip jack that accommodates all standard phone tip plugs. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 334...................Std. Pkg. 50

No. 335 ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip is composed of a combination jack in rear for both standard phone tip plugs and banana plugs. 1-9/16" length of handle. Overall length 3". Available in Red or Black.

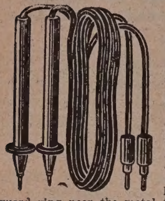
Cat. No. 335...................Std. Pkg. 50

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Hi-Voltage Test Leads • Prods • Jacks
Phone Tips • Brackets • Lugs

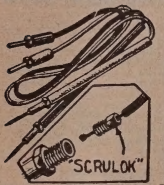
HEAVY DUTY HIGH VOLTAGE TEST LEADS



Safely tests up to 15,000 volts. High dielectric strength and lo leakage resistance. Has low voltage drop. Prods and tip handles are made of black and red bakelite with special tip for application. Cable constructed of No. 18 - 66/36 tinned copper with heavy duty rubber wall. Prods are 6″ long and ½″ dia. and have a protective rugged guard ring near the metal tip. The other end has 1¼″x½″ dia. bakelite prods. All prods and cable color coded. The leads are 60″ long.

Cat. No.	Std. Pkg.
562—Heavy Duty High Voltage Test Leads	10

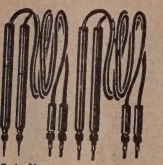
BAKELITE PENCIL TYPE TEST LEADS
(SCRULOK)



Red and black bakelite handles, 6″ long and 5/16″ in dia., and red and black bakelite insulated phone tips. Heavy kinkless wire is used together with the Birnbach Scrulok system of solderless wire connection. The Universal needle and phone tip prod have the same dimensions as the standard phone tip and are useful for piercing insulation without damage. Length overall 60″.

Cat. No.	Std. Pkg.
408—Bakelite Pencil Type Test Lead	10
439—Needlepoint Prod Tip for Replacement	10

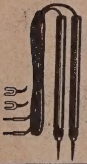
DELUXE TEST LEADS



Constructed with 5″ long cast phenolic red and black handles with removable needlepoint chucks or solderless tips. Black and red heavy kinkless instrument 48″ long is used to connect the prods with the insulated red and black cast phenolic solderless tips.

Cat. No.	Std. Pkg.
560—Needlepoint	25
561—Solderless	25

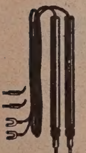
NEEDLEPOINT TEST LEADS



These test leads have 4″ red and black insulated handles. A needlepoint chuck is fitted to the handle. Needles can be replaced when broken simply by loosening the knurled collar. Length overall 50″.

Cat. No.	Std. Pkg.
420—Needlepoint Phone Tip Test Leads	25
421—Needlepoint Spade Lug Test Leads	25

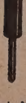
STANDARD TEST LEADS



A Sr. solderless phone tip is fitted to a red and black insulated handle 4″ long. This permits replacement of wire when broken. The wire is secured by tightening the knurled nut. Length overall 50″.

Cat. No.	Std. Pkg.
422—Soldeless Phone Tip Test Leads	25
423—Solderless Spade Lug Test Leads	25

PHONE TIPS

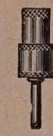


The 402 is 1″ in overall length and fits all standard phone tip jacks. Hole is drilled for 7/64″; length of barrel is ½″. Brass, nickel plated.

The 402A has a large drilled hole 5/32″ I.D.; 7/16″ barrel length; 1″ overall. Made of brass with nickel plated finish.

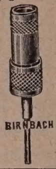
Cat. No.	Std. Pkg.
402 —Phone Tips	100
402A—Larger Diameter	100

SOLDERLESS PHONE TIPS

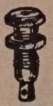


These phone tips are milled of solid brass and nickel plated. Designed for easy insertion of the wire.

Cat. No.	Std. Pkg.
23—Junior	100
24—Senior	100



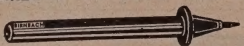
No. 26 PHONE TIP JACK



Milled of brass nickel plated. The bronze springs are made to hold the phone tip tight and straight. Mounts in a ¼″ dia. hole.

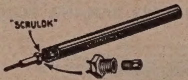
Cat. No. 26............Std. Pkg. 100

HEAVY DUTY HIGH VOLTAGE BAKELITE TEST PROD HANDLES



Same as used on No. 562. 6″ long and ½″ dia. with finger guard control. The rear of the prod can accommodate IN-34 crystal and condenser for use as an RF probe. Tips are heavy brass with nickel plating. Available in Red and Black.

Cat. No.	Handle Length	Handle Width	Overall Length
559	6″	½″	6-15/16″
558	1¼″	½″	2¼″



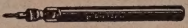
No. 411 BAKELITE PENCIL TEST PRODS

These prods have the Birnbach Scrulok solderless needlepoint tips. They are made of bakelite and are 6″ long and 5/16″ dia. The connection is made by threading the wire through the handle and securing to the needlepoint tip by locking the Scrulok. The tip is then screwed into the handle.

Available in Red or Black.

Cat. No.	Std. Pkg.
411—Bakelite Pencil Test Prods	12

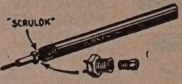
NEEDLEPOINT TEST PROD



A threaded shank needlepoint chuck is threaded into the end of handle. Made of highly polished cast phenolic handle. Available in Red or Black.

Cat. No.		Std. Pkg.
344	4″ Handle	50
345	5″ Handle	50

SCRULOK NEEDLEPOINT TEST PROD

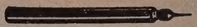


These insulated prods have the Scrulok solderless system of wire connection. Wire is easily attached without soldering. An extra heavy needle is fitted into the tip.

COLORS: Black or Red

Cat. No.		Std. Pkg.
417	4″ Handle	50
418	5″ Handle	50

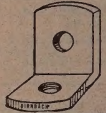
SOLDERLESS TEST PROD



Made of highly polished cast phenolic resin. A solderless phone tip is threaded at end permitting replacement of tip. Available in Red or Black.

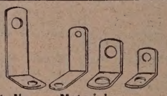
Cat. No.		Std. Pkg.
410	4″ Handle	50
343	5″ Handle	50

TAPPED ANGLE BRACKET



Steel cadmium plated. ½″ by ½″. One plain .165 hole and one 8/32 tapped hole.

Cat. No.	Std. Pkg.
1120	100

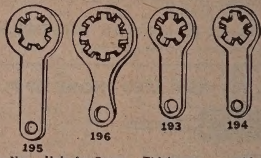


BRASS AND STEEL ANGLES

Cat. No.	Material	Size	Std. Pkg.
1121	Brass N.P.	½″x ½″	100
1122	Brass N.P.	⅝″x ⅝″	100
1123	Steel H.T.	¾″x ¾″	100
1124	Steel H.T.	⅝″x1⅛″	100

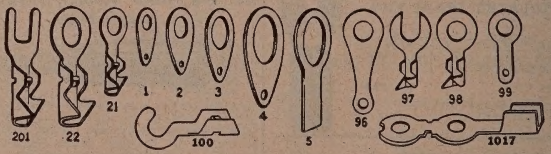
BIRNBACH LOCKING TYPE TERMINAL LUGS

Brass Electro Plated



Cat. No.	Hole for Screw	Thickness	Std. Pkg.
193	4	.020″	1000
194	6	.020″	1000
195	8	.020″	1000
196	¼″	.020″	1000

BIRNBACH TINNED TERMINAL LUGS



Cat. No.	Hole for Screw	Length In.	Std. Pkg.
1	6	9/16	1000
2	10	5/8	1000
3	1/4	5/8	1000
4	3/8	7/8	1000
5	1/2	1-3/16	1000
21	10	1-3/16	1000
22	1/4	1-3/32	1000
201	8	1-3/16	1000
96	6-8-10	7/8	1000
97	8	5/8	1000
98	6-8-10	11/16	1000
99	4-6-8	11/16	1000
100	10	7/8	1000
1017 (TV)	10	13/16	1000

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Lugs • Couplings • Clamps • Spacers
Shafts • Terminal Strips • Bearings • Clips

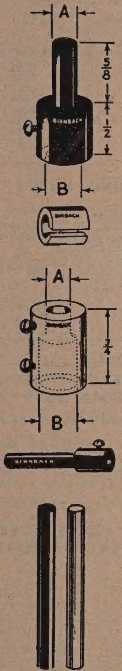
BIRNBACH LUGS IN PACKAGES

BIRNBACH
TERMINAL LUGS

Cat. No.	Quan. in Env.	Lug No.	Cat. No.	Quan. in Env.
1-50	50	1	1-100	100
2-50	50	2	2-100	100
3-50	50	3	3-100	100
21-35	35	21	21-100	100
22-15	15	22	22-100	100
201-35	35	201	201-100	100
96-40	40	96	96-100	100
97-40	40	97	97-100	100
98-35	35	98	98-100	100
99-35	35	99	99-100	100
100-20	20	100	100-100	100
1017-10	10	1017	1017-100	100

Specify "D" for Display Card

SHAFT COUPLINGS, REDUCERS AND EXTENDERS



By the use of these units all ¼″ and ⅜″ dia. shafts and knobs can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown.

SHAFT COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
534	634	¼″	¼″
535	635	¼″	⅜″
536	636	⅜″	¼″

537—Reducer for ⅜″ dia. hole to ¼″ dia. shaft

COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
531	631	¼″	¼″
532	632	¼″	⅜″
533	633	⅜″	⅜″

EXTENDERS

	538 Brass	539 Insul.
Length	1¾″	1¾″
Hole I.D.	¼″	¼″
Shaft O.D.	¼″	¼″

BRASS SHAFTING

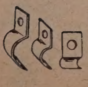
No.	Dia.	Length
540	¼″	6″
541	¼″	12″
542	⅜″	8″

FIBRE SHAFTING

No.	Dia.	Length
543	¼″	6″
544	¼″	12″
545	⅜″	8″

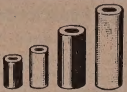
BIRNBACH CABLE CLAMPS

Standard Package of 100



Cat. No.	To fit Cable	L.	W.	Hole
1153	⅛″	7/16″	¼″	4
1154	3/16″	⅝″	⅜″	6
1155	⅜″	11/16″	⅜″	6
1156	½″	15/16″	⅜″	6
1157	⅞″	1¼″	⅜″	10

BRASS BUSHING AND SPACERS



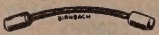
For raising sub panels, chassis, condensers, transformers, etc. Hole will accommodate a No. 6 or No. 8 screw.

For No. 6 Cat. No.	For No. 6 Std. Pkg.	Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
		¼″ O.D.		
1125	100	¼″	1130	100
1126	100	⅜″	1131	100
1127	100	½″	1132	100
1128	100	¾″	1133	100
1129	100	1″	1134	100
		⅜″ O.D.		
1135	100	¼″	1140	100
1136	100	⅜″	1141	100
1137	100	½″	1142	100
1138	100	¾″	1143	100
1139	100	1″	1144	100

INSULATED BUSHINGS & SPACERS

For No. 6 Cat. No.	For No. 6 Std. Pkg.	¼″ O.D. Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
1145	100	¼″	1149	100
1146	100	⅜″	1150	100
1147	100	½″	1151	100
1148	100	¾″	1152	100

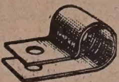
BIRNBACH FLEXIBLE SHAFTS



With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into ¼″ dia. hubs.

Cat. No.	Std. Pkg.
553—Flexible Shaft 3″ long	25
554—Flexible Shaft 6″ long	25

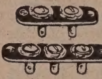
BIRNBACH TUBE CLAMPS



Desirable when mounting resonant lines or elements of directive beam antennas. Made of hard drawn aluminum. The 5/16″, ⅜″ and ½″ have holes for No. 10 screw and the ¾″ and 1″ dia. clamps have holes for ¼″ bolts.

Cat. No.	To Fit Tube	Std. Pkg.
51—Clamp	¼″ Dia.	100
52—Clamp	5/16″ Dia.	100
53—Clamp	⅜″ Dia.	100
54—Clamp	½″ Dia.	100
55—Clamp	¾″ Dia.	50
57—Clamp	⅞″ Dia.	50
56—Clamp	1″ Dia.	50

BAKELITE TERMINAL STRIPS



Terminals are made of brass and cadmium plated. Terminals are mounted on 1/16″ bakelite. 7, 8, 9 and 10 terminals are mounted on 3/32″ bakelite. All terminals are space 7/16″ center to center.

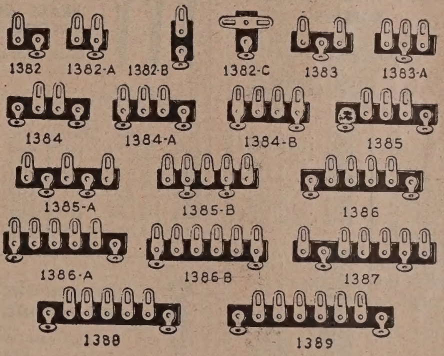
PLAIN

Cat. No.	Terminals	Mtg. Center
1372	2	1-5/16″
1373	3	1-¾″
1374	4	2-3/16″
1375	5	2-⅝″
1376	6	3-1/16″
1377	7	3-½″
1378	8	3-15/16″
1379	9	4-⅜″
1380	10	4-13/16″

MARKED

Cat. No.	Terminals Marked
1260	2; A-G
1261	2; Output
1262	2; Input
1263	3; 1-2-3
1264	4; 1-2-3-4
1265	5; 1-2-3-4-5
1266	6; 1-2-3-4-5-6

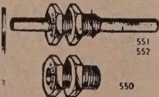
BIRNBACH LUG TERMINAL STRIPS



Cat. No.	Std. Pkg.
1382	100
1382A	100
1382B	100
1382C	100
1383	100
1383A	100
1384	100
1384A	100
1384B	100

Cat. No.	Std. Pkg.
1385	100
1385A	100
1385B	100
1386	100
1386A	100
1386B	100
1387	100
1388—5 Ter., 2 grds.	100
1389—6 Ter., 2 grds.	100

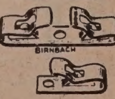
BIRNBACH FRONT PANEL BEARING



Cadmium plated brass for panels up to ⅜″ in thickness and for ¼″ dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and ¼″ dia. brass shaft cadmium plated.

Cat. No.	Std. Pkg.
550—Front Panel Bearing	50
551—Front Panel Bearing, ¼″ shaft, 3″ long	50
552—Front Panel Bearing, ¼″ shaft, 6″ long	25

BIRNBACH SPRING WIRE CLIPS



They will hold a wire up to No. 10 B&S Gauge in a secure contact. All clips are brass nickel plated.

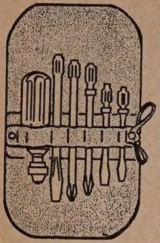
Cat. No.	Length	Width	Mtg. Hole	Std. Pkg.
32A—Spring Clip	¾″	5/16″	6	100
32 —Spring Clip	1″	⅜″	10	100
33 —Twin Clip	1¾″	⅜″	10	50

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Tool Kits • Nuts • Wing Nuts • Screws
Lock Washers • Washers • Standoff

6 PIECE SCREW DRIVER SET

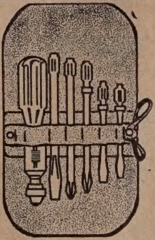


Unbreakable, shockproof, non-inflammable amber handle, with flange aluminum screw chuck. Blades hardened, tempered and fully polished. For most TV and Radio work.

	Blade Size
1—Cabinet Blade	⅛ x 3¼
1—Cabinet Blade	3/16 x 3½
1—Mechanic Blade	¼ x 5½
1—Recessed Head (#1) Blade	3/16 x 4¼
1—Recessed Head (#2) Blade	¼ x 4¼
1—Amber Handle with Chuck	

All in attractive leatherette case. Wt. 5 lbs.
Cat. No. 3618...................Std. Pkg. 12

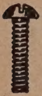
RATCHET HANDLE SCREW DRIVER SET



6 piece set. Same as above but with ratchet amber handle. (3 way: left, right and rigid). Weight: 5 lbs.

Cat. No.	Std. Pkg.
3619	12

ROUND HEAD MACHINE SCREWS



Standard Package 1000

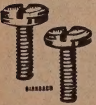
STEEL NICKEL PLATED

Cat. No.	Size
6300 ..	2-56 x 3/16
6301 ..	2-56 x ⅜
6302 ..	2-56 x ½
6303 ..	3-48 x ¾
6304 ..	4-36 x ¼
6305 ..	4-36 x ½
6306 ..	4-36 x ¾
6307 ..	4-40 x ¼
6308 ..	4-40 x ½
6309 ..	4-40 x ¾
6420 ..	6-32 x ¼
6421 ..	6-32 x ⅜
6422 ..	6-32 x ½
6423 ..	6-32 x ⅝
6424 ..	6-32 x ¾
6425 ..	6-32 x 1
6426 ..	8-32 x ¼
6427 ..	8-32 x ⅜
6428 ..	8-32 x ½
6429 ..	8-32 x ⅝
6430 ..	8-32 x ¾
6431 ..	8-32 x 1
6432 ..	8-32 x 1½
6433 ..	10-32 x ¼
6434 ..	10-32 x ⅜
6435 ..	10-32 x ½
6436 ..	10-32 x ⅝
6437 ..	10-32 x ¾
6438 ..	10-32 x 1
6439 ..	¼-20 x ½
6310 ..	¼-20 x 1¼
6311 ..	¼-20 x 2½

BRASS NICKEL PLATED

Cat. No.	Size
6400 ..	4-36 x ¼
6401 ..	4-36 x ⅜
6402 ..	4-36 x ½
6403 ..	4-36 x ¾
6404 ..	4-36 x 1
6312 ..	4-40 x ¼
6313 ..	4-40 x ⅜
6314 ..	4-40 x ½
6315 ..	4-40 x ¾
6405 ..	6-32 x ¼
6406 ..	6-32 x ⅜
6407 ..	6-32 x ½
6408 ..	6-32 x ⅝
6409 ..	6-32 x ¾
6410 ..	6-32 x 1
6411 ..	6-32 x 1¼
6412 ..	6-32 x 1½
6413 ..	8-32 x ¼
6414 ..	8-32 x ⅜
6415 ..	8-32 x ½
6416 ..	8-32 x ⅝
6417 ..	8-32 x ¾
6418 ..	8-32 x 1
6316 ..	10-32 x ¼
6317 ..	10-32 x ⅜
6318 ..	10-32 x ½
6319 ..	10-32 x ¾
6320 ..	10-32 x 1

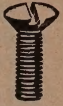
BINDING HEAD MACHINE SCREWS



Steel Nickel Plated

Cat. No.	Size	Std. Pkg.
6321	6-32 x ¼″	1000
6322	6-32 x ⅜″	1000
6323	6-32 x ½″	1000
6324	8-32 x ¼″	1000
6325	8-32 x ⅜″	1000
6326	8-32 x ½″	1000

OVAL HEAD RACK SCREWS

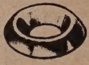


Brass Nickel Plated

Widely used for mounting panels on racks and cabinets. Screws are nickel-plated brass.

Cat. No.	Size	Std. Pkg.
6600	6-32 x ¼″	100
6601	6-32 x ½″	100
6602	6-32 x ¾″	100
6603	6-32 x 1″	100
6604	8-32 x ¼″	100
6605	8-32 x ½″	100
6606	8-32 x ¾″	100
6607	8-32 x 1″	100
6608	10-32 x ¼″	100
6609	10-32 x ½″	100
6610	10-32 x ⅝″	100
6611	10-32 x ¾″	100
6611-A	10-32 x 1″	100

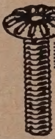
FINISHING RACK WASHERS



Brass Nickel Plated

Cat. No.	Size	Std. Pkg.
6612	6-32 Cup Washer	100
6613	8-32 Cup Washer	100
6614	10-32 Cup Washer	100

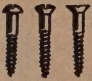
ORNAMENTAL HEAD SCREWS



Steel—Statuary Bronze Finish

Cat. No.	Size	Std. Pkg.
6327	6-32 x ¾″	1000
6328	6-32 x 1″	1000
6329	8-32 x 1¼″	1000

BRASS AND STEEL WOOD SCREWS



Round, Flat and Oval Heads

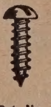
BRASS NICKEL PLATED

Cat. No.	Size	Std. Pkg.
6460	⅜ x #4	144
6461	½ x #4	144
6462	⅝ x #5	144
6463	¾ x #5	144
6464	1 x #5	144
6465	1¼ x #6	144
6466	1½ x #6	144

STEEL NICKEL PLATED

Cat. No.	Size	Std. Pkg.
6470	⅜ x #4	144
6471	½ x #4	144
6472	⅝ x #5	144
6473	¾ x #5	144
6474	1 x #5	144
6477	1 x #6	144
6475	1¼ x #6	144
6476	1½ x #6	144
6478	¾ x #8	144

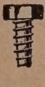
BIRNBACH SHEET METAL SELF TAPPING SCREWS



Steel Cadmium Plated
TYPE A — SHARP POINT

Cat. No.	Size	Std. Pkg.
6500	#4 x ½	144
6501	#6 x ¼	144
6502	#6 x ⅜	144
6503	#6 x ½	144
6504	#6 x ¾	144
6540	#8 x ⅜	144
6541	#8 x ½	144
6505	#8 x 1	144
6542	#10 x ⅜	144
6543	#10 x ½	144
6506	#10 x ¾	144
6507	#10 x 1	144

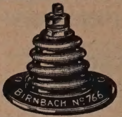
BIRNBACH HEX HEAD SELF TAPPING SCREWS



TYPE B — BLUNT POINT SLOTTED
Steel Cadmium Plated

Cat. No.	Size	Std. Pkg.	Cat. No.	Size	Std. Pkg.
6510	#6 x ⅜	144	6515	#8 x ½	144
6511	#6 x ½	144	6516	#8 x ¾	144
6512	#6 x ¾	144	6517	#8 x 1	144
6513	#8 x ¼	144	6518	#10 x ½	144
6514	#8 x ⅜	144	6519	#10 x 1	144

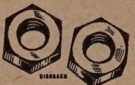
BEE-HIVE STANDOFF



Base measures 2″ dia. with 3 holes on a 1⅝″ circle, for No. 6 screws. Complete with 12-24 nickel plated brass screw and nuts. No. 766J has a No. 403 Jack. Available white or brown glaze.

Cat. No.	Hardware	Std. Pkg.
766	—Standoff Insulator, 12-24 Screw.......	10
766J	—Jack Type, No. 403 Jack...............	10

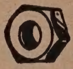
HEXAGON STEEL MACHINE SCREW NUTS



Nickel Plated

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6330	2-56	3/16″	1/16″	1000
6331	3-48	3/16″	1/16″	1000
6332	4-36	1/4″	3/32″	1000
6333	4-40	1/4″	3/32″	1000
6448	6-32	1/4″	3/32″	1000
6449	6-32	5/16″	7/64″	1000
6334	8-32	1/4″	3/32″	1000
6450	8-32	5/16″	7/64″	1000
6335	10-32	3/8″	1/8″	1000
6336	¼-20	7/16″	3/16″	1000

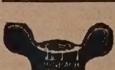
HEXAGON MACHINE SCREW NUTS



BRASS—NICKEL PLATED

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6440	4-36	1/4″	3/32″	1000
6442	4-40	1/4″	3/32″	1000
6441	6-32	1/4″	5/64″	1000
6443	6-32	5/16″	7/64″	1000
6444	8-32	11/32″	1/8″	1000
6445	10-32	5/16″	7/64″	1000
6446	10-32	3/8″	1/8″	1000
6447	¼-20	7/16″	1/8″	1000

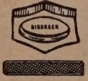
WING NUTS



High quality brass nickel plated wing nut used extensively on portable and test instruments.

Cat. No.	Thread	Std. Pkg.
6	6-32	100
8	8-32	100
10	10-32	100
11	¼-20	100

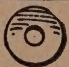
BIRNBACH VOLUME CONTROL & TOGGLE NUTS



BRASS—NICKEL PLATED

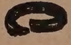
No.	Type	Size	Std. Pkg.
6337	—Volume Control	⅜-32x½x3/32	1000
6338	—Toggle Switch	15-32x9/16x5/64	1000
6339	—Toggle Ring Nut	15-32x⅝x1/16	1000

BIRNBACH BRASS NICKEL PLATED FLAT WASHERS



Cat. No.	Fits Screw No.	Hole Size	O.D.	Thickness	Std. Pkg.
6479	4	.118″	9/32″	.025″	1000
6480A	6	.145″	5/16″	.025″	1000
6480	6	.145″	3/8″	.025″	1000
6481	8	.172″	3/8″	.032″	1000
6482	10	.203″	7/16″	.036″	1000
6483	¼-20	.265″	9/16″	.040″	1000

STEEL KANTLINK LOCKWASHERS

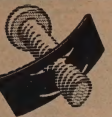


Cat. No.	Screw Size	O.D.	Thickness	Std. Pkg.
6484	4	3/16″	1/32″	1000
6485	6	15/64″	1/32″	1000
6486	8	15/64″	.025″	1000
6487	10	5/16″	.050″	1000
6488	¼	7/16″	5/64″	1000

See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Speed Nuts • Lock Washers • Threaded Rods
Standoffs • Insulators • Spreaders • Sockets

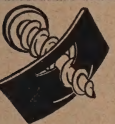


BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

These speed nuts are self locking and help reduce assembly time. They prevent loosening from vibration, eliminate need of washers and stand up under abuse. For use with machine screws.

Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350	4-36	3/8″	1/4″	.012″	1000
6351	6-32	7/16″	9/16″	.017″	1000
6352	8-32	1/2″	5/16″	.017″	1000
6353	10-24	5/8″	3/8″	.022″	1000
6354	¼-20	3/4″	1/2″	.025″	1000

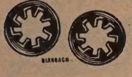


BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

For use with sheet metal screws.

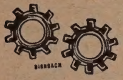
Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350A	4A	3/8″	1/4″	.022″	1000
6351A	6A	1/2″	5/16″	.025″	1000
6352A	8A	5/8″	13/32″	.028″	1000
6353A	10A	3/4″	1/2″	.031″	1000
6354A	14A	7/8″	9/16″	.037″	1000



SHAKEPROOF LOCKWASHERS

INTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6355	2	1000
6356	3	1000
6357	4	1000
6490	6	1000
6491	8	1000
6492	10	1000
6493	¼	1000
6494	⅜	1000

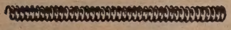


SHAKEPROOF LOCKWASHERS

EXTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6358	4	1000
6359	6	1000
6360	8	1000
6361	10	1000
6362	¼	1000
6363	⅜	1000

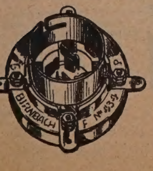
BIRNBACH THREADED RODS



These brass nickel plated threaded rods are standard parts of our insulator assemblies.

Cat. No.	Length	Thread	Std. Pkg.
16	4″	¼-20	1000
17	5½″	¼-20	1000
18	10″	¼-20	1000
113	15″	¼-20	1000
114	8″	10-32	1000
115	1⅝″	10-32	1000
116	2¼″	10-32	1000
117	8″	10-32	1000
118	8″	8-32	1000
119	8″	6-32	1000
15	2″	6-32	1000

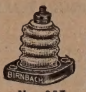
TRANSMITTING TUBE SOCKETS



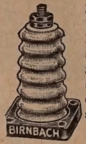
50-Watt socket has extra heavy side wiping phosphor bronze contact spring with the filament spring having a double contact to safely carry the heavy current.

	Std. Pkg.
434—50 Watt	25
435—10 Watt	25

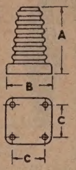
METAL BASE INSULATORS



No. 867



No. 4176

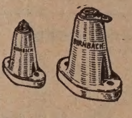


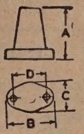
Extremely long leakage paths due to the corrugated surface is one of the important characteristics. Made from high tensile strength low absorption porcelain smoothly glazed all over. Supplied with nickel plated brass screws and nuts and cadmium plated drawn steel bases.

Cat. No.	Height A	Std. Pkg.	Base Dimension B	C	Mounting Screw D
867	1⅜″	25	1⅞x1 5/16″	1½″	2 #8
867J	1⅜″	25	1⅞x1 5/16″	1½″	2 #8
4176	2¾″	10	1¾x1¾″	1⅜″	4 #10
4176J	2¾″	10	1¾x1¾″	1⅜″	4 #10
4451	4½″	5	2¼x2¼″	1¾″	4 #10
4451J	4½″	5	2¼x2¼″	1¾″	4 #10

Hardware: No. 867—10-32; 867J—No. 403 Jack; 4176 & 4451—¼-20; 4176J & 4451J—No. 395 Jack.

BIRNBACH STANDOFF INSULATORS



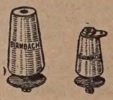


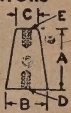
Highly vitrified low absorption glazed porcelain. No washers are necessary for mounting except No. 405 and No. 966. All brass nickel plated hardware is supplied.

Cat. No.	Height A	Std. Pkg.	Base Dimensions B	C	D	Mtg. Holes
405	⅝″	100	1″	17/32″	11/16″	5/32″
965	1″	50	1¼″	¾″	13/16″	5/32″
966	1″	50	1⅜″	⅞″	1″	5/32″
966J	1″	50	1⅜″	⅞″	1″	5/16″
866	1½″	25	1¾″	1⅛″	1¼″	5/32″
866J	1½″	25	1¾″	1⅛″	1¼″	5/16″
866SJ	1½″	10	1¾″	1⅛″	1¼″	5/32″
4275	2¾″	10	2¾″	2″	2⅛″	¼″
4275J	2¾″	10	2¾″	2″	2⅛″	¼″
4450	4½″	5	3⅝″	2½″	2⅝″	9/32″
4450J	4½″	5	3⅝″	2½″	2⅝″	9/32″

Hardware: No. 405—6-32; 965 & 966—8-32; 966 & 866J—No. 403 Jack; 866—10-32; 866SJ, 4275J & 4450J—No. 399 Jack; 4275 & 4450—¼-20.

CONE STANDOFF INSULATORS
(STEATITE)



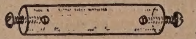


All heights except the No. 430 are available with a Jack or a threaded hole top. Complete with screws, metal and cork washers.

Cat. No.	Height A	Std. Pkg.	Base Dimensions B	C	Threaded Holes D	E
430	⅝″	100	⅝″	7/16″	6-32	6-32
431	1″	50	11/16″	½″	8-32	8-32
431J	1″	50	11/16″	½″	8-32	403 Jack
432	1½″	50	⅞″	⅝″	10-32	10-32
432J	1½″	50	⅞″	⅝″	10-32	403 Jack
433	2¾″	25	1¼″	¾″	¼-20	¼-20
433J	2¾″	25	1¼″	¾″	¼-20	395 Jack

Mounting Hole: No. 430—5/32″; 431 & 431J—3/16″; 432 & 432J—7/32″; 433 & 433J—9/32″.

BIRNBACH LUCITE SPEADERS



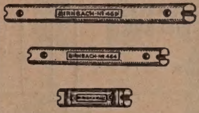
DuPont Lucite rod which has a very low loss at radio frequencies. Very low water absorption. Holes are drilled to take a No. 12 wire. A screw at the end of the spreader locks the wire in position.

Cat. No.	Wire-Spacing	Std. Pkg.
436	2″	25
437	4″	25
438	6″	25

BIRNBACH LUCITE RODS

Cat. No.	Length	Dia.	Cat. No.	Length
455	12″	¼″	455A	48″
459	12″	⅜″	459A	48″
460	12″	½″	460A	48″
461	12″	¾″	461A	48″

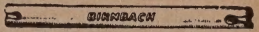
BIRNBACH FEEDER SPREADERS



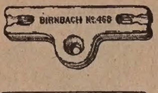
⅜″ x ½″. Vitrified, low absorption, high tensile strength porcelain with smooth white glaze overall.

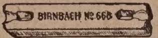
Cat. No.	Std. Pkg.
462—Spreader, 2″ long	25
464—Spreader, 4″ long	25
469—Spreader, 6″ long	25

BIRNBACH ANTENNA INSULATORS



470—7 inch 471—12 inch

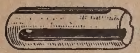




Low moisture absorption. The leakage path is long and the cross section is small. White glaze overall.

Cat. No.	Std. Pkg.
Center Insulator	
468—4½″ long	10
668—4¼″ long	25
470—7″ long	10
471—12″ long	5

STEATITE AIRPLANE INSULATORS

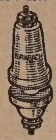


It is 1½″ long and ½″ diameter.

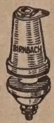
463.....Std. Pkg. 25

BIRNBACH FEEDTHRU INSULATORS

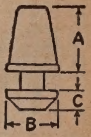
Made of highly vitrified, low absorption porcelain smoothly glazed. Long insulating sleeves on the lower part of the insulator. Brass nickel plated hardware.



478

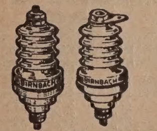


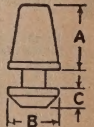
478J



Cat. No.	Height A	Std. Pkg.	Dimensions B	C	Mtg. Hole	Hardware
458	⅝″	50	11/16″	¼″	5/16″	6-32
478	1″	25	13/16″	5/16″	7/16″	10-32
478J	1″	25	13/16″	5/16″	7/16″	403 Jack
4125	1¼″	25	⅞″	⅜″	7/16″	10-32
4125J	1¼″	25	⅞″	⅜″	7/16″	403 Jack
4234	2¾″	10	2″	1″	¾″	¼-20
4175	2¾″	10	1¼″	¾″	⅝″	¼-20
4175J	2¾″	10	1¼″	¾″	⅝″	394 Jack

CORRUGATED FEEDTHRU INSULATORS

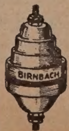




Have more than twice the leakage path of the straight type because of increased surface of the corrugations. Brass nickel plated hardware and cork mounting washers supplied.

Cat. No.	Height A	Std. Pkg.	Dimensions B	C	Mtg. Hole	Hardware
479	1⅜″	25	1¼″	11/16″	9/16″	10-32
479J	1⅜″	25	1¼″	11/16″	9/16″	403 Jack
4276	2¾″	10	1⅝″	1″	¾″	¼-20
4276J	2¾″	10	1⅝″	1″	¾″	394 Jack
4452	4½″	5	2⅛″	1½″	1″	¼-20
4452J	4½″	5	2⅛″	1½″	1″	394 Jack

HIGH VOLTAGE FEEDTHRU INSULATOR



High dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve tapers from a base dia. of 1-3/16″.

Cat. No.	H.	Std. Pkg.	Base Dia.	Mtg. Hole	Hardware
4233	1⅝″	10	2″	1¼″	¼-20

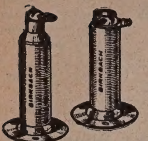
See Pages S-38 and S-39 for Birnbach Prices

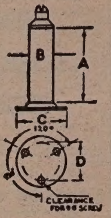
Birnbach

Steatite Pillars • Buttons • Dial Cables Insulators • Cords • Lead-in Strips

BIRNBACH

STEATITE PILLARS

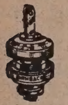


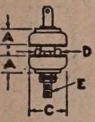


Have great tensile strength with extremely low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.

Cat. No.	Height A	Std. Pkg.	Dimen. B	Base Dia. C	D	Hard-ware
450	1"	10	½"	1⅛"	⅞"	6-32
450J	1"	10	½"	1⅛"	⅞"	403 Jack
451	1½"	10	½"	1⅛"	⅞"	6-32
451J	1½"	10	½"	1⅛"	⅞"	403 Jack
452	2½"	10	½"	1⅛"	⅞"	6-32
452J	2½"	10	½"	1⅛"	⅞"	403 Jack
453	2½"	5	¾"	1 9/16"	1 3/16"	¼-20
453J	2½"	5	¾"	1 9/16"	1 3/16"	395 Jack
454	4"	5	¾"	1 9/16"	1 3/16"	¼-20
454J	4"	5	¾"	1 9/16"	1 3/16"	395 Jack

BIRNBACH STEATITE BUTTON





This specially designed steatite button is intended for use to simplify wiring and to be used as a binding post or a binding post insulator, or as a standoff insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.

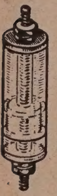
Cat. No. **Std. Pkg.**

457—Steatite Button 25

Dimensions

A	B	C	D	E
5/16"	½"	¾"	½"	6-32

"LUCITE" FEEDTHRU INSULATORS

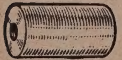


These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine DuPont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The ½" dia. insulators have brass nickel plated 6-32 hardware and the ¾" dia. insulators, 10-32 hardware.

Cat. No.	Height Above Panel	Insulator Dia.	Mtg. Hole	Bottom Height	Std. Pkg.
377	¼"	½"	5/16"	¼"	25
378	½"	½"	5/16"	¼"	25
379	1"	½"	5/16"	¼"	25
475	1½"	¾"	7/16"	½"	25
476	2"	¾"	7/16"	½"	25

STEATITE PILLARS

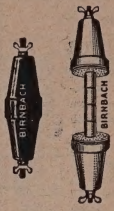
(Without Hardware)



In many constructions, these unmounted threaded steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of glazed Steatite with threaded holes on both sides.

Cat. No.	Height	Dia.	Threaded Hole	Std. Pkg.
443	½	½	6-32	100
444	¾	½	6-32	100
445	1	½	6-32	100
446	1½	½	6-32	100
447	2½	½	6-32	100
448	2½	¾	¼-20	50
449	4	¾	¼-20	50

LEADIN INSULATORS



Each cone 2¾" high, made of low absorption, vitrified glazed porcelain. The Nos. 4237 and 4238 have insulating bushings to insulate rod that goes through the wall. 2 bushings are included, ¼" and ½" long, allowing complete insulation of the threaded rod of any length in multiples of ¼". Complete with brass nickel plated hardware and lead and cork washers to permit water-tight seal.

Cat. No.	Description	Std. Pkg.
4235	10" Rod	10
4236	15" Rod	10
4237	10" Rod with bushings	10
4238	15" Rod with bushings	10
	Individually Boxed	

REGULAR THIN NYLON CORD

(.028 Diameter)

The most popular of all dial cords.

Cat. No.	
2025	25 ft. Spool
2050	50 ft. Spool
2051	100 ft. Spool
2052	1000 ft. Spool

LIGHT NYLON DIAL CORD

(.040 Diameter)

Used extensively in RCA, Philco, Majestic, Wells Gardner, etc.

Cat. No.	
3025	25 ft. Spool
3050	50 ft. Spool
3051	100 ft. Spool
3052	1000 ft. Spool

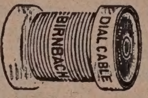
HEAVY DUTY NYLON DIAL CORD

(.062 Diameter)

Cat. No.	
1057	25 ft. Spool
1058	50 ft. Spool
1059	100 ft. Spool
1060	1000 ft. Spool

As used on models of Philco, Majestic, Brunswick, etc.

BIRNBACH DIAL CABLE 42-STRAND PHOSPHOR BRONZE



Finest phosphor bronze wire over a linen thread center. Due to its high tensile strength, it will not stretch.

(.040 Diameter)

Cat. No.	
1025	25 ft. Spool
1050	50 ft. Spool
1051	100 ft. Spool
1052	1000 ft. Spool

BRAIDED PHOSPHOR BRONZE DIAL CABLE

(Light — .025 Diameter)

Cat. No.	
1053	25 ft. Spool
1054	50 ft. Spool
1055	100 ft. Spool
1056	1000 ft. Spool

All of the quality cables are constructed of the finest Nylon Braid, over a fibreglass core. They are pre-stretched and chemically treated to prevent stretching and slipping. Has maximum resistance to abrasion.

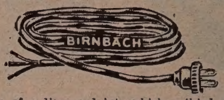
EXTRA THIN NYLON DIAL CABLE

(.025 Diameter)

Cat. No.	
4025	25 ft. Spool
4050	50 ft. Spool
4051	100 ft. Spool
4052	1000 ft. Spool

Used on Motorola, RCA, GE, etc. Is extra thin!

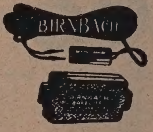
AC-DC RESISTANCE CORDS



Consists of a line cord into which a third element has been incorporated. The voltage dropping resistor reduces the voltage to that needed for the filament of the tubes. The 135, 160, 180 and 200-ohm cords can also be used for single light 20 and 15-watt fluorescent fixtures. All 6-ft. long, color coded with tinned leads and all rubber plugs. All individually boxed.

Cat. No.	Cord Rating	Sets Having Following Tubes:
35	135 ohm	25Z5-43-4 (6.3 volt tubes)
36	160 ohm	25Z5-43-3 (6.3 volt tubes)
34	180 ohm	12Z3-43-4 (6.3 volt tubes)
49	200 ohm	25Z5-43-2 (6.3 volt tubes)
37	220 ohm	12Z3-43-3 (6.3 volt tubes)
41	250 ohm	12Z3-43-2 (6.3 volt tubes)
		25Z5 -3 (6.3 volt tubes)
38	290 ohm	12Z3 -3 (6.3 volt tubes)
45	300 ohm	
39	330 ohm	-4 (6.3 volt tubes)
		12Z3 -2 (6.3 volt tubes)
40	350 ohm	12Z3 -1 (6.3 volt tubes)
47	390 ohm	-2 (6.3 volt tubes)
58	560 ohm	For 3-way portables, AC-DC battery sets
59	960 ohm	Wherever 45Z3 rectifier is used (All pocket type radios)
125	220-110 volt	Step down reducing cords

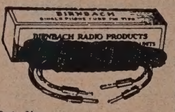
SPEAKER EXTENSION CORDS



These extension cords are constructed of stranded annealed copper wire insulated with rubber over which a brown mercerized cotton braid is closely woven. Complete with easily attached bakelite connector.

Cat. No.	
166	10 ft. Cord
120	20 ft. Cord
151	Bakelite Extension Cord Connector Only

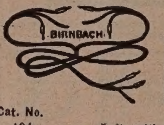
SPEAKER CORDS



Stranded wire, insulated with rubber, with closely woven brown mercerized cotton overall.

Cat. No.	
102	5 ft. with Pin Tips on both ends
103	5 ft. with Pin and Spade Tips
106	5 ft. with Pin and Eye Tips
413	10 ft. with Pin and Eye Tips

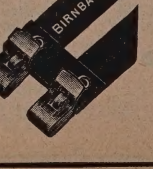
HEADSET PHONE CORDS



These cords are closely woven and are very durable and strong. Standard cords listed match practically all headsets manufactured.

Cat. No.	
104	5 ft. with Pin Tips on both ends
105	5 ft. with Pin and Spade Tips
107	5 ft. with Pin and Eye Tips
108	8 ft. with Pin and Eye Tips
109	10 ft. with Pin and Eye Tips

DOUBLET LEAD-IN STRIPS



Consists of two strips held parallel by a piece of bakelite. This assembly prevents the strips from moving back and forth.

Cat. No.	Std. Pkg.
2611	25

Black or White

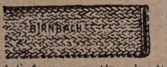
See Pages S-38 and S-39 for Birnbach Prices

Birnbach

Shielded Flat Braid • Ignition Filters
Antenna Kits • Accessories • Mike Connectors

BIRNBACH

TINNED COPPER SHIELDING

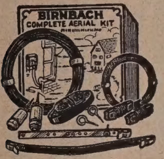


Very flexible copper shielding, slides over wires and cables. Measurements are inside diam. flattened. For shielding leads of interference creating circuits; for bonding in auto radio installations, aircraft, etc.

Cat. No.	Inside Diam.	Spool
	TINNED	
855	1/16″	50 ft.
858	1/8″	50 ft.
859	3/16″	50 ft.
863	1/4″	50 ft.
864	3/8″	50 ft.
868	1/2″	50 ft.
865	5/8″	50 ft.
857	25/32″	50 ft.
856	1″	50 ft.
	BARE	
860	1/4″	50 ft.

Longer Lengths Available

BIRNBACH ANTENNA KITS

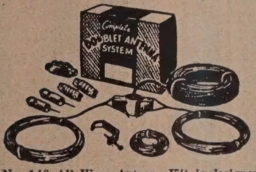


Cat. No. 503 — AERIAL KIT

75 ft. 7/24 Copper Wire
35 ft. R.C. Lead-in Wire
1—No. 650 Lightning Arrestor
1—No. 600 Ground Clamp
1—No. 611 Lead-in Strip
2—No. 666 Porcelain Insulators
2—No. 669 Glazed Nailit Knobs
2—No. 665 Galvanized Screw Eyes

Std. Pkg. 24 Weight 65 lbs.

UNIVERSAL ALL WAVE KIT



The No. 149 All Wave Antenna Kit is designed for efficient operation with all types of receivers.

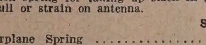
List of Parts:

2—30 ft. coils 7/24 bare copper aerial wire
1—50 ft. coil Stranded Transmission Cable
1—Transfer unit
2—Porcelain Insulators
2—All Wave Lead-in Strip
1—Ground Clamp
2—Glazed Nailit Knobs

The above completely assembled for simple installation.

Cat. No. **Std. Pkg.**
149—Universal All Wave Kit.............24

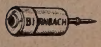
AIRPLANE SPRING



Rust-proof steel, cadmium plated thruout. Compact compression spring for taking up slack in guy wire due to pull or strain on antenna.

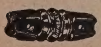
Cat. No. **Std. Pkg.**
764—Airplane Spring 100

NAIL-IT KNOBS



Cat. No. **Std. Pkg.**
669—Glazed 100

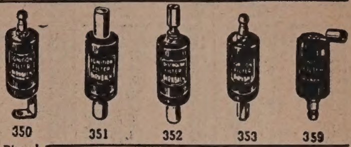
PORCELAIN INSULATORS



Cat. No. **Std. Pkg.**
666—White 100

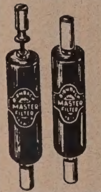
IGNITION FILTERS

Completely eliminate all ignition and high tension circuit interference. Copper wound inductance accounts for the low resistance of 120 ohms for the Ignition Filter. Due to the low resistance of these filters, less gasoline is consumed than when high resistance filters are used.



Cat. No.	Std. Pkg.
350—Ignition Filter (Bracket Type)	25
351—Ignition Filter (Cable Type)	25
352—Distributor Filter	10
353—Ignition Filter (Screw Type)	25
359—Ignition Filter (Slip-on Type)	25

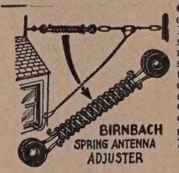
BIRNBACH MASTER FILTER



Eliminates all ignition interference, does away with necessity of having filter for each spark plug. Distributor type for easy insertion into distributor head. Cable type to be placed into the distributor lead where impossible to insert into distributor head.

Cat. No. **Std. Pkg.**
354—Cable or Distributor Type 12

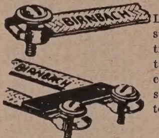
AERIAL SPRING ADJUSTER



Corrects excessive sag of doublet antennas. Prevents swinging and swaying; eliminates resultant fading of signals. Consists of two hooks with porcelain rings, powerful compression spring. Cadmium plated thruout.

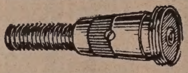
Cat. No.
765—Birnbach Aerial Spring Adjuster

SCREW TERMINAL LEAD-IN STRIP



Locks wire together with strip in a secure connection assuring perfect contact. Has weather-proof covering over a copper strip with cadmium plated terminals. White or Black.

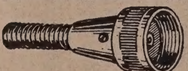
Cat. No. **Std. Pkg.**
617—Lead-in Strip 50
2617—Doublet Lead-in Strip 25



No. 231-MC Microphone Connector

Made of milled brass and chrome plated. Wire secured by threading thru coiled spring and bending shield back on spring and soldering. Center conductor of cable is threaded thru eyelet of bakelite insulator and soldered. Set screw then tightened completing connection.

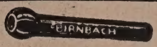
Cat. No. **Std. Pkg.**
231-MC—Microphone Connector 100



No. 232-FC Microphone Connector

Milled from brass, chromium plated. Fits all standard male fittings having ⅝-27 thread.

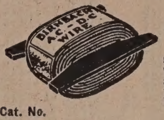
Cat. No. **Std. Pkg.**
232-FC—Female Connector 100



PORCELAIN TUBES

To bring a lead-in into a building. ¾″ diameter hole required.

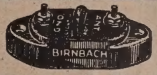
Cat. No.	Std. Pkg.
42—2″	100
43—3″	100
44—4″	100
46—6″	100
48—8″	100



AC-DC ANTENNA WIRE

Low cost, flexible, stranded cotton braided wire ideal as an indoor antenna for AC-DC Universal Receivers. Colors Brown or White.

Cat. No.	Ft.
2125	25 Ft. Hank
2100	100 Ft. Spool
2500	500 Ft. Spool
2000	1000 Ft. Spool

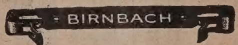


LIGHTNING ARRESTOR

Glazed porcelain body, nickel-plated hardware. Outdoor or indoor use. Mounting screws and instructions.

Cat. No. **Std. Pkg.**
650—Lightning Arrestor 50

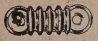
BIRNBACH LEAD-IN STRIPS



Covered with a heavy cotton braid and weatherproofed, with numerous coats of lacquer. Clips are riveted and soldered at both ends.

Cat. No.	Std. Pkg.
611—Black 12″ long	50
613—White 12″ long	50

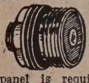
BIRNBACH GLASS INSULATORS



Made of crystal clear glass and have a smooth surface which prevents dirt or ice from collecting.

Cat. No. 00—3″.................Std. Pkg. 100

No. 233-CC CHASSIS CONNECTOR

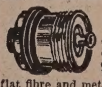


Milled of solid brass. Mounts in .385″ dia. hole to ground shell directly to chassis. Mounts in ½″ hole when insulation from panel is required. Supplied with shoulder and flat fibre and metal washers and hex lock nut.

Cat. No. **Std. Pkg.**
233-CC—Chassis Connector 100

No. 234-CLC CHASSIS CONNECTOR

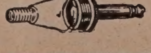
CLOSED CIRCUIT



Circuit is closed before cable circuit breaks. Prevents open grid circuit howls. Milled of solid brass, complete with shoulder and flat fibre and metal washers and lock nut.

Cat. No. **Std. Pkg.**
234-CLC—Closed Circuit Jack 100

No. 235 PHONE PLUG ADAPTER



⅝-27 thread; screws into coupling ring of No. 232-FC Connector permitting cable to be plugged into standard phone jack. Made of brass and nickel-plated.

Cat. No. **Std. Pkg.**
235-PC 50

See Pages S-38 and S-39 for Birnbach Prices

Birnbach PRICE LIST

NUMERICALLY ARRANGED BY CATALOG NUMBER
See BIRNBACH Pages S-22 thru S-37

Cat. No.	List Price
00	$11.00/C
1-50	.45/Ea.
1-100	.90/Ea.
1-1000	6.75/M
2-50	.45/Ea.
2-100	.90/Ea.
2-1000	6.75/M
3-50	.45/Ea.
3-100	.90/Ea.
3-1000	6.75/M
4-1000	37.50/M
5-1000	50.00/M
6	12.00/C
8	12.50/C
10	12.50/C
11	17.50/C
15	7.00/C
16	.25/Ea.
17	.55/Ea.
18	1.00/Ea.
19	.45/Ea.
20	.90/Ea.
20-A	.75/Ea.
21-35	.45/Ea.
21-100	1.35/Ea.
21-1000	11.50/M
22-15	.45/Ea.
22-100	3.20/Ea.
22-1000	29.50/M
23	15.00/C
24	15.00/C
26	15.00/C
27	.11/Ea.
27-C	.21/Ea.
27-R	.195/Ea.
28	.11/Ea.
29	.14/Ea.
30	.24/Ea.
31	.11/Ea.
32	2.50/C
32-A	1.80/C
33	10.50/C
34	1.40/Ea.
35	1.40/Ea.
36	1.40/Ea.
37	1.40/Ea.
38	1.40/Ea.
39	1.40/Ea.
40	1.40/Ea.
41	1.40/Ea.
42	7.00/C
43	8.00/C
44	10.00/C
45	1.40/Ea.
46	14.00/C
47	1.40/Ea.
48	32.50/C
49	1.40/Ea.
51	.25/Ea.
52	.25/Ea.
53	.25/Ea.
54	.25/Ea.
55	.40/Ea.
56	.50/Ea.
57	.50/Ea.
58	1.50/Ea.
59	1.80/Ea.
61	4.90/Ea.
62	24.00/Ea.
66	6.00/Ea.
67	27.50/Ea.
68	7.75/Ea.
69	38.00/Ea.
70	.52/Ea.
71	.60/Ea.
72	2.15/Ea.
73	2.50/Ea.
74	10.50/Ea.
75	12.50/Ea.
76	19.50/Ea.
77	22.00/Ea.
80	.63/Ea.
81	.70/Ea.
82	.70/Ea.
83	.80/Ea.
84	2.50/Ea.
85	2.75/Ea.
86	3.00/Ea.
87	3.25/Ea.
88	12.50/Ea.
89	14.00/Ea.
90	14.25/Ea.
91	16.00/Ea.
92	22.00/Ea.
93	24.50/Ea.
94	26.75/Ea.
95	30.00/Ea.
96-40	.45/Ea.
96-100	1.05/Ea.
96-1000	9.75/M
97-40	.45/Ea.
97-100	1.10/Ea.
97-1000	9.75/M
98-35	.45/Ea.
98-100	1.35/Ea.
98-1000	11.50/M
99-35	.45/Ea.
99-100	1.30/Ea.
99-1000	11.50/M
100-20	.45/Ea.
100-100	2.25/Ea.
100-1000	20.00/M
102	.90/Ea.
103	.90/Ea.
104	1.50/Ea.
105	1.50/Ea.
106	.90/Ea.
107	1.50/Ea.
108	1.90/Ea.
109	2.75/Ea.
113	$ 1.10/Ea.
114	10.00/C
115	11.00/C
116	12.00/C
117	14.00/C
118	6.50/C
119	6.50/C
120	2.75/Ea.
125	2.50/Ea.
149	6.25/Ea.
151	.60/Ea.
154	7.00/Ea.
155	7.00/Ea.
156	4.50/Ea.
157	4.50/Ea.
158	12.00/Ea.
160	4.25/Ea.
161	4.65/Ea.
164	.40/Ea.
166	2.00/Ea.
172	10.50/Ea.
173	14.25/Ea.
174	17.80/Ea.
175	22.00/Ea.
176	26.00/Ea.
177	31.00/Ea.
178	37.00/Ea.
179	45.00/Ea.
180	53.00/Ea.
182	61.00/Ea.
193	14.00/M
194	14.00/M
195	14.00/M
196	14.00/M
201-35	.45/Ea.
201-100	1.30/Ea.
201-1000	11.50/M
220	8.50/Ea.
220-A	6.75/Ea.
221	1.80/Ea.
221-A	1.40/Ea.
226	4.00/Ea.
231-MC	55.00/C
232-FC	60.00/C
233-CC	45.00/C
234-CLC	55.00/C
235-PC	60.00/C
236-FC1	5.50/Ea.
237-FC1	9.25/Ea.
238-FC1	15.40/Ea.
239-FC2	6.20/Ea.
240-FC2	9.75/Ea.
241-FC2	16.00/Ea.
242-MC1	5.50/Ea.
243-MC1	9.25/Ea.
244-MC1	15.40/Ea.
245-MFC	6.20/Ea.
246-MFC	9.25/Ea.
247-MFC	16.70/Ea.
248	10.00/C
248-C	10.00/C
249	14.00/C
249-A	18.00/C
250	4.60/Ea.
251	8.00/Ea.
252	12.85/Ea.
255	4.25/Ea.
256	7.25/Ea.
257	12.50/Ea.
263	8.50/Ea.
264	11.00/Ea.
265	13.25/Ea.
266	15.50/Ea.
267	17.50/Ea.
268	19.50/Ea.
269	22.50/Ea.
270	25.00/Ea.
272	31.00/Ea.
280	.70/Ea.
281	.80/Ea.
282	.82/Ea.
283	.90/Ea.
284	1.00/Ea.
285	1.10/Ea.
286	1.35/Ea.
287	1.60/Ea.
288	2.05/Ea.
289	2.25/Ea.
290	1.25/Ea.
291	.19/Ea.
291-V	1.70/Ea.
291-VC	6.00/Ea.
292	2.15/Ea.
293	.19/Ea.
293-V	1.70/Ea.
293-VC	6.00/Ea.
294	.19/Ea.
294-V	1.70/Ea.
294-VC	6.00/Ea.
295	.19/Ea.
295-V	1.70/Ea.
295-VC	6.75/Ea.
296	1.25/Ea.
296-VC	42.50/Ea.
297	.45/Ea.
298	.50/Ea.
299	1.20/Ea.
299-VC	39.50/Ea.
300	.19/Ea.
300-V	1.75/Ea.
300-VC	7.00/Ea.
301	.35/Ea.
301-V	1.75/Ea.
301-VC	10.00/Ea.
302	.35/Ea.
302-V	1.25/Ea.
302-VC	11.00/Ea.
303	.65/Ea.
303-VC	25.00/Ea.
304	.75/Ea.
304-VC	$30.00/Ea.
305-V	1.50/Ea.
305-VC	14.00/Ea.
306-V	1.60/Ea.
306-VC	15.00/Ea.
307	.30/Ea.
307-V	1.80/Ea.
307-VC	9.00/Ea.
309	1.70/Ea.
310	25.00/C
312	1.90/Ea.
313	.17/Ea.
313-B	.75/Ea.
313-BC	2.75/Ea.
314	.17/Ea.
314-B	.75/Ea.
314-BC	2.75/Ea.
315	.18/Ea.
315-B	.75/Ea.
315-BC	2.75/Ea.
316	.19/Ea.
316-B	.80/Ea.
316-BC	3.00/Ea.
317	.19/Ea.
317-B	.80/Ea.
317-BC	3.00/Ea.
318	.40/Ea.
318-B	.75/Ea.
318-BC	4.70/Ea.
319	.45/Ea.
319-B	.75/Ea.
319-BC	6.75/Ea.
320	.50/Ea.
320-B	.75/Ea.
320-BC	6.75/Ea.
321	.60/Ea.
321-BC	8.50/Ea.
322	.65/Ea.
322-BC	14.00/Ea.
323	1.00/Ea.
323-BC	22.50/Ea.
324	1.10/Ea.
324-BC	27.50/Ea.
325	.35/Ea.
325-B	.75/Ea.
325-BC	4.40/Ea.
326	.40/Ea.
326-B	.75/Ea.
326-BC	5.00/Ea.
330	25.00/C
331	25.00/C
331-A	13.00/C
332	18.00/C
332-A	20.00/M
333	25.00/C
334	50.00/C
335	60.00/C
340	11.00/C
341	.60/Ea.
342	2.50/Ea.
343	.55/Ea.
344	.50/Ea.
345	.55/Ea.
348	2.00/Ea.
350	1.10/Ea.
351	1.10/Ea.
352	1.10/Ea.
353	1.10/Ea.
354	3.50/Ea.
359	1.10/Ea.
365	.40/Ea.
366	12.00/C
367	20.00/C
368	2.00/C
369	2.00/C
370	4.50/C
371	2.50/C
372	2.00/C
373	6.00/C
377	.45/Ea.
378	.60/Ea.
379	.65/Ea.
380	2.85/Ea.
381	3.15/Ea.
382	3.15/Ea.
383	3.50/Ea.
384	3.90/Ea.
385	4.25/Ea.
386	5.25/Ea.
387	6.25/Ea.
388	8.50/Ea.
389	9.00/Ea.
391	.22/Ea.
392	.56/Ea.
393	.50/Ea.
393-A	.50/Ea.
394	.35/Ea.
395	.30/Ea.
396	.35/Ea.
397	.40/Ea.
398	.35/Ea.
398-A	.35/Ea.
399	.35/Ea.
399-A	.40/Ea.
400	.20/Ea.
401	.20/Ea.
402	3.00/C
402-A	5.00/C
403	.15/Ea.
404	.30/Ea.
404-A	.27/Ea.
404-B	.35/Ea.
405	.14/Ea.
406	.20/Ea.
407	.20/Ea.
408	3.00/Ea.
409	.23/Ea.
410	.50/Ea.
411	1.20/Ea.
412	.30/Ea.
413	$ 1.50/Ea.
415	.23/Ea.
417	.50/Ea.
418	.55/Ea.
419	.35/Ea.
420	1.30/Ea.
421	1.30/Ea.
422	1.30/Ea.
423	1.30/Ea.
430	.23/Ea.
431	.35/Ea.
431-J	.40/Ea.
432	.62/Ea.
432-J	.85/Ea.
433	1.15/Ea.
433-J	1.40/Ea.
434	1.90/Ea.
435	1.40/Ea.
436	.60/Ea.
437	.65/Ea.
438	.75/Ea.
439	.35/Ea.
440	2.35/Ea.
443	.18/Ea.
444	.20/Ea.
445	.30/Ea.
446	.35/Ea.
447	.40/Ea.
448	.55/Ea.
449	.75/Ea.
450	.56/Ea.
450-J	.67/Ea.
451	.67/Ea.
451-J	.72/Ea.
452	.72/Ea.
452-J	.95/Ea.
453	1.30/Ea.
453-J	1.50/Ea.
454	1.70/Ea.
454-J	1.75/Ea.
455	1.00/Ea.
455-A	4.00/Ea.
457	.35/Ea.
458	.25/Ea.
459	1.50/Ea.
459-A	6.00/Ea.
460	2.00/Ea.
460-A	8.00/Ea.
461	3.75/Ea.
461-A	15.00/Ea.
462	.25/Ea.
463	.40/Ea.
464	.35/Ea.
468	.45/Ea.
469	.45/Ea.
470	1.00/Ea.
471	1.40/Ea.
472	.45/Ea.
473	.20/Ea.
474	.16/Ea.
475	1.40/Ea.
476	1.05/Ea.
478	.35/Ea.
478-J	.42/Ea.
479	.62/Ea.
479-J	.75/Ea.
480	14.00/Ea.
481	15.75/Ea.
482	15.75/Ea.
483	17.50/Ea.
484	19.50/Ea.
485	21.50/Ea.
486	24.00/Ea.
487	25.00/Ea.
488	40.00/Ea.
489	43.50/Ea.
490	2.25/Ea.
490-A	3.40/Ea.
490-B	4.50/Ea.
492	3.50/Ea.
492-A	5.25/Ea.
492-B	7.00/Ea
493	3.15/Ea.
495	4.10/Ea.
497	5.50/Ea.
499	10.75/Ea.
501	2.85/Ea.
503	2.75/Ea.
505	2.40/Ea.
516	2.00/Ea.
518	17.50/Ea.
519	3.80/Ea.
520	2.25/Ea.
522	4.25/Ea.
523	20.00/Ea.
524	6.25/Ea.
526	6.00/Ea.
527	15.00/Ea.
531	.25/Ea.
532	.25/Ea.
533	.25/Ea.
534	.25/Ea.
535	.25/Ea.
536	.25/Ea.
537	.25/Ea.
538	.30/Ea.
539	.30/Ea.
540	.30/Ea.
541	.60/Ea.
542	.45/Ea.
543	.25/Ea.
544	.50/Ea.
545	.60/Ea.
550	.25/Ea.
551	.50/Ea.
552	.60/Ea.
553	.90/Ea.
554	1.30/Ea.
555	1.80/Ea.
558	$ .85/Ea.
559	1.30/Ea.
560	2.25/Ea.
561	2.25/Ea.
562	6.00/Ea.
566	40.00/Ea.
568	30.00/Ea.
570	6.25/Ea.
572	15.50/Ea.
573	28.00/Ea.
574	28.25/Ea.
578	33.75/Ea.
580	26.25/Ea.
581	29.00/Ea.
582	30.50/Ea.
583	32.50/Ea.
584	35.00/Ea.
585	40.00/Ea.
586	44.00/Ea.
587	50.00/Ea.
588	79.00/Ea.
589	87.50/Ea.
600	.11/Ea.
604	.25/Ea.
605	.35/Ea.
611	.14/Ea.
613	.15/Ea.
616	1.40/Ea.
617	.20/Ea.
618	2.25/Ea.
619	2.80/Ea
625	.23/Ea.
626	.56/Ea.
628	.28/Ea.
629	8.50/C
631	.25/Ea.
632	.25/Ea.
633	.25/Ea.
634	.25/Ea.
635	.25/Ea.
636	.25/Ea.
647	.70/Ea.
650	.50/Ea.
663	14.00/C
664	19.50/C
666	11.00/C
667	45.00/C
668	.35/Ea.
669	11.00/C
681	.85/Ea.
697	3.25/Ea.
700	.85/Ea.
701	28.00/Ea.
702	32.00/Ea.
703	59.00/Ea.
704	40.00/Ea.
705	56.00/Ea.
710-100	5.70/Ea.
710-250	14.25/Ea.
710-500	28.25/Ea.
710-1000	55.00/Ea.
710-2500	135.00/Ea.
712-100	3.95/Ea.
712-250	9.75/Ea.
712-500	19.50/Ea.
712-1000	38.25/Ea.
712-2500	95.00/Ea.
714-100	2.45/Ea.
714-250	6.00/Ea.
714-500	12.00/Ea.
714-1000	23.50/Ea.
714-2500	58.00/Ea.
740	.69/Ea.
749	35.00/Ea.
756	17.50/Ea.
757	157.50/Ea.
762	.20/Ea.
763-3	.30/Ea.
763-5	.38/Ea.
763-7	.40/Ea.
764	.35/Ea.
765	.90/Ea.
766	.50/Ea.
766-J	.75/Ea.
768	.70/Ea.
769	1.40/Ea.
770	2.50/Ea.
771	16.75/Ea.
772	16.75/Ea.
772/18	21.00/Ea.
773	21.75/Ea.
774	24.00/Ea.
775	27.50/Ea.
776	32.00/Ea.
777	35.00/Ea.
778	45.00/Ea.
781	20.00/Ea.
782	1.40/Ea.
784	1.95/Ea.
786	27.50/Ea.
787	38.50/Ea.
788	12.50/Ea.
789	31.75/Ea.
790	15.50/Ea.
791	37.50/Ea.
792	18.75/Ea.
793	45.75/Ea.
794	22.00/Ea.
795	55.00/Ea.
796	27.50/Ea.
797	65.00/Ea.
798	29.00/Ea.
799	20.00/Ea.
800	27.50/Ea.
801	30.00/Ea.
802	21.00/Ea.
803	16.00/Ea.
806	12.00/Ea.
809	6.50/Ea.
810	$31.25/Ea.
813	20.00/C
814	15.00/C
815	.80/Ea.
816	.55/Ea.
817	.70/Ea.
818	10.75/Ea.
819	.75/Ea.
820	9.50/Ea.
822	40.00/Ea.
824	47.50/Ea.
825	32.00/Ea.
826	75.00/Ea.
851	8.50/Ea.
855-50′	3.00/Ea.
856-50′	18.00/Ea.
857-50′	15.50/Ea.
858-50′	3.10/Ea.
859-50′	3.30/Ea.
860-50′	3.50/Ea.
863-50′	4.10/Ea.
864-50′	6.00/Ea.
865-50′	9.50/Ea.
866	.23/Ea.
866-J	.30/Ea.
866-SJ	.70/Ea.
867	.35/Ea.
867-J	.45/Ea.
868-50′	9.50/Ea.
870	11.25/Ea.
872	13.50/Ea.
907	14.00/Ea.
908	32.00/Ea.
909	63.20/Ea.
910	125.00/Ea.
919	30.00/Ea.
920	60.00/Ea.
923	59.25/Ea.
951	4.50/Ea.
952	22.25/Ea.
953	140.00/Ea.
954	70.00/Ea.
955	35.00/Ea.
956	14.00/Ea.
963	14.00/C
964	19.50/C
965	.17/Ea.
966	.17/Ea.
966-J	.23/Ea.
967	45.00/C
968	.10/Ea.
972	13.00/Ea.
972-A	70.00/Ea.
972-B	60.00/Ea.
972-S	50.00/Ea.
973	15.00/Ea.
973-S	60.00/Ea.
974	18.75/Ea.
975	22.75/Ea.
976	27.50/Ea.
977	35.00/Ea.
978	40.00/Ea.
1013	2.75/Ea.
1014	5.25/Ea.
1015	10.00/Ea.
1017	35.00/M
1017-10	.45/Ea.
1017-50	1.95/Ea.
1017-100	3.85/Ea.
1017-1000	35.00/M
1025	1.35/Ea.
1050	2.50/Ea.
1051	4.50/Ea.
1052	37.00/Ea.
1053	.75/Ea.
1054	1.40/Ea.
1055	2.75/Ea.
1056	21.00/Ea.
1057	1.45/Ea.
1058	2.80/Ea.
1059	5.00/Ea.
1060	40.00/Ea.
1101	3.50/Ea.
1111	30.00/Ea.
1112	57.50/Ea.
1113	115.00/Ea.
1120	5.00/C
1121	2.80/C
1122	5.50/C
1123	2.20/C
1124	2.20/C
1125	5.00/C
1126	6.50/C
1127	8.00/C
1128	9.50/C
1129	11.00/C
1130	5.00/C
1131	6.50/C
1132	8.00/C
1133	9.50/C
1134	11.00/C
1135	8.00/C
1136	9.50/C
1137	11.00/C
1138	12.50/C
1139	14.00/C
1140	8.00/C
1141	9.50/C
1142	11.00/C
1143	12.50/C
1144	14.00/C
1145	6.00/C
1146	6.75/C
1147	7.00/C
1148	9.00/C
1149	6.00/C
1150	6.75/C
1151	7.00/C
1152	9.00/C
1153	1.50/C
1154	$ 1.80/C
1155	2.00/C
1156	2.00/C
1157	2.00/C
1220	17.00/Ea.
1220-A	12.50/Ea.
1225	25.00/Ea.
1260	.23/Ea.
1261	.23/Ea.
1262	.23/Ea.
1263	.40/Ea.
1264	.45/Ea.
1265	.56/Ea.
1266	.62/Ea.
1372	.15/Ea.
1373	.21/Ea.
1374	.26/Ea.
1375	.32/Ea.
1376	.37/Ea.
1377	.42/Ea.
1378	.47/Ea.
1379	.52/Ea.
1380	.57/Ea.
1382	3.50/C
1382-A	4.00/C
1382-B	4.00/C
1382-C	4.00/C
1383	5.00/C
1383-A	5.60/C
1384	6.75/C
1384-A	7.25/C
1384-B	8.10/C
1385	8.50/C
1385-A	8.50/C
1385-B	9.75/C
1386	10.00/C
1386-A	11.00/C
1386-B	11.50/C
1387	12.50/C
1388	12.75/C
1389	12.75/C
1401	2.85/Ea.
1402	5.60/Ea.
1403	51.50/Ea.
1405	1.80/Ea.
1406	3.40/Ea.
1407	31.00/Ea.
1409	1.25/Ea.
1410	2.25/Ea.
1411	22.20/Ea.
1413	.85/Ea.
1414	1.40/Ea.
1415	13.90/Ea.
1417	.75/Ea.
1418	1.40/Ea.
1419	13.90/Ea.
1421	.63/Ea.
1422	1.25/Ea.
1423	9.00/Ea.
1433	14.00/Ea.
1434	5.75/Ea.
1440	4.25/Ea.
1490	22.50/Ea.
1492	35.00/Ea.
1497	55.00/Ea.
1516	28.50/Ea.
1518	1.20/Ea.
1519	2.30/Ea.
1520	11.00/Ea.
1526	1.40/Ea.
1527	2.70/Ea.
1528	13.00/Ea.
1542	12.50/Ea.
1543	4.25/Ea.
1544	20.00/Ea.
1545	25.00/Ea.
1548	22.50/Ea.
1549	18.00/Ea.
1550	3.75/Ea.
1553	25.00/Ea.
1561	2.65/Ea.
1562	5.10/Ea.
1563	47.50/Ea.
1565	1.55/Ea.
1566	3.10/Ea.
1567	29.00/Ea.
1569	1.10/Ea.
1570	2.10/Ea.
1571	21.00/Ea.
1573	.70/Ea.
1574	1.20/Ea.
1575	11.70/Ea.
1600	14.00/Ea.
1627	15.50/Ea.
1628	14.50/Ea.
1631	19.00/Ea.
1633	18.00/Ea.
1634	15.00/Ea.
1637	23.50/Ea.
1638	20.75/Ea.
1639	18.00/Ea.
1640	1.45/Ea.
1641	1.75/Ea.
1642	1.90/Ea.
1643	.90/Ea.
1644	1.30/Ea.
1645	1.50/Ea.
1646	.95/Ea.
1647	12.25/Ea.
1648	8.50/Ea.
1670	1.90/Ea.
1671	2.10/Ea.
1672	2.45/Ea.
1673	1.50/Ea.
1674	1.80/Ea.
1675	1.90/Ea.
1680	1.25/Ea.
1682	1.55/Ea.
1683	1.25/Ea.

BIRNBACH PRICE LIST NUMERICALLY ARRANGED BY CATALOG NUMBER (Cont'd)

Cat. No.	List Price
1696	$ 1.45/Ea.
1697	1.15/Ea.
1716	42.00/Ea.
1741	8.50/Ea.
1772	40.00/Ea.
1773	50.00/Ea.
1774	56.00/Ea.
1775	67.50/Ea.
1776	80.00/Ea.
1777	87.50/Ea.
1800	13.25/Ea.
1818	11.90/Ea.
1820	11.00/Ea.
1822	6.75/Ea.
1822-B	30.00/Ea.
1822-C	56.00/Ea.
1824	26.00/Ea.
1824-M	50.00/Ea.
1825	31.00/Ea.
1825-M	61.00/Ea.
1870	28.00/Ea.
1872	33.00/Ea.
1874	75.00/Ea.
1874-A	40.00/Ea.
1875	110.00/Ea.
1875-A	57.50/Ea.
1878	165.00/Ea.
1878-A	85.00/Ea.
1963	.06/Ea.
1964	.10/Ea.
1965	.10/Ea.
1967	.20/Ea.
1968	.10/Ea.
1972	16.00/Ea.
1972-A	75.00/Ea.
1973	18.50/Ea.
1974	21.50/Ea.
1975	26.75/Ea.
1976	31.25/Ea.
2000	14.00/Ea.
2010	11.00/Ea.
2012	9.00/Ea.
2013	7.75/Ea.
2014	7.00/Ea.
2015	5.75/Ea.
2016	4.75/Ea.
2025	1.45/Ea.
2050	2.80/Ea.
2051	5.00/Ea.
2052	40.00/Ea.
2100	1.60/Ea.
2125	.42/Ea.
2330	15.00/Ea.
2331	3.25/Ea.
2440	19.00/Ea.
2500	7.00/Ea.
2611	.30/Ea.
2617	.40/Ea.
2650	.56/Ea.
2810	13.25/Ea.
2812	8.75/Ea.
2814	6.00/Ea.
2816	5.00/Ea.
2818	4.40/Ea.
3000 to 3024	1.40/Ea.
3025	1.35/Ea.
3050	2.50/Ea.
3051	4.50/Ea.
3052	28.00/Ea.
3416	10.00/Ea.
3418	7.50/Ea.
3420	6.00/Ea.
3425	1.25/Ea.
3450	2.50/Ea.
3460	5.00/Ea.
3600	22.50/Ea.
3618	2.35/Ea.
3619	2.75/Ea.
4000 to 4006	9.00/M
4007 to 4013	10.00/M
4014	11.25/M
4015 to 4019	12.25/M
4020-21	13.50/M
4022-23	28.00/M
4025	.85/Ea.
4050	1.60/Ea.
4051	2.80/Ea.
4052	21.00/Ea.
4125	.40/Ea.
4126-J	.45/Ea.
4175	.90/Ea.
4175-J	1.30/Ea.
4176	.62/Ea.
4176-J	.80/Ea.
4233	.90/Ea.
4234	1.00/Ea.
4235	2.25/Ea.
4236	2.50/Ea.
4237	2.75/Ea.
4238	3.50/Ea.
4275	.60/Ea.
4275-J	1.00/Ea.
4276	1.15/Ea.
4276-J	1.35/Ea.
4450	1.15/Ea.

Cat. No.	List Price
4450-J	$ 1.50/Ea.
4451	.92/Ea.
4451-J	1.30/Ea.
4452	1.70/Ea.
4452-J	2.00/Ea.
5000	1.10/Ea.
5002	1.35/Ea.
5003	1.70/Ea.
5004	.90/Ea.
5005	1.05/Ea.
5006	1.35/Ea.
5007	1.05/Ea.
5008	1.45/Ea.
5009	1.70/Ea.
5010	3.30/Ea.
5011	3.30/Ea.
5012	4.75/Ea.
5013	4.75/Ea.
5015-5016	.75/Ea.
5017-5018	.75/Ea.
5040	.23/Ea.
5041	.23/Ea.
5042	.24/Ea.
5043	.24/Ea.
5044	.24/Ea.
5045	.24/Ea.
5046	.24/Ea.
5047	.23/Ea.
5050	.45/Ea.
5051	.45/Ea.
5052	.35/Ea.
5053	.30/Ea.
5060 to 5063	.17/Ea.
5070	.23/Ea.
5071	.30/Ea.
5075	.30/Ea.
5076	.30/Ea.
5080	.30/Ea.
5081	.35/Ea.
5085	.30/Ea.
5086	.35/Ea.
5090	.30/Ea.
5091	.32/Ea.
5095	.36/Ea.
5096	.35/Ea.
5105	.35/Ea.
5106	.40/Ea.
5110-5111	.40/Ea.
5115	.60/Ea.
5130 to 5134	.30/Ea.
5140	.30/Ea.
5141	.35/Ea.
5142	.35/Ea.
5143	.40/Ea.
5160	.23/Ea.
5161	.25/Ea
5165-66	.30/Ea.
5170	.30/Ea.
5171	.30/Ea.
5180	.25/Ea.
5181	.30/Ea.
5185	.30/Ea.
5190	.17/Ea.
5191	.17/Ea.
5195	.30/Ea.
5200	.25/Ea.
5201	.25/Ea.
6000	4.90/Ea.
6100	.50/Ea.
6102	.60/Ea.
6103	.85/Ea.
6104	.85/Ea.
6105	3.00/Ea.
6200	.75/Ea.
6201	1.00/Ea.
6202	1.00/Ea.
6203	1.20/Ea.
6204	1.40/Ea.
6205	1.60/Ea.
6206	1.60/Ea.
6207	1.85/Ea.
6208	.15/Ea.
6210	1.00/Ea.
6211	1.15/Ea.
6212	1.20/Ea.
6213	1.35/Ea.
6214	1.50/Ea.
6215	1.65/Ea.
6216	1.85/Ea.
6217	2.00/Ea.
6220	.75/Ea.
6221	1.00/Ea.
6222	1.40/Ea.
6223	1.60/Ea.
6224	1.40/Ea.
6225	2.10/Ea.
6226	2.75/Ea.
6227	6.25/Ea.
6228	8.25/Ea.
6229	12.00/Ea.
6230	.90/Ea.
6231	1.40/Ea.
6232	.35/Ea.
6233	.80/Ea.
6234	.85/Ea.
6235	.90/Ea.
6236	1.30/Ea.

Cat. No.	List Price
6241	$ 1.60/Ea.
6242	2.50/Ea.
6243	1.45/Ea.
6244	.55/Ea.
6245	.35/Ea.
6246	.40/Ea.
6247	.50/Ea.
6248	.55/Ea.
6249	.45/Ea.
6300	5.25/M
6301	5.30/M
6302	5.35/M
6303	7.00/M
6304	5.80/M
6305	5.80/M
6306	5.80/M
6307	6.40/M
6308	6.40/M
6309	7.40/M
6310	29.05/M
6311	49.50/M
6312	5.80/M
6313	5.80/M
6314	6.40/M
6315	7.40/M
6316	10.85/M
6317	11.00/M
6318	11.20/M
6319	13.25/M
6320	15.00/M
6321	6.50/M
6322	7.00/M
6323	7.50/M
6324	8.50/M
6325	8.95/M
6326	9.60/M
6327	9.30/M
6328	9.90/M
6329	11.70/M
6330	8.20/M
6331	8.20/M
6332	7.80/M
6333	7.80/M
6334	8.70/M
6335	9.60/M
6336	22.80/M
6337	21.00/M
6338	30.00/M
6339	30.00/M
6350	10.00/M
6350-A	10.00/M
6351	10.00/M
6351-A	10.00/M
6352	10.00/M
6352-A	10.00/M
6353	11.00/M
6353-A	11.00/M
6354	13.50/M
6354-A	13.50/M
6355	8.25/M
6356	7.70/M
6357	7.70/M
6358	5.50/M
6359	5.50/M
6360	5.75/M
6361	5.75/M
6362	7.15/M
6363	12.65/M
6400	7.50/M
6401	8.10/M
6402	10.50/M
6403	11.50/M
6404	13.00/M
6405	10.30/M
6406	11.90/M
6407	13.50/M
6408	16.20/M
6409	19.80/M
6410	20.00/M
6411	21.50/M
6412	23.50/M
6413	14.70/M
6414	16.60/M
6415	18.60/M
6416	20.30/M
6417	22.90/M
6418	27.10/M
6420	6.50/M
6421	7.00/M
6422	7.50/M
6423	8.00/M
6424	8.75/M
6425	9.75/M
6426	8.30/M
6427	8.75/M
6428	9.60/M
6429	10.00/M
6430	11.00/M
6431	12.65/M
6432	14.65/M
6433	10.85/M
6434	11.00/M
6435	11.20/M
6436	12.50/M
6437	13.25/M
6438	15.00/M
6439	19.15/M
6440	10.30/M

Cat. No.	List Price
6441	$14.70/M
6442	10.30/M
6443	16.05/M
6444	17.05/M
6445	17.10/M
6446	18.10/M
6447	35.00/M
6448	7.80/M
6449	8.65/M
6450	9.60/M
6460	3.35/Gr.
6461	3.60/Gr.
6462	4.45/Gr.
6463	5.00/Gr.
6464	6.95/Gr.
6465	7.75/Gr.
6466	8.55/Gr.
6470	2.75/Gr.
6471	2.95/Gr.
6472	3.10/Gr.
6473	3.25/Gr.
6474	3.40/Gr.
6475	3.60/Gr.
6476	4.00/Gr.
6477	4.35/Gr.
6478	3.60/Gr.
6479	5.50/M
6480	5.50/M
6480-A	5.50/M
6481	6.75/M
6482	7.50/M
6483	25.00/M
6484	4.95/M
6485	4.65/M
6486	5.20/M
6487	5.20/M
6488	7.50/M
6490	5.50/M
6491	5.50/M
6492	5.75/M
6493	7.15/M
6494	12.65/M
6500	1.70/Gr.
6501	1.85/Gr.
6502	1.70/Gr.
6503	1.80/Gr.
6504	2.00/Gr.
6505	2.80/Gr.
6506	2.90/Gr.
6507	3.25/Gr.
6510	1.70/Gr.
6511	1.80/Gr.
6512	2.00/Gr.
6513	2.00/Gr.
6514	2.00/Gr.
6515	2.15/Gr.
6516	2.65/Gr.
6517	2.80/Gr.
6518	2.60/Gr.
6519	3.25/Gr.
6525 to 6534	1.55/C
6540	2.00/Gr
6541	2.15/Gr.
6542	2.50/Gr.
6543	2.60/Gr.
6600	.72/C
6601	.75/C
6602	.87/C
6603	.90/C
6604	.74/C
6605	.75/C
6606	.98/C
6607	1.00/C
6608	.93/C
6609	1.00/C
6610	1.20/C
6611	1.33/C
6611-A	1.40/C
6612	4.10/C
6613	4.65/C
6614	5.20/C
7000	13.75/Ea.
7000-1	1.50/Ea.
7001	17.00/Ea.
7001-1	1.85/Ea.
7002	16.75/Ea.
7002-1	1.80/Ea.
7003	21.50/Ea.
7003-1	2.30/Ea.
7004	21.25/Ea.
7004-1	2.25/Ea.
7005	26.00/Ea.
7005-1	2.75/Ea.
7007	37.50/Ea.
7007-1	3.90/Ea.
7009	56.50/Ea.
7009-1	5.80/Ea.
7011	100.00/Ea.
7011-1	10.15/Ea.
7016	50.00/Ea.
7016-1	5.15/Ea.
7018	40.50/Ea.
7018-1	4.20/Ea.
7020	35.00/Ea.
7020-1	3.65/Ea.
7022	32.00/Ea.
7022-1	3.35/Ea.
7024	17.25/Ea.

Cat. No.	List Price
7024-1	$ 1.85/Ea.
7026-FM	2.75/Ea.
7027	3.50/Ea.
7027-HF	2.50/Ea.
7028	5.00/Ea.
7029	10.00/Ea.
7030	85.00/Ea.
7031	5.00/Ea.
7032	.95/Ea.
7033	5.95/Ea.
7034	.15/Ea.
7035	.25/Ea.
7036	10.00/C
7037	10.00/C
7038	9.00/C
7039	11.00/C
7040	20.00/C
7041	15.00/C
7042	22.50/C
7043-1"	7.50/C
7043-1½"	7.50/C
7043-2"	8.00/C
7043-3"	10.00/C
7044	18.00/C
7045	28.00/C
7046	4.75/Ea.
7047	2.25/Ea.
7048	25.00/C
7049	.85/Ea.
7049-A	.85/Ea.
7049-B	.85/Ea.
7050	.90/Ea.
7052	1.10/Ea.
7053	1.50/Ea.
7054	2.75/Ea.
7055	3.00/Ea.
7061	1.55/Ea.
7062	3.00/Ea.
7063	14.00/Ea.
7064	27.80/Ea.
7065	1.25/Ea.
7066	1.50/Ea.
7080	1.68/Ea.
7081	1.68/Ea.
7082	2.10/Ea.
7083	4.75/Ea.
7084	2.10/Ea.
7085	2.70/Ea.
7086	2.10/Ea.
7087	2.70/Ea.
7088	2.10/Ea.
7201	21.50/Ea.
7201-1	2.30/Ea.
7202	18.75/Ea.
7202-1	1.95/Ea.
7203	24.50/Ea.
7203-1	2.60/Ea.
7204	21.00/Ea.
7204-1	2.25/Ea.
7205	31.50/Ea.
7205-1	3.30/Ea.
7207	41.00/Ea.
7207-1	4.25/Ea.
7400	199.50/Ea.
7401	125.00/Ea.
D-50	4.50/M
R-100	4.50/M
T-6	.20/Ea.
T-7	.50/Ea.
T-8	.40/Ea.
T-9	.15/Ea.
T-10	.08/Ea.
T-11	.30/Ea.
T-12	.15/Ea.
T-14	.70/Ea.
T-14A	.80/Ea.
T-15	.25/Ea.
T-16	.25/Ea.
T-16A	.25/Ea.
T-17	20.00/C
T-18	20.00/C
T-19-¾	9.50/C
T-19-1	9.50/C
T-19-1½	13.50/C
T-20	.80/Ea.
T-42	7.00/M
T-44	18.00/C
T-46	28.00/C
T-48	48.00/C
T-100-1"	.08/Ea.
T-101-1¼"	.08/Ea.
T-102-1½"	.10/Ea.
T-103	.84/Ea.
T-104	.55/Ea.
T-105-14	9.45/Ea.
T-105-16	11.25/Ea.
T-105-16R	11.95/Ea.
T-105-17R	12.95/Ea.
T-105-19R	18.50/Ea.
T-105-20	18.85/Ea.
T-110	1.25/Ea.
T-250	20.00/C
T-250-A	22.00/C
T-669	17.00/C
SPECIAL SPOOLS	
Magnet Wire	.72/Ea.
Solid Tinned	.72/Ea.

PLAIN ENAMEL MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
10	8	$ .59
12	12	.60
14	20	.63
16	32	.64
18	50	.65
20	80	.70
22	127	.73
24	201	.77
26	320	.92
28	507	.97
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	5132	1.75
40	8143	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	1.11
12	25	1.12
14	40	1.14
16	63	1.17
18	100	1.18
20	160	1.20
22	254	1.27
24	403	1.35
26	640	1.62
28	1015	1.70
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

1 Lb. Spools

Size	Ft.	List Price
10	32	1.88
12	50	1.89
14	80	1.93
16	126	1.97
18	201	2.05
20	320	2.12
22	508	2.23
24	806	2.33
26	1280	2.90
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

DOUBLE COTTON MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
12	12	.70
14	19	.73
16	31	.78
18	48	.79
20	78	.87
22	119	.97
24	134	1.13
26	284	1.35
28	435	1.60
30	641	1.92
32	976	2.37
34	1365	3.35
36	1827	4.55
38	2738	8.00
40	3405	11.50

½ Lb. Spools

Size	Ft.	List Price
12	24	1.23
14	39	1.25
16	62	1.28
18	97	1.42
20	157	1.58
22	238	1.80
24	269	2.12
26	568	2.53
28	871	3.07
30	1284	3.60
32	1953	4.47
34	2735	6.30
36	3654	8.72
38	5476	13.09
40	6811	19.60

1 Lb. Spools

Size	Ft.	List Price
12	49	2.23
14	78	2.28
16	123	2.33
18	194	2.40
20	304	2.70
22	477	3.07
24	538	3.82
26	1136	4.45
28	1742	5.20
30	2569	6.18
32	3906	8.50
34	5470	12.15
36	7309	16.37
38	10952	24.50
40	13623	36.40

DOUBLE SILK MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
12	12	$ 1.00
14	19	1.05
16	31	1.15
18	49	1.27
20	78	1.45
22	123	1.70
24	195	1.85
26	303	2.25
28	478	2.50
30	739	2.85
32	1136	3.82
34	1712	4.92
36	2551	7.65
38	3770	10.94
40	5040	17.00

½ Lb. Spools

Size	Ft.	List Price
12	24	1.97
14	39	2.02
16	62	2.20
18	99	2.30
20	157	2.84
22	247	3.28
24	390	3.60
26	606	4.38
28	956	4.92
30	1479	5.47
32	2272	7.44
34	3424	9.63
36	5102	14.88
38	7541	20.74
40	10080	32.00

1 Lb. Spools

Size	Ft.	List Price
12	49	3.73
14	78	3.77
16	125	3.98
18	198	4.38
20	314	5.34
22	495	5.87
24	781	7.00
26	1212	8.58
28	1912	9.30
30	2958	10.10
32	4545	14.88
34	6849	18.55
36	10204	28.44
38	15082	39.40
40	20161	60.00

SOLID TINNED (SOFT DRAWN)

¼ Lb. Spools

Size	Ft.	List Price
10	8	.59
12	12	.60
14	20	.63
16	32	.64
18	50	.65
20	80	.70
22	127	.73
24	201	.77
26	320	.92
28	507	.97
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	8143	1.75
40	5132	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	1.11
12	25	1.12
14	40	1.14
16	63	1.17
18	100	1.18
20	160	1.20
22	254	1.27
24	403	1.35
26	640	1.62
28	1015	1.70
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

1 Lb. Spools

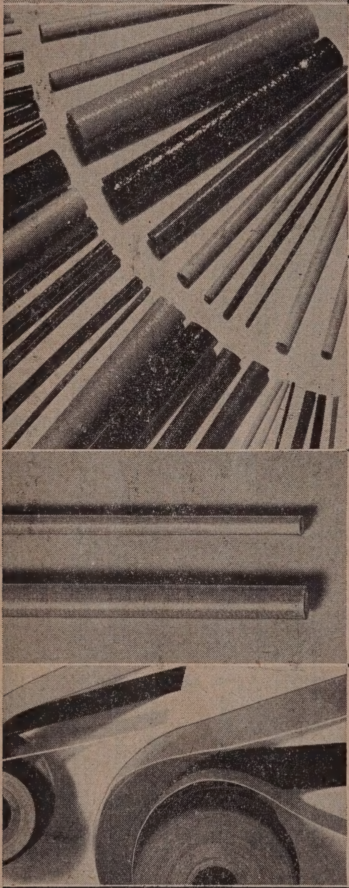
Size	Ft.	List Price
10	32	1.88
12	50	1.89
14	80	1.93
16	126	1.97
18	201	2.05
20	320	2.12
22	508	2.23
24	806	2.33
26	1280	2.90
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

Where wire is shipped on returnable spools or reels a deposit covering same will be required. No credit will be allowed for returnable reels and spools unless returned prepaid within 12 months from date of shipment. All deposit spools and reels are billed separately on invoice and not included in price of materials sold. ***ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE***

TURBO

THE WM. BRAND AND CO., INC.
WILLIMANTIC, CONNECTICUT

Electrical • Electronic
INSULATING MATERIALS WIRE and WIRE MARKERS



Quality Products to Safeguard Your Product Quality and Performance

TURBO VARNISHED TUBING — *All NEMA Grades*

A cotton, rayon or glass braid impregnated with high quality insulating varnish. Recommended for general application requiring high tensile strength, flexibility, tear resistance, non-peeling and non-cracking qualities, low moisture absorption, oil and acid resistance. Radio Grade (NEMA B-1) and Magneto Grade (NEMA A-1) available from .022 I.D. Standard Lengths bundled as follows: No. 24 — No. 6½ mm., 500 ft.; No. 2 — No. 0, 250 ft.; 9 mm. to ⅝" I.D., 100 ft.; ¾" and larger, 52½".

TURBO SATURATED SLEEVING — *All NEMA Grades*

Produced from select cotton, rayon or glass braid saturated with a specially formulated insulating varnish to assure desirable sealing properties with excellent flexibility. Recommended for low cost insulation where dielectric is not the major problem. Features absolute concentricity, high tensile strength, low moisture absorption and flexibility. Available from .022 I.D. standard lengths. Sizes 13 to 24 inclusive can be supplied in continuous lengths put up on spools. Stock colors up to size 12 include black, yellow, red, green, brown and blue. Black and yellow standard on larger sizes.

TURBOSIL GLASS TUBING

A flexible glass braid reinforced with superior silicone insulating varnishes and developed specifically for those applications demanding flexibility with high heat resistance and dielectric strength. Exceedingly popular for use with circuits in small space where optimum protection with least bulk is prime requisite. Provides maximum safeguard against low and high temperatures (—70°C. to +200°C.), moisture, oil and grease. Available in natural color from No. 20 to ⅝" I.D., in 42" standard lengths in four grades: Single Saturated (NEMA H-C-3), Double Dip (NEMA H-C-2), Triple Strength (NEMA H-C-1) and Magneto Grade (NEMA H-A-1).

TURBO CAMBRICS, TAPES, CLOTHS, PAPERS

Broad line affords desired protection against voltage breakdown, oils, moistures and alkalies under the most severe operating conditions. All standard types, sizes, lengths and colors are available. TURBO line includes varnished cambric in sheets and rolls; varnished cambric tapes; dry and oil type splicing tapes; plastic backing tape; duplex cambric slot insulation; varnished duck; silicone varnished glass cloth; treated asbestos cloth; duplex glass slot insulation; extra thin varnished insulation of cambric, nylon, rayon and silk; and varnished papers. All tested in accordance with A.S.T.M. Specifications. Detailed data in TURBO Catalog. Write for samples.

THE WILLIAM BRAND AND COMPANY, INC.

Yours FOR THE ASKING - complete product information and index of TURBO electrical insulating materials and wire plus helpful ordering information.

WRITE TODAY FOR YOUR COPY

SERVICE backed by quality products and experience of specialists is the keynote to the growing acceptance of TURBO products. The Brand research laboratories are continuously studying new materials, methods and machinery to improve standard products and introduce new products to keep step with increased demands placed on electricity. Whatever your insulation problem, look to The William Brand and Co., Inc. for study, recommendations, samples and SERVICE. Turbo-Technician in your territory will be happy to serve you.

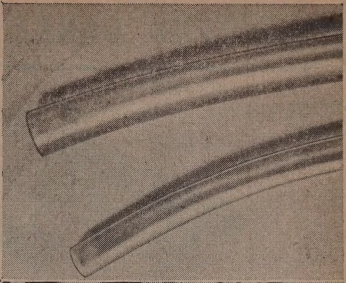
TURBO EXTRUDED PLASTIC TUBING

Vinyl tubing for wide application wherever you require resistance to tear and abrasion, toughness, elasticity, flexibility for broad temperature range. Available in three classifications up to 1.5″ I.D., 7 colors and clear in continuous lengths or cut to length. Samples on request.

HIGH HEAT: Turbotrans 105 and Turbotherm 105 are U. L. approved for 105°C. uses. Turbotrans is specially processed tubing of high quality used extensively for potting, baking, etc. Turbotrans 105 is suitable at temperatures of —40°C.

LOW TEMPERATURE: Turbozone 47 is a non-corrosive tubing providing unusual flexibility at sub-zero temperatures. Specially compounded to meet AAF12047A requirements. Not recommended for oil use.

GENERAL PURPOSE: Turbolex 63 meets JAN-1-631 requirements. Not recommended for high heat or oil use. Turbolex 85 is recommended for service for moderate heat and occasional exposure to oil. Not recommended for temperature applications below —30°C.



TURBO WIRE AND MULTI-CABLES

Multi-conductor cables up to maximum ⅝″ O.D. Range of lays 1″ to 10″, right or left hand with fillers and cotton wraps if required. Can also pair conductors with range of lays ½″ to 6″. Manufactured to specifications.

TURBOTHERM 60: Radio and instrument hook-up wire. Approved for JAN-C-76-SRIR (1000 V.) and SRHV (2500 V.). Available with nylon jacket or lacquered glass braid in standard RMA colors. Nos. 16 to 24 solid or stranded.

TURBOTHERM 80: Radio, instrument and control hook-up wire. U. L. approved appliance wire for 80°C. — 300-600 V., with or without cotton, rayon or glass lacquered overbraid. Nos. 12 to 26 solid or stranded. Nos. 14, 16 and 18 stranded U. L. approved for 80°C. — 1000 V. Standard RMA colors. Available also as a thin-wall instrument wire. Meets Buships 15-W-9, Type LV. Nos. 22 to 28 in solid or stranded. Standard RMA colors.

TURBOTHERM 90: Radio, instrument and control hook-up and motor lead wire with or without lacquered braid. U. L. approved 90°C. — 600 V. Nos. 16 to 26 solid or stranded. Standard RMA colors.

TURBOTHERM 105: Motor lead and appliance wire. U. L. approved 105° C. — 600 V. Nos. 16 to 26 solid or stranded. Standard RMA colors.

TURBOTHERM 105: Hook-up and appliance wire with lacquered glass overbraid. U. L. approved 105°C. — 300 and 600 V. Nos. 16 to 26 solid or stranded. Standard RMA colors.

TURBOLENE PE: Low voltage (150 V.) loop antenna wire. Nos. 22 and 24, solid or stranded, with natural or brown insulation.

TURBOLENE NF: High voltage Appliance Wire. U. L. approved 10,000 and 20,000 V. Nos. 14 to 22 solid and stranded in natural white.

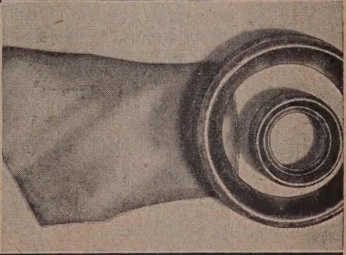
NEON SIGN CABLE GTO-15: U. L. approved 15,000 V. Nos. 12 and 14 stranded in natural color primary insulation with black jacket.

TURBO TWIN-LEAD TRANSMISSION LINE: Available in heavy duty outdoor and light weight indoor types. 300 ohm and 150 ohm Twin—lead are standard. Special combinations of conductor gage and web dimensions are available. Can be furnished with your imprint on the web.

Additional colors, contrasting color tracer stripes, other construction and special packaging on special request.

TURBO MICA PRODUCTS

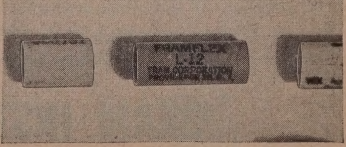
Possessing ideal electrical properties, Mica is available in several grades and forms for every electrical need. TURBO Mica line includes: HEATER PLATE: can withstand direct contact with heat, 1000°F., 625 VPM. FLEXIBLE PLATE: soft mica bonded with non-hardening adhesive varnish can be bent or molded whether cold or warm. AMBER SEGMENT PLATE: soft edged for wearing down with copper commutator bars, 600 VPM. MOLDING PLATE: moldable at approximately 284°F., on flat sheets, 600 VPM up to .015″ thickness, 450 VPM .015″ and over. INDIA SEGMENT PLATE: distinguished from amber segment plate by increased hardness and higher thermal characteristics. B-H-1 and B-H-2 PLATE: built-up mica plate with high rigidity and good power factor suitable for condenser applications. BLOCK MICA to rigid specifications, all standard sizes. MICA FILMS for mica condensers.



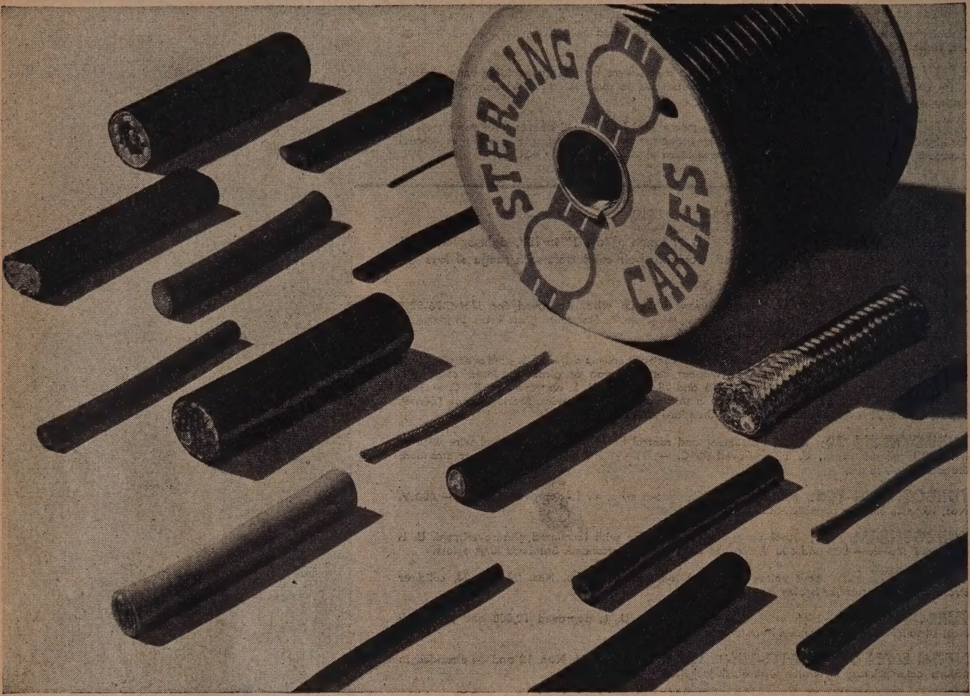
TURBO **WILLIMANTIC, CONN., U.S.A.** · TELEPHONE 3-1661

TURBO IDENTIFICATION MARKERS

Slip-on identification sleeves in braided fabric or extruded plastic are available imprinted longitudinally or circumferentially in any diameter or length in any combination of colors. Dimensioned to precise limits to insure snug fit, these markers clearly identify electrical conductors, tubing, wiring, hose, cable, rod and similar connectors. Fadeproof, bleedproof and smearproof, TURBO Markers will last the life of any product.



STERLING CABLE THRU BEAM INSTRUMENTS



Sterling Cable Company manufactures a full range of Electrical, Radio and Television wires and cables which is sold exclusively through Beam Instruments Corporation.

Due to the very large number of different types of wire and cable no attempt is made to list or classify them here.

Substantial stocks of the more popular Television cables are maintained in New York.

Representatives of these stocks are:

300 ohm twin lead.
4-8 Conductor Antenna Rotator cable
Coaxial cables
R.G. 59U (S C 2132)
R.G. 11 U
R.G. 5 U, etc., etc.

PAPER AND CAMBRIC INSULATED
CABLES HIGH AND LOW TENSION
LEAD SHEATHED
STEEL TAPED
WIRE ARMOURED
RUBBER
POLY-VINYCHLORIDE INSULATED
POLYTHENE INSULATED
RUBBER, PLASTIC, TEXTILE AND
POLYCHLOROPRENE FINISHES.

Quotations for special cables and regular types on request.

Send for fuller information.

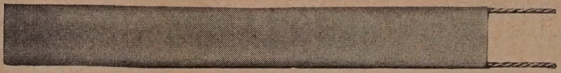
BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

Intelin* TV Lead-in Cables by Federal

Transmission Lines for Every Television Application by America's Largest Manufacturer of Solid Dielectric HF Cables

Type K-1046 300-Ohm TV Lead-In



Insulated with Federal "Silver" polyethylene—the revolutionary development that provides greater resistance to weather, heat and sunlight. Unchanging electrical and physical characteristics assure long, trouble-free service. Installations are more attractive—silver insulation blends with any color scheme in home decoration.

Federal		Nominal Impedance Ohms	Nominal Attenuation DB per 100 feet			**Suggested Retail Price per ft.**
Catalog No.	Code No.		50 Mc	100 Mc	200 Mc	
3025	K-1046	300	1.4	2.0	3.5	**$.05**

Type K-111 Shielded 300-Ohm TV Lead-In

Shielded and balanced 300-ohm TV lead-in that minimizes "snow," "ghosts" and electrical noise due to lead-in pick-up. For use in high signal strength, high noise level areas.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3024	**K-111**	300	2.4 at 50 Mc. 3.4 at 100 Mc 4.6 at 200 Mc.	**$.23**

Type K-200 Ultra Low-Loss 200-Ohm TV Lead-In

A 200-ohm TV lead-in that is the answer to satisfactory reception in extreme fringe areas where weak signal strength demands a lead-in with absolute minimum losses.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3027	**K-200**	200	.45 at 50 Mc. .56 at 100 Mc. .66 at 200 Mc.	**$.2734**

Type RG-59/U Coaxial 72-Ohm TV Lead-In Cable

72-ohm (U. S. Government approved) coaxial cable. For use with unbalanced input TV receivers where top quality installation is essential.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3059	**RG-59/U**	72	2.7 at 50 Mc. 3.8 at 100 Mc. 6.0 at 200 Mc.	**$.153**

Type RG-11/U
Coaxial 75-Ohm Low-Loss TV Lead-In Cable

75-ohm low-loss (U. S. Government approved) coaxial cable. For use with unbalanced input TV receivers in low signal strength areas.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3038	**RG-11/U**	75	1.35 at 50 Mc. 2.1 at 100 Mc. 3.1 at 200 Mc.	**$.25**

Type K-117 Shielded 185-Ohm TV Lead-In

185-ohm shielded TV lead-in for use in matching multi-stacked arrays, multiple outlet installations, and long unsupported runs in noisy localities.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3069	**K-117**	185	2.4 at 50 Mc. 3.8 at 100 Mc. 6.0 at 200 Mc.	**$.2666**

Type TV-59 Coaxial 72-Ohm TV Lead-In Cable

An economical, high-quality 72-ohm coaxial cable for use as lead-in with unbalanced input TV receivers.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3023	**TV-59**	72	3.8 at 100 Mc.	**$.0975**

Type RG-8/U Coaxial 52-Ohm TV Lead-In Cable

52-ohm low-loss (U. S. Government approved) coaxial cable. Characteristics and quality proved in every installation where this type cable is indicated. For special applications and experimental work.

Federal		Nominal Impedance Ohms	Attenuation DB/100 ft.	**Sugg'd Retail Price, per ft.**
Catalog No.	Code No.			
3035	**RG-8/U**	52	1.25 at 50 Mc. 2.0 at 100 Mc. 3.2 at 200 Mc.	**$.25**

Intelin High Frequency Cables, Manufactured by Federal Telephone and Radio Corporation, Are Available in a Complete Line for All Electronic Requirements.

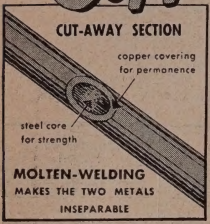
*Trade Mark

PROVED DEPENDABILITY

Copperweld NON-RUSTING

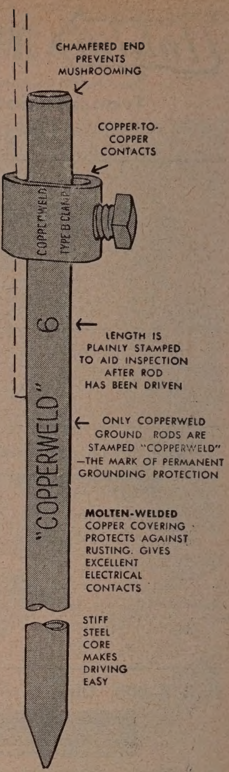
GROUND RODS and CLAMPS

FOR RADIO AND TELEVISION

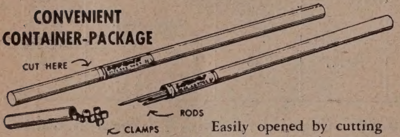

CUT-AWAY SECTION
copper covering for permanence
steel core for strength
MOLTEN-WELDING MAKES THE TWO METALS INSEPARABLE

Copperweld Ground Rods and Clamps provide the reliable grounding protection necessary for successful performance, elimination of interference and safe operation of radio and television equipment. The rugged steel core gives the stiffness you need for easy driving. High conductance and lasting protection against corrosion are provided by the heavy molten-welded copper covering.

Millions of Copperweld Ground Rods are rendering permanent grounding protection. You're SAFE when you use Copperweld — the only Molten-Welded Ground Rods. They give you PROVED dependability — PROVED economy — PROVED longer service.


CHAMFERED END PREVENTS MUSHROOMING
COPPER-TO-COPPER CONTACTS
COPPERWELD
TYPE B CLAMP
6
"COPPERWELD"
LENGTH IS PLAINLY STAMPED TO AID INSPECTION AFTER ROD HAS BEEN DRIVEN
ONLY COPPERWELD GROUND RODS ARE STAMPED "COPPERWELD" —THE MARK OF PERMANENT GROUNDING PROTECTION
MOLTEN-WELDED COPPER COVERING PROTECTS AGAINST RUSTING. GIVES EXCELLENT ELECTRICAL CONTACTS
STIFF STEEL CORE MAKES DRIVING EASY

CONVENIENT CONTAINER-PACKAGE


CUT HERE
RODS
CLAMPS

Easily opened by cutting the heavy fiber tube. This creates a bin for the rods and a convenient container for the clamps.

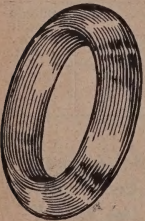
SPECIFICATIONS

Catalog Number	Size	Pounds Per 100 Pcs.	Pcs. Per Package
RT 34	3/8″ x 4′	150	25
RT 36	3/8″ x 6′	220	25
RT 38	3/8″ x 8′	285	20
RT 45	1/2″ x 5′	330	10
RT 46	1/2″ x 6′	395	10
RT 48	1/2″ x 8′	515	10

Above weights include clamps.

COPPERWELD GUY STRAND

Ideal for guying radio and television antenna masts and towers. It provides greater safety, permanent high strength and rust proof construction for the life of the antenna. Furnished in two sizes, 3 No. 18 (breaking strength 435 lbs.) and 3 No. 12 (breaking strength 2236 lbs.) Lengths of 100′, 250′ and 1000′ are available.



COPPERWELD ANTENNA WIRE

Preferred for many years by professionals and amateurs. Because of its high strength, it maintains a fixed length. Furnished in 3 sizes, No. 12 Awg, No. 14 Awg and No. 18 Awg, in coil lengths of 100, 250, 1000 and 3000 feet.

COPPERWELD GROUNDING WIRE

Used to connect antenna mast to ground rod. Annealed for easy handling. Available in two sizes, No. 8 Awg and No. 10 Awg. Coils are furnished in various lengths ranging from 50 to 500 ft.

Copperweld is also used for television twin-lead wire, coaxial cable, resistor and condenser pigtails, radio tube parts and various allied components manufactured and sold by other companies.
Additional information available upon request.

COPPERWELD STEEL COMPANY
GLASSPORT, PA.

WIRE BENCHES WITH

Pierceway

TRADE MARK REG. U.S. PAT OFF.

PACKAGED WIRING SYSTEMS

APPROVED BY
UNDERWRITERS
LABORATORIES, INC.

For more convenient and efficient use of portable power tools . . .

The Pierceway Packaged Wiring System shown here assembled is the 4-foot, 6-outlet system with back-feed section in center.

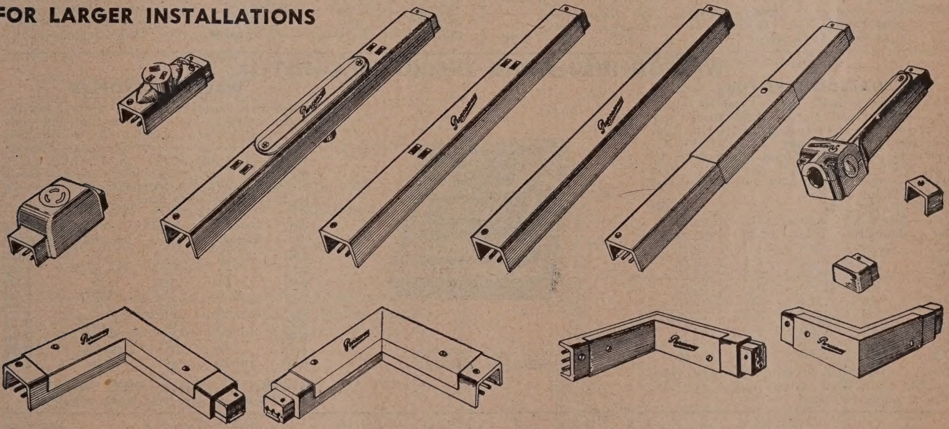
Here is the quick, easy, economical way to get all the outlets you need for efficient use of portable power tools and appliances. With 2 outlets in each section of Pierceway plastic duct, you get an outlet approximately every 8 inches.

Pierceway Packaged Wiring Systems are complete and ready to install, with copper conductors built in as an integral part of each section. These systems are easy to assemble and install—all you need is a screwdriver.

Pierceway Packaged Wiring Systems are available in both 2-wire and 3-wire systems, with a choice of end-feed or back-feed connection. Service is brought into feed section by non-metallic cable through any standard angle or straight ½-inch coupler.

Pierceway systems are packaged in 3 lengths: 4-foot system with 6 outlets; 6-foot, 8-inch system with 10 outlets; 9-foot, 4-inch system with 14 outlets.

FOR LARGER INSTALLATIONS



With the parts shown here, Pierceway systems can be assembled into many types and any size of electrical circuit. They provide an exceptionally flexible installation—if necessary, a Pierceway system can easily and quickly be taken apart and reassembled to meet any change in electrical distribution requirements. All parts are 100% salvable.

Pierceway systems can be provided for voltages of 125 and 250; for all types of 2-wire and 3-wire circuits; for single-phase or 3-phase systems, and for A.C. and D.C. circuits. Made in bus capacities of 10, 15, 20, 30, 45 and 60 amperes. Available with outlets for 2-wire or 3-wire cord caps; with outlet capacities of 10, 15 and 20 amperes; with standard 2-wire or 3-wire polarized receptacles; with Pierceway Twist-Lock or Twist-Tite receptacles, and with adequate grounding facilities.

PIERCEWAY DIVISION

CLIFTON CONDUIT COMPANY, INC.

1278 Orgill Avenue, Memphis 4, Tennessee

INSULATING TUBING SPECIALTY ITEMS

WALSCO SILICONE COMPOUND

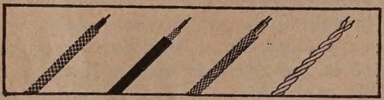
For treating TV and amateur antenna lead wires, insulators and terminals to prevent impedance changes due to moisture conditions. Effective even in seacoast and marine locations.

This compound also prevents high voltage breakdown and arcing under humid conditions since it forms a moisture-repellent high-dielectric seal. WALSCO Silicone is very effective in waterproofing and preserving automobile and aircraft spark plugs and ignition systems.

Cat. No.		List Price
24	—1 oz. tube	$ 2.00
24D	—Display of 12 1 oz. tubes	24.00

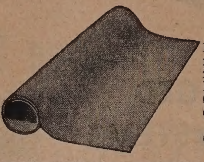
WALSCO ULTRA-FLEXIBLE MINIATURE WIRES

For all connections in electronic devices requiring special thin and flexible leads such as phono pick-ups, miniature earphones, relays, etc. All wires, except tinsel, are 30-gauge, stranded.



Cat. No.		List Price
304	—Single-conductor, shielded, for pick-up leads, etc., 25-ft. spool	$1.90
3040	—Same as No. 304, but package of 54″ length	0.45
305	—Single-conductor, shielded, with black cotton overbraid, 25-ft. spool	2.65
3050	—Same as No. 305, but package of 48″ length	0.45
307	—Two conductors, parallel, color-coded, shielded, 25-ft. spool	2.95
308	—Two conductors, tinsel, twisted, with flesh-colored plastic insulation. Designed for headphones, hearing aids, etc., 25-ft. spool	3.95

WALSCO INSULATING CAMBRIC

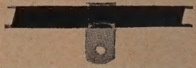


High-voltage (5000-v.) insulating material for repairing transformers, field coils, solenoids, relays, etc. Yellow color; very flexible and durable.

Cat. No.		List Price
645	—Roll of approx. 210 sq. in.	$0.85
645-D	—Display of 10 No. 645 rolls	8.50

WALSCO NO-LOSS TWIN-LEAD STRAP

All plastic clamp for 300-ohm Twin-Lead. Weather- and moisture-resistant for use inside or out. Will not affect line impedance. Rounded edges make damage to insulation impossible.



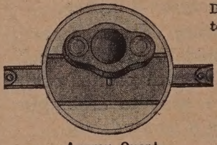
Cat. No.		List Price, per hundred
1520	—Twin-lead Strap (Standard Pack: 100)	$6.05

WALSCO TWIN-LEAD CONNECTOR

For quickly connecting and disconnecting Twin-Lead. Molded low-loss shells and precision machined contacts.

Cat. No.		List Price
1580	—Pair of Connectors	$ 1.40
1580D	—Display of 20 pairs	28.00

WALSCO TWIN-LEAD WIRING NAILS



Designed for attaching 300-ohm leads to walls, moldings, etc. Ornamental head greatly improves the appearance of the installation. WALSCO nails have no appreciable effect on the impedance of the line as the heads consist almost entirely of insulating material.

Cat. No.	Approx. Quant. Per Pkg.	List Price	
†2552	35	$0.45	(Std. Pkg.: 20 Pkgs. on Display Card or in Display Box)
2552-99	200	1.80	(Std. Pack: 12 Pkgs.)
2552-BU	Bulk	7.70 per M	(Min. Quant.: 1000)

WALSCO INSULATING TUBING (SPAGHETTI)

WALSCO FLEXITUBE

A high-grade synthetic extruded vinylite tubing for electronic and electrical insulation. Extremely flexible and resistant to abrasion. High dielectric strength (average 12,000-volt). Resistant to cold or heat from minus 65°F to plus 185°F. (Minus 54°C to 85°C). This tubing is impervious to water, oil, alcohol and most acids and alkalies.

List Price, per pkg. $1.00

Cat. No.	Size B & S Gauge No.	Approx. I.D. inch	Approx. I.D. mm	Quantity per pkg.*
600	18	.042	1	20 ft.
601	16	.053	1.4	20 ft.
602	14	.066	1.6	18 ft.
603	12	.085	2	16 ft.
604	10	.106	2.7	14 ft.
605	8	.133	3.5	12 ft.
606	6	.166	4	10 ft.
607	4	.208	5	6 ft.
608	2	.263	6.5	6 ft.

Color: Clear will be supplied unless order specifies color. Black, Green or Red available subject to stock on hand.

*For larger quantities, write for quotation.

WALSCO RAYOFLEX

A new type "spaghetti tubing" made of heavily lacquered rayon braid. More flexible and superior in many other respects to the conventional varnished tubing. Good dielectric strength (4,000 to 5,000 volts). RAYOFLEX has a smooth and tough surface inside and out. Meets ASTM and VTA Specifications #B2. Sizes up to #6 are packed in handy boxes.

Cat. No.	Size B & S Gauge No.	Approx inch	Quantity per pkg.*	List Price per pkg.
630	18	.042	10 ft.	$1.20
631	15	.059	10 ft.	1.20
632	12	.085	8 ft.	1.20
633	9	.118	5 ft.	1.20
634	6	.166	5 ft.	1.20
635	2	¼″	30 in.	0.70
636	0	5⁄16″	30 in.	0.80
637	00	⅜″	30 in.	0.85
638	0000	½″	30 in.	1.40

Available in: Black, Blue, Red, Yellow. Please specify color when ordering.

HANDY ASSORTMENTS

Cat. No.	FLEXITUBE	List Price
620	—20 ft. of Assorted sizes and colors, from size 18 to 10	$ 1.00
620-D	—36 Assortments of No. 620 in one Display Box	36.00
621	—12 ft. of Assorted sizes and colors, from size 10 to 2	1.00
621-D	—24 Assortments of No. 621 in one Display Box	24.00

Cat. No.	RAYOFLEX	List Price
640	—12 ft. of Assorted sizes and colors, from size 18 to 9	$ 1.00
640-D	—36 Assortments of No. 640 in one Display Box	36.00
641	—6 ft. of Assorted sizes and colors, from size 9 to ½″	1.00
641-D	—24 Assortments of No. 641 in one Display Box	24.00

WALSCO FLEXITUBE *(Twin-Lead Size)*

Special clear, vinylite tubing, weather-resistant. Slips easily over standard 300-ohm twin-lead. Prevents deterioration of lead-in under adverse climatic conditions. Also used as protection when installing lead close to walls, over metal gutters, etc.

Cat. No.		List Price
609-75	—75 ft. Hank (Standard Pack: 12 hanks)	$6.50/hank

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†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card.

WALSCO TELEVISION ANTENNAS

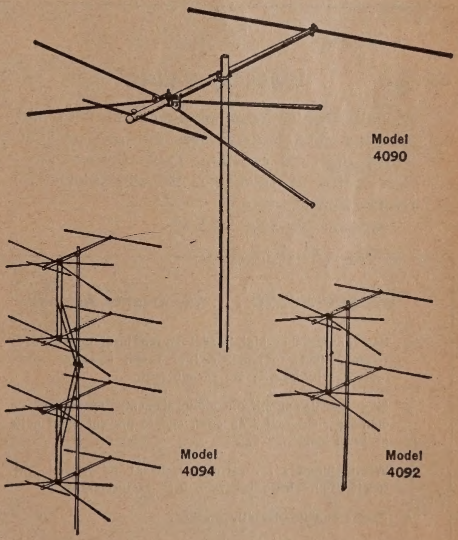
Exclusive advantages available in WALSCO Antennas assures outstanding performance in any climate . . . anywhere. All WALSCO antennas are unconditionally guaranteed for one full year. WALSCO originated the high tensile butt-seamed tubing in order to provide greater flexibility. It will not bend or break under adverse weather conditions. As a result of the exclusive U-bolt design, using hardened, serrated steel clamps, turning or slipping of the antenna on the mast is positively prevented. Antenna elements are made of special chromium - magnesium - aluminum alloy which has a 94% higher tensile strength than regular aluminum generally used for antennas. Special fold-over terminals with built-in strain relief are supplied with all WALSCO antennas and stacking bars. Stacking Kits are precision engineered for each antenna model and are formed to provide for an exact match to the transmission line. This guarantees maximum performance on stacked arrays.

WALSCO SIGNAL KING ANTENNA

The one antenna that does more to guarantee outstanding reception, trouble-free performance even in the fringe areas. The WALSCO Signal King, with its amazing new patented design, assures longer, dependable service under the most adverse weather conditions.

IMPORTANT FEATURES OF THE NEW SIGNAL KING ANTENNA

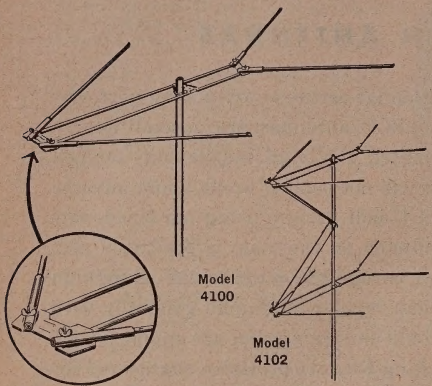
- **High gain on all channels—no weak spots. Readily stacked for fringe area reception.**
- **Radically new insulator design (Patent Pending). Guaranteed unbreakable—outstanding and lasting dielectric properties, under all climatic conditions. Nothing like it anywhere.**
- **Marine type aluminum alloy elements. One end reinforced, other end sealed.**
- **Hi-Speed assembly—two nuts, three thumbscrews—takes less than two minutes. No loose hardware or parts.**



Cat. No.		List Price
4090	Single Bay, no mast	**$ 9.25**
4092	Dual Stack, no mast	**19.85**
4094	4-Bay Stack, no mast	**44.50**

STACKING KITS

Cat. No.		List Price
4005-7	To convert 2 single bays to one dual stack	**$1.50**
4005-8	To convert 2 dual stacks to one 4-bay stack	**5.60**



"TWINTUBE elements have double wall, reinforced ends.

Cat. No.	List Price
4100—Single Bay, no mast	$ 7.50
4102—Dual Stack, no mast	17.75
STACKING KIT	
4005-9—To convert 2 Single Bays to one Dual Stack	$ 2.90

WALSCO "DOUBLE-VEE" ANTENNA*

A new engineering idea in a Double-Vee Antenna . . . "TWINTUBE" element construction eliminates sag and makes breakage impossible; keeps elements in perfect alignment for lasting high-gain performance.

*Licensed under patents of the Workshop Assoc., Inc.

OUTSTANDING FEATURES OF THE WALSCO "DOUBLE-VEE" ANTENNA

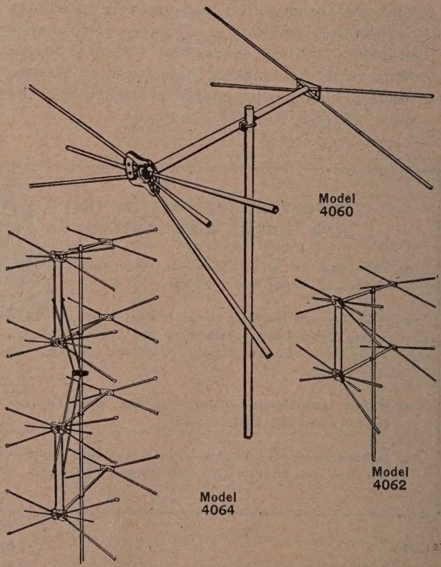
- Extra-high gain on all channels.
- Highly directive—eliminates or reduces ghosts and interference.
- Completely assembled—no loose parts—ready in less than 30 seconds.
- "Twinlube" elements eliminate mechanical failure—even under severe weather conditions.
- New molded insulators guaranteed unbreakable—outstanding and lasting dielectric properties—nothing like it anywhere.
- Marine-type, chromium-aluminum alloy elements—closed outer ends.

WALSCO V-KING

A quality conical antenna embodying many outstanding and unique features, improved mechanical design and excellent gain characteristics over entire TV spectrum. Readily stacked for fringe area reception.

WALSCO V-KING . . . The Quality Antenna

- New unbreakable high-impact styron insulator—silicone treated. Ideal for industrial or beach locations where soot or salt deposits are encountered.
- High tensile aluminum alloy element. Reinforced on clamped end—sealed on outer end to prevent wind noise or breakage.
- Weather-proof . . . corrosion-resistant alloys and A.N. specification plated hardware used exclusively.
- Fast assembly—Readily stacked.



Cat. No.	List Price
4060—Single Bay, no mast	$ 9.25
4062—Dual Stack, no mast	19.85
4064—4-Bay Stack, no mast	44.50

STACKING KITS

Cat. No.	List Price
4005-6—To convert 2 Single Bays to one Dual Stack	$1.50
4005-5—To convert 2 Dual Stacks to one 4-Bay Stack	5.60

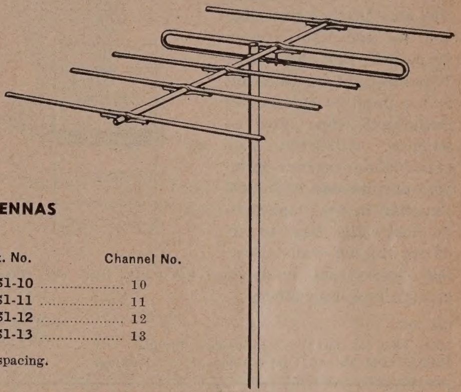
WALSCO *products*
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

TELEVISION ANTENNAS and ACCESSORIES

WALSCO "5-ELEMENT YAGI"

Single-channel high-gain antenna of optimum performance. Designed for low signal areas or where interference makes a highly-directive array necessary. Cut for each channel. Improved signal-to-noise ratio. Minimizes co-channel or adjacent channel interference. Sharp forward pattern with negligible pick-up from sides or rear. Rugged aluminum-alloy construction. Completely assembled. No tools required.

Cat. No.	For Channel	List Price	Cat. No.	For Channel	List Price
4080-2	2	$19.50	4080-8	8	$11.90
4080-3	3	18.75	4080-9	9	11.75
4080-4	4	18.50	4080-10	10	11.60
4080-5	5	17.00	4080-11	11	11.40
4080-6	6	16.75	4080-12	12	11.40
4080-7	7	12.40	4080-13	13	11.40



STACKING KITS FOR WALSCO YAGI ANTENNAS
List Price $2.50 per Set

Cat. No.	Channel No.	Cat. No.	Channel No.	Cat. No.	Channel No.
4081-2	2	4081-6	6	4081-10	10
4081-3	3	4081-7	7	4081-11	11
4081-4	4	4081-8	8	4081-12	12
4081-5	5	4081-9	9	4081-13	13

Channel 2-6 Bars are ¼ wave spacing. Channel 7-13 Bars are ½ wave spacing.

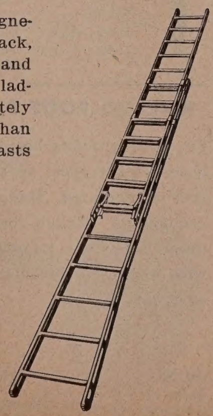
REPLACEMENT ELEMENTS FOR CONICAL ANTENNAS

⅜" Diameter elements made of butt-seamed high-strength chromium-aluminum alloy. One end reinforced, other end crimped, on 44" and 48" length.

Cat. No.	List Price
4004-20 —20" long, each	$0.22
4004-44A—44" long, each	0.60
4004-48A—48" long, each	0.65

WALSCO MAGNESIUM LADDER *for Antenna Installation*

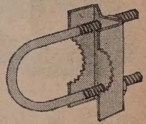
Strong, safe, light-weight magnesium ladders that will not crack, splinter, or rot. Easy to carry and load on truck or car. (20-ft. ladder weighs only approximately 23 lbs.) Weighs much less than wooden ladders and outlasts them three to one.



Cat. No.	Dealer's Net
1600—20 ft. Magnesium extension ladder	$44.50
1602—28 ft. Magnesium extension ladder	$63.25
1603—40 ft. Magnesium extension ladder	$104.75
1605—Pivoted Safety Shoes for above ladder, per pair	$ 3.90

U-BOLT BRACKET ASSEMBLY

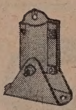
Made of serrated steel, cadmium-plated with cadmium-plated steel U-bolts; fits masts up to 1½". Grips mast tightly, will not slip or turn.



Cat. No.	List Price
4005-20	$0.60

(Standard Pack: 25)

MAST SWIVEL BASE



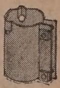
Heavy all-angle cadmium-plated steel base. Accommodates to any pitch roof. Allows orientation of mast AFTER installing antenna.

Cat. No.	List Price
4005-2 —For 1" Diameter Masts	$0.85
4005-27—For 1¼" Diameter Masts	0.95

(Standard Pack: 25)

WALSCO GUY-WIRE RING

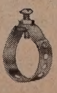
Made of aluminum-alloy. Very strong and highly corrosion-resistant.



Cat. No.	List Price
4005-1 —For 1" Diameter Masts	$0.45
4005-26—For 1¼" Diameter Masts	0.50

(Standard Pack: 25)

WALSCO GROUND CLAMP



Made of heavily plated steel. Provides excellent contact even on rusty pipes and rods. Adjustable for ⅜" to 1¼" pipe sizes. Finest clamp made.

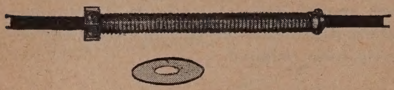
Cat. No.	List Price
4005-10	$0.20

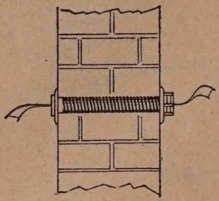
(Standard Pack: 25 units)

WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

TELEVISION ACCESSORIES

WALSCO FEED-THROUGH BUSHING FOR 300-OHM TWIN-LEAD
(Patent Pending)





The ideal method for bringing TV and FM antenna Twin-Lead into the house. Weather-tight installation is now possible. Eliminates bringing the wire under the window. Attractive professional appearance on inside and outside of house. Supplied in 8⅝″ length to fit most walls. Easy to cut off for thinner walls. Low-loss polystyrene holds line securely but will not change line impedance.

Cat. No.		List Price
1550	(Old No. 4011)—Feed-through Bushing	$ 1.10
1550-D	(Old No. 4011-D)—Display of 12 Bushings	13.20

WALSCO ALUMINUM GROUND WIRE

High-conductivity, solid aluminum ground wire. Very soft and easy to install. ⅛″ thick (No. 8 B & S gauge). For grounding of antennas.

Cat. No.		List Price
1500	100-ft. coil	$ 2.75
1505	500-ft. coil	12.80

WALSCO GUY WIRE

High-grade galvanized steel stranded Guy Wire, fully rust-resistant, excellent for masts and towers. Put up in 200-ft. continuous lengths, wired off into four 50-ft. coils.

Cat. No.		List Price
1510	4 Strand No. 20; 3/32″ diam.	$1.45 per C ft.
1512	6 Strand No. 20; ⅛″ diam.	1.90 per C ft.

(Standard Pack: 1200 ft.)

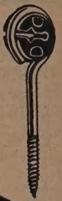
WALSCO PERFORATED STEEL STRAP

¾″ wide, galvanized strapping for fastening masts to chimneys, vent-pipes, etc. Flexible and strong. ¼″ diam. holes punched ¾″ apart.

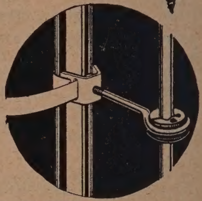
Cat. No.		List Price
1518	10-ft. coil	$0.70

(Standard Pack: 25 rolls)

WALSCO STAND-OFF INSULATORS



Made of high-grade polyethylene insulator, precision molded for easy insertion of Twin-Lead or RG-59/U co-ax. Rust-resistant galvanized steel screw eyes.



Wood Screw Type

Cat. No.	Length	List Price
1560-1	3½″	$0.07
1560-3	7½″	0.09

Mast Type
(Fits any size mast to 2⅛″ O.D.)

Cat. No.	Length	List Price
1565-1	3½″	$0.21
1565-3	7½″	0.29

(Standard Pack: 100)

BULK QUANTITY PRICES ON REQUEST

ANTENNA INSULATOR ASSEMBLY

Complete insulator with holding straps, clamps, screws, nuts and lugs for the V-King Antennas.

Cat. No.	List Price
4005-11A	$1.75

WALSCO TURNBUCKLES

Strong and rustproof. Indispensable for high mast and tower installations.

Cat. No.	Length Open	Length Closed	List Price
1533	4¼″	3″	$0.30
1535	7½″	5½″	0.40
1537	10½″	7½″	0.95

(Standard Pack: 1 Dozen)

WALSCO SCREW EYES

Heavy steel cadmium-plated screw eyes for securing of guy wires.

Cat.No.		List Price Each	List Price Per Gross
1540	Over-all length 2″	$0.05	$5.40
1542	Over-all length 3″	0.08	8.25

(Standard Pack: 144)

WALSCO ROOF PATCHING COMPOUND

For waterproofing around mast-bases, screw-eyes or wherever roof is punctured. Made of highest quality asphalt base with fibred asbestos. Easy to apply with applicators furnished with each can.

WALSCO
ROOF PATCHING COMPOUND
WALTER L. SCHOTT CO.

Cat. No.		List Price
1548	16 oz. can	$1.00

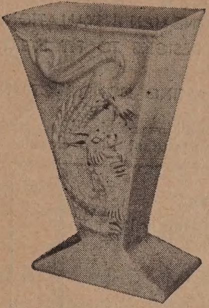
(Standard Pack: 24)

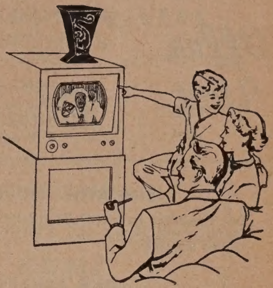
TELEVISION LAMPS
T-V DETENTS

WALSCO T-VIEW LAMP

natural,
glare-free lighting
. . . properly balanced
for clearer T-V reception

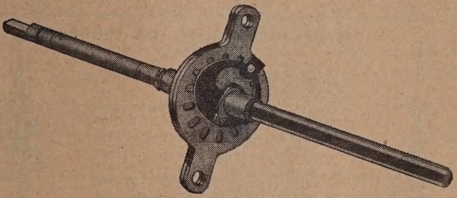
A beautiful, hand-painted television lamp that actually improves the TV picture. The new WALSCO T-VIEW Lamp provides a subdued, indirect illumination of any size room. Gives a proper balance of soft, glare-free, natural light for sharper, brighter TV reception.





The new T-VIEW Lamp eliminates eye-strain by preventing glare or reflections on the television screen.

Cat. No.		List Price
TVL	Black	$6.95
TVL	Chartreuse	6.95
TVL	Maroon	6.95



SHAFT LENGTH*

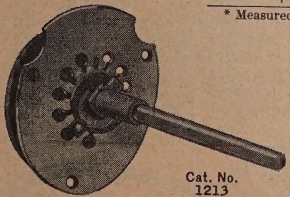
Cat. No.	Brass	Phenolic
1210	$2\frac{13}{16}$″	3¾″
1211	$3\frac{9}{16}$″	3¾″
1212	4½″	3¾″

* Measured from "C" Washer

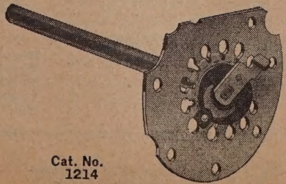
WALSCO T-V TUNER DETENTS

Three point ball-bearing suspension for smooth, positive tuning. Phosphor-bronze spring for longer lasting, dependable performance. Linen base phenolic shafts are rigid, precise, non-warping.

Part No. 1210	replaces RCA part 71463
Part No. 1211	replaces RCA part 72743
Part No. 1212	replaces RCA part 201E1 for use with Tuner No. 71531
Part No. 1213	replaces RCA part 73440
Part No. 1214	replaces RCA part 75162



Cat. No. 1213



Cat. No. 1214

Cat. No.	List Price
1210	$2.80
1211	3.15
1212	4.15
1213	4.75
1214	4.00

WARD AERIALS

World's Finest FOR CAR AND HOME

Offer You

- ✓ SIMPLIFIED ONE-MAN INSTALLATION.
- ✓ UNIVERSAL DESIGNS TO FIT EVERY CAR.
- ✓ RUGGED, LASTING CONSTRUCTION with —
  - Heavy wall brass tubing
  - Weather-resistant triple chrome
- ✓ GREATEST SIGNAL PICKUP with —
  - High "Q" low-loss lead cables
  - Positive coaxial connections
  - 100% shielding
- ✓ PATENTED FLUID TYPE ANTI-RATTLE.
- ✓ HEAVY CARTONS READY FOR RESHIPMENT.

SIDE COWL MOUNTS

Two stanchions for sturdy installation. Smartly designed insulators with chrome caps. Conversion kit for torpedo bodies included.

LONG RANGER

Four-section, 100-inch, EZ-on installation. A favorite in low Signal areas where its extra length provides fine reception.

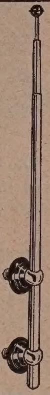
Individually packed: 12 to a master carton.
Approximate individual shipping weight: 1 lb. 11 oz.

Model SC-8 .... **List Price, $7.45**

AIR KING

Three-section, 66-inch, EZ-on installation.
Individually packed: 12 to a master carton.
Approximate individual shipping weight: 1 lb. 4 oz.

Model SC-6 .... **List Price, $5.30**



SIDE COWL OR FENDER

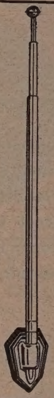
FLEX-ANGLE

Three-section, 68-inch, EZ-on installation.

Individually packed: 12 to a master carton.
Approx. individual shipping weight: 1 lb. 8 oz.

Model CF-6 .... **List Price, $5.85**

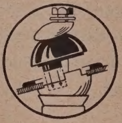
Tops in popularity because of trim styling and a flexible adjustment so rod can be locked in a vertical position, regardless of body contour. Ideal design for new body styles.



TOP COWL OR FENDER

"8-BALL"

Featuring the
SPLIT BALL DESIGN

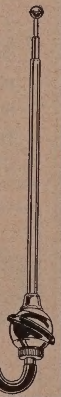


Three-section, 56-inch, collapses to 22 inches.
Individually packed: 12 to a master carton.

Approximate individual shipping weight: 1 lb.

Model TCF-3B .... **List Price, $5.75**

Smart looking "8-Ball" design developed and engineered by WARD is the answer to every installer's dream. One man installs in five minutes! Secure installation! Perfect fit on every car!



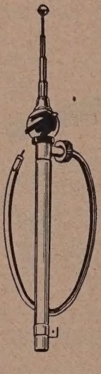
DISAPPEARING COWL OR FENDER

← **IMPERIAL**

Four-section, 100-inch, 8-9/16" exposed when collapsed.
Individ. packed: 12 to a master carton.
App. ind. shipping weight: 1 lb. 10 oz.

Model DCF-4 .... **List Price, $10.95**

A disappearing antenna — 100% shielded from engine noises and completely water-sealed. Unique split-ball design plus popular disappearing feature gives that smart built-in appearance. Universal bracket for sturdy mounting. Ward 36" coaxial lead cable.



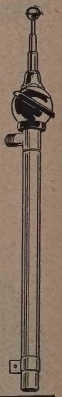
PHANTOM →

Three-section, 56-inch, 3½" exposed when collapsed.

Ward 36" coaxial lead cable.

Individ. packed: 12 to a master carton.
Approx. ind. shipping weight: 1 lb.

Model DCF-3 .... **List Price, $7.45**



EACH MODEL COMPLETE WITH A WARD COAXIAL LEAD CABLE

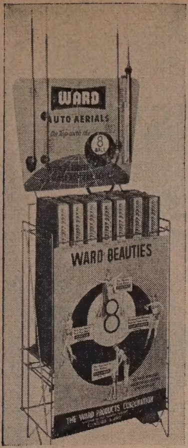
Made of the finest insulating materials — Polyethylene, wire shield braid, oil and abrasion-proof vinylite.

WARD's exclusive lead connector fitting provides an easy coaxial connection, 100% shielded. Bayonet adapter for pin plug included so lead will fit every car radio.

Model C-8 *(12 in.)* **List, $0.85**
Model C-9 *(18 in.)* **List, $1.15**
Model C-12 *(24 in.)* **List, $1.45**
Provides additional lead length required for fender installation.

Covered by one or more of the following Patent Numbers: 104968, 119160, 2152316, 2251889, 2252671, 2269947, 2366634.

THE WARD PRODUCTS CORPORATION



WARD'S *FAST ACTION*
AUTOMOTIVE AERIAL ASSORTMENT AND DISPLAY
WD-50

- Merchandise well displayed is half sold! Here is a fast selling assortment of 32 automotive aerials, packed in a snappy display rack. Complete with eye-catching display panels featuring the Ward Beauties, and all merchandising aids. Built of sturdy welded steel wire, requires only 2 square feet of display space. Shipped complete in one single carton.

WD-50 Floor Display
Weight Aprox. 65 lbs. std. Asst. **List $196.45**
8-Ball Asst. **List $185.35**

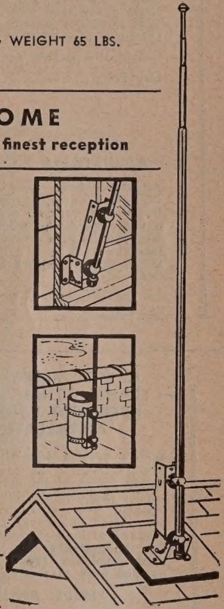
2 OPTIONAL ASSORTMENTS OF 32 FAST SELLERS

13	TFC-3	**OR**	29	TCF-3
7	SC-6		1	SC-6
5	DCF-3		1	DCF-3
3	CF-6		1	CF-6
4	SC-8			

SHIPPING WEIGHT 65 LBS.

WARD ANTENNAS FOR THE HOME

Are vertical, the same as broadcasting antennas, for greatest signal pick-up, finest reception



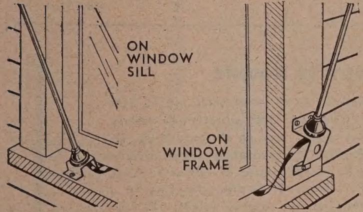
WINDOW MAST

3-Section, 8-Foot, Collapsible to 42 inches

FEATURES . . . Simple 3-point, 3-minute installation for apartments, homes, office buildings, Two-way mounting bracket, 12-inch lead-in strap, and heavy, weatherproof cadmium plating.

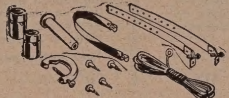
Model WM-3 .... **List, $3.50**

Individually packed — 12 to a master carton.
Approx. ind. shipping weight — 1 lb. 2 oz.



HOUSE MAST

4-Section, 12-ft., Collapsible to 47 ins.



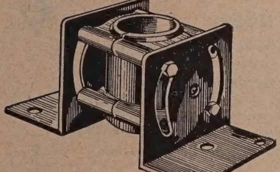
FEATURES . . . Easy installation, Universal mounting brackets, Heavy weatherproof cadmium plating, Built-in lightning arrestor. Complete installation. Fittings include:

60' Lead Wire — Ground Clamp — 4
Wood Screws — 2 2 Nail-It-Knobs — 1
Porcelain Tube — 1 Lead-in Strap — 2
Soil Pipe Straps

Model HM-4 .... **List, $8.00**

Ind. packed — 12 to the master carton.
Approx. ind. shipping weight 4 lbs.

ANTENNA ACCESSORIES—TV AND FM



SELF SUPPORTING BASE — Model C-14

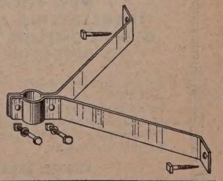
New, heavy, weatherproofed metal base for sturdy installation on any angle. The self-supporting base eliminates the need for guy wire on most installations. Accommodates 1¼" O.D. Mast. Ind. packed: six to a master carton. Approx. ind. shipping weight: 1 lb. 7 oz.

List Price $2.70

Model C-11—For use with 1" O.D. Mast. Ind. boxed. Approx. ind. shipping weight: 1½ lbs.

List Price $2.15

MAST STAND-OFF BRACKET KIT



Two pairs of heavy, cadmium-plated steel stand-off brackets, for 1¼" O.D., to extend mast from side of house or parapet for clearance of 7" or larger size for clearance of 14". Complete with all necessary mounting hardware.

Model C-16—For 7" clearance. Individually packed: 6 kits to a master carton. **List Price** **$3.60**
Model C-17—For 14" clearance. Individually packed: 6 kits to a master carton. **List Price** **$4.70**

THE WARD PRODUCTS CORPORATION

Special COMMUNICATION *ANTENNAS*

by WARD

BUILT FOR RIGOROUS SERVICE

UNIVERSAL SWIVEL MOUNTS

Antennas built for the hardest mobile use. Separate components may be combined to meet any requirements. These rear-mounting Transmitting Antennas are designed for the 25-45 mc. services. Base mounts in such a way as to allow the whip rod to be held vertically regardless of contour of vehicle body.

← SPP-3B

SINGLE ROD

Special Alloy Whip Rod of maximum resilience and durability. 84" Single rod for use in the range of 30 to 45 mcs. Non-Corroding, stainless steel tapered for proper stress distribution. Base Adapter threaded 3/8-24 to permit mounting on SPP-3 Base or SPP-3A Spring.

Individually packed. Approx. wt.: 2½ lbs.

List Price..........**$11.50**

SPP-12 →

ADJUSTABLE 2-SECTION ROD

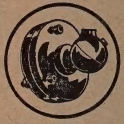
Adjustable Rod. Telescopes from 85" to 103" and is equipped with a locking device that permits removal of the whip rod and replacement at the exact previous length. Heavy wall, hard drawn brass tubing — threaded 3/8-24 to fit either SPP-3 Base or SPP-3A Spring. See SPP-3B for Rod description.

Ind. packed. Approx. weight: 2 lbs. 10 oz.

List Price..........**$22.50**

SPP-3

SWIVEL BASE



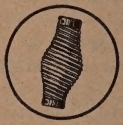
Swivel base for mounting at any desired point. Half balls of cast aluminum tapped 3/8-24 to accept whip rods and shock springs. Insulator of black bakelite — rubber gaskets — steel backup plate. All screws are Allen Head type with wrenches supplied.

Individually packed. Approx. wt.: 1 lb. 10 oz.

List Price..........**$13.25**

SPP-3A

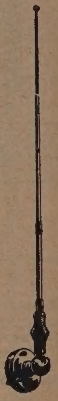
SHOCK MOUNTING SPRING

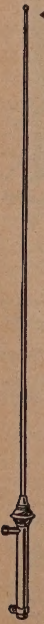


This sturdy spring is used to lessen damage to the whip rod. A flexible lead through the center of the spring maintains constant electrical impedance through the spring assembly. 3/8-24 stud on one end — 3/8-24 tapped hole on opposite end — approximately 6" in height — made of oil tempered wire.

Individually packed. Approx. wt.: 2 lbs. 3 oz.

List Price..........**$7.90**



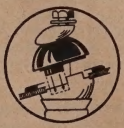


NEW 10 METER MOBILE ← TRANSMITTING ANTENNA NEEDS BUT 1 HOLE FOR INSTALLATION!

Ward's SPP-143 transmitting antenna can be installed on cowl, fender or flat rear deck of any automobile without the necessity of drilling a series of unsightly holes. It is developed to use one 15/16" hole, that can easily be plugged or used to mount a Ward 8-Ball standard broadcast antenna. The short, standard 55½" rod reduces damage from overhead constructions.

MODEL SPP-143

List Price..........**$22.50**

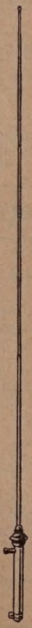


NEW POLICE TRANSMITTING ANTENNA → GIVES COMPLETE DISGUISE TO DETECTIVE CARS

To any criminal a long whip antenna is a police car giveaway. To achieve complete disguise, Ward engineered a standard automotive aerial to withstand transmitting currents and permanently fix the rod length.

MODEL SPPB-71

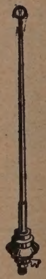
List Price..........**$22.50**

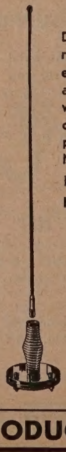


MOTORCYCLE MOUNTS

These Antennas are designed for use on motorcycles and are built to withstand the rugged service and high vibration of vehicle. Rod is electrically short but can be used on all frequencies. 40" rod of same material as SPP-3B — ¼-20 mounting stud in insulator for mounting to motorcycle. Flexible base of rubber to allow movement when rod is bent — Model SPP-6 with safety ring tip — no lead supplied. Individually packed. Approx. weight: 1 lb. 5 oz.

Model SPP-6 Ring Tip (Illustrated)..........**List, $9.25**





ROOF TOP MOUNT

Developed for roof top mountings in 30 to 45 Megacycle range. Advantages of this type of antenna is that directional effects caused by car body shielding of antenna are avoided. Base is designed to be used with the SPP-3B rod which is sold separately. This unit consists of all components of Universal Swivel Mounts except that half-balls are replaced by SPP-3A Spring fastened permanently to insulator. No lead supplied.

Individually packed. Approximate weight: 3 lbs.

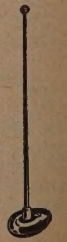
Model SPP-26 Base..........**List, $16.50**

ROOF TOP ANTENNA →

This model is designed for taxicabs, police services, and others using the 140 to 165 Megacycles frequencies. Installed entirely from the outside of vehicle — 12 ft. length of RG-58/U coaxial cable attached permanently to antenna. Whip rod is replaceable.

Individually packed. Approximate weight: 1 lb.

Model SPP-18..........**List, $6.60**



THE WARD PRODUCTS CORPORATION

WARD *Magic Wand*

ANTENNAS For FM and Television

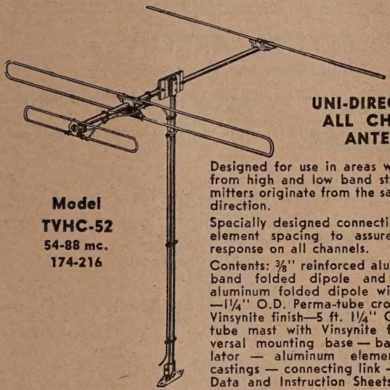
- **Maximum electrical efficiency for all channel coverage.**
- **Mechanical design that assures permanent and trouble-free installations.**

MINUTE MAN SERIES

Can be assembled by 1 Man in 1 Minute!
A magnificent new series of antennas designed and developed in the Ward antenna laboratory.

- **Vinsynite mast for strength, durability and maximum protection against corrosion.**
- **Rotatable guy ring for orientation of antenna after guying.**
- **Nylon insulators on high band antennas.**

TELEVISION MODELS



UNI-DIRECTIONAL ALL CHANNEL ANTENNA

Model
TVHC-52
54-88 mc.
174-216

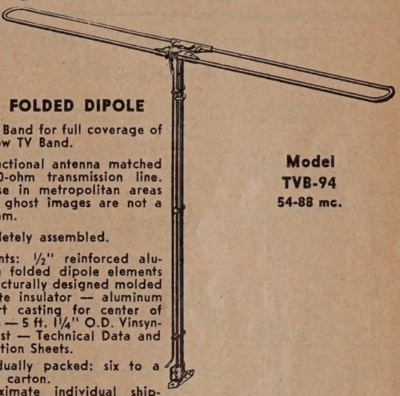
Designed for use in areas where signal from high and low band station transmitters originate from the same general direction.

Specially designed connecting link and element spacing to assure maximum response on all channels.

Contents: 3/8" reinforced aluminum high band folded dipole and 1/2" O.D. aluminum folded dipole with reflector—1¼" O.D. Perma-tube cross arm with Vinsynite finish—5 ft. 1¼" O.D. Perma-tube mast with Vinsynite finish. Universal mounting base — bakelite insulator — aluminum element support castings — connecting link — Technical Data and Instruction Sheets.

Individually packed: six to a master carton.
Approximate individual shipping weight: 9 lbs. 5 oz.

List Price **$17.85**



TV FOLDED DIPOLE

Model
TVB-94
54-88 mc.

Broad Band for full coverage of the Low TV Band.

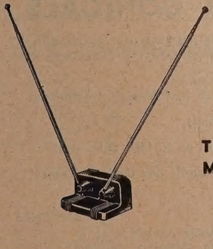
Bi-directional antenna matched to 300-ohm transmission line. For use in metropolitan areas where ghost images are not a problem.

Completely assembled.

Contents: 1/2" reinforced aluminum folded dipole elements — structurally designed molded bakelite insulator — aluminum support casting for center of dipole — 5 ft. 1¼" O.D. Vinsynite mast — Technical Data and Instruction Sheets.

Individually packed: six to a master carton.
Approximate individual shipping weight: 5 lbs. 6 oz.

List Price **$9.20**

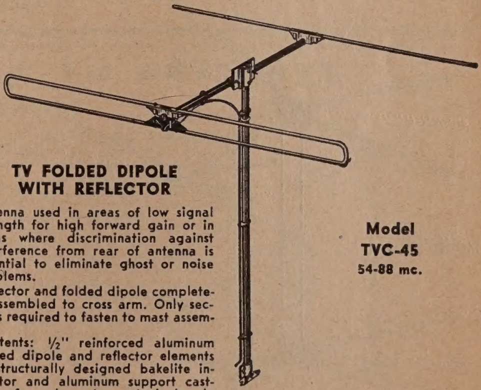


INDOOR TV ANTENNAS MODEL TVI-49

Excellent reception on all channels. Top quality electric insulation. Orients easily in all directions. Heavy base with large surface for mechanical stability. WILL NOT TIP OVER. Telescopic dipole elements.

Contents: Ebony black ceramic base — Two 43" tuneable elements of chrome-plated brass tubing — Stainless steel rod allows no corrosion. Individually packed: six to a master carton. Approximate individual shipping weight: 5 lbs.

List Price **$6.95**



TV FOLDED DIPOLE WITH REFLECTOR

Model
TVC-45
54-88 mc.

Antenna used in areas of low signal strength for high forward gain or in areas where discrimination against interference from rear of antenna is essential to eliminate ghost or noise problems.

Reflector and folded dipole completely assembled to cross arm. Only seconds required to fasten to mast assembly.

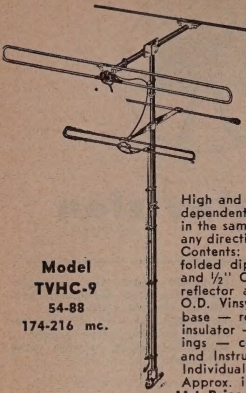
Contents: 1/2" reinforced aluminum folded dipole and reflector elements — structurally designed bakelite insulator and aluminum support castings for elements — steel brackets for attaching cross arm to mast — 5 ft. 1¼" O.D. Vinsynite metal mast — universal swivel base — grounding solder lug — Technical Data and Instruction Sheets.

Individually packed: six to a master carton.
Approximate individual shipping weight: 8 lbs. 9 oz.

List Price **$16.20**

THE WARD PRODUCTS CORPORATION

WARD *Magic Wand* Television Antennas



Model
TVHC-9
54-88
174-216 mc.

ALL CHANNEL ANTENNA

Designed for use when high band and low band stations are on air or are proposed. Includes scientifically designed transmission line link to prevent interaction of high and low antennas.

Eliminates necessity for individual antennas cut for each channel.

High and low band bays can be oriented independently to receive stations which are not in the same direction. Each bay adjustable in any direction to give maximum desired signal.

Contents: ⅜'' reinforced aluminum high band folded dipole with reflector and cross arms and ½'' O.D. Low band folded dipole with reflector and cross arms — two 5 ft. 1¼'' O.D. Vinsynite masts — universal mounting base — rotatable guy wire ring — bakelite insulator — aluminum element support castings — connecting links — Technical Data and Instruction Sheets.

Individually packed: six to a master carton.
Approx. individual shipping weight: 12 lbs.
List Price **$22.05**

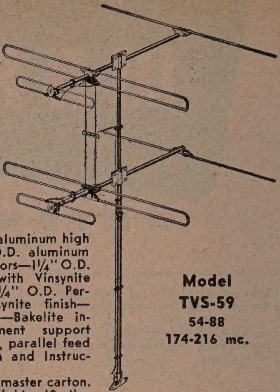
UNI-DIRECTIONAL ALL-CHANNEL ANTENNA

Designed for fringe areas where signals from high and low band transmitters originate from the same general direction.

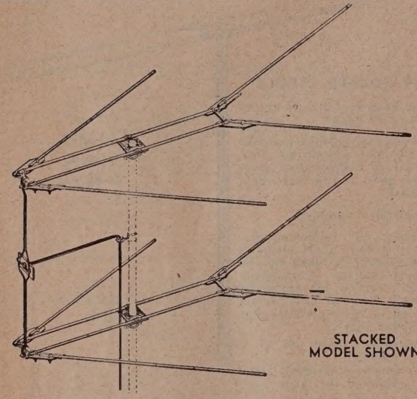
Specially designed connecting link, element spacing and bay spacing for maximum response on all channels.

Contents: ⅜'' reinforced aluminum high band dipoles and ½'' O.D. aluminum folded dipoles and reflectors—1¼'' O.D. Permatube cross arms with Vinsynite finish—2 sections—5 ft. 1¼'' O.D. Permatube mast with Vinsynite finish—universal mounting base—Bakelite insulators—aluminum element support castings, connecting links, parallel feed assembly—Technical Data and Instruction Sheets.

Individ. packed: three to master carton.
App. ind. shipping weight: 19 lbs.
List Price **$36.75**



Model
TVS-59
54-88
174-216 mc.



STACKED
MODEL SHOWN

FLYING ARROW

with Minute Man Construction

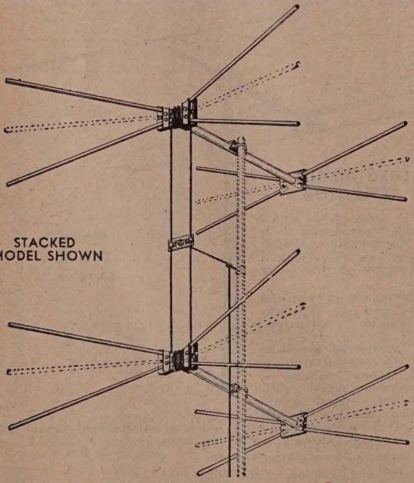
ALL CHANNEL Television Antenna with exceptional high gain throughout entire high band.

Recommended particularly for areas where reception on high band stations constitute a problem.

- PIN POINT DIRECTIVITY
  concentrates energy, eliminating noise and interference.
- SUPERB MATCH TO 300 OHM LINE
  resulting in Maximum energy transfer.
- ONLY FEW SECOND ASSEMBLY TIME REQUIRED.

Model		List Price
TV-72	Single Bay; Individually packed 6 to a master carton. Master carton shipping weight: 28½ lbs. less mast	**$ 9.75**
TV-73	Bulk packed	**9.75**
TVS-75	Stacked 2 Bay, includes stacking harness. Individually packed 6 to a master carton. Master carton shipping weight: 44 lbs. less mast	**19.95**
TVS-76	Bulk packed	**19.95**

WARD *AIRFLIGHT* CONICALS



STACKED
MODEL SHOWN

UNIQUE ELEMENT SPACING AND ANGULAR ADJUSTMENTS ELIMINATE PATTERN BREAK-UP. NO FALLING OFF OF RESPONSE ON HIGH BAND.

- Scientifically Determined Impedance Matching Characteristics
- Optimum Reception on Both TV Bands
- Rigid Mechanical Construction takes up to 1⅜'' O.D. Mast
- New Molded Universal Insulator Permits any Desired Element Arrangement.

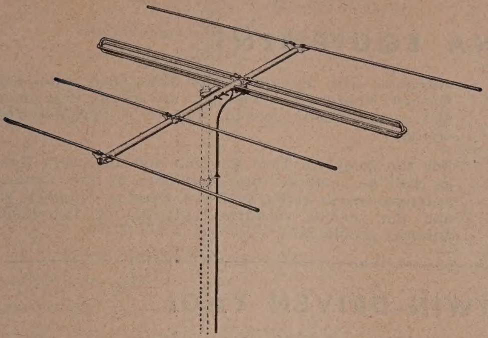
Model		List Price
TV-63	Single Bay, less mast; Individually packed 6 to a master carton. Master carton shipping weight: 36½ lbs.	**$10.25**
TV-62	Bulk packed, 6 to a master carton	**10.25**
TV-67	Stacked 2 Bay, less mast, includes Feeder wire assembly; Individually packed 3 to a Master Carton, shipping weight: 52 lbs.	**21.20**
TV-66	Bulk packed, 3 to a master carton; shipping weight: 44½ lbs.	**21.20**

Stacking Harness Kits for extreme gain in super fringe areas

Models		List Price
TV-71	Makes 2 single bays into a stacked array	**$2.15**
TV-77	Makes 2 two-bay stacked arrays into a 4-bay stacked array	**3.20**

THE WARD PRODUCTS CORPORATION

WARD *Magic Wand* Television Antennas



WARD *YAGI* Antennas

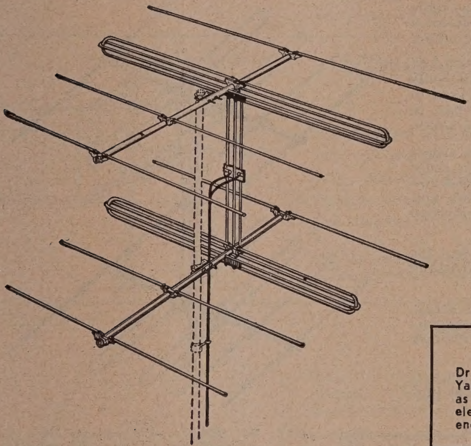
with Minute Man Construction

INTERLINKING FOLDED DIPOLE PRINCIPLE

Impedance transformer built-in as integral part of unit to step up impedance.

- VERY HIGH FRONT TO BACK RATIO
- NO CO-CHANNEL INTERFERENCE
- PIN POINT DIRECTIVITY
- MINIMUM STANDING WAVE RATIO GUARANTEES MAXIMUM ENERGY TRANSFER
- PERFECT MATCH TO 300 OHM LINE
- RUGGED CONSTRUCTION—uses Jones and Laughlin Permatube cross arm for maximum horizontal torsional rigidity.
- COMPLETELY PREASSEMBLED AT THE FACTORY
- THE PERFECT ANTENNA FOR FRINGE AND SUPER FRINGE AREAS.

	TVY-2 and 3	**List $26.20**
Models	**TVY-4, 5 and 6**	**List 22.60**
	TVY-7 thru 13	**List 13.60**



WARD YAGI Antennas Stacking Kits

In super-fringe areas, Ward Yagi provides maximum performance as a stacked array, using a sharply tuned Yagi for each channel.

STACKING KIT MODEL C-23
For low band stacking Ward Yagi's TVY-2 to 6. Permits stacking of entire low band, using the transmission line without loss due to loading effect.
Contents: Low band feeder wire assembly for connecting two single bay Yagi's into a stacked array. Instruction sheet. Bulk packed, six to a master carton. Shipping weight: 4½ lbs.
C-23 .... **List Price $5.00**

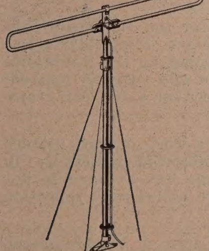
STACKING KIT MODEL C-24
For stacking high band Ward Yagi's TV-7 to 13.
Contents: High band feeder wire assembly for connecting 2 single bay Yagi's into a stacked array. Instruction sheet. Bulk packed, 6 to a master carton. Shipping weight: 1¾ lbs.
C-24 .... **List Price $1.60**

DR. YAGI PRAISES WARD ENGINEERING

Dr. Hidetsugu Yagi, inventor of YAGI antenna, recently said of the Ward Yagi antenna: "The low numerical value of voltage standing wave ratio as recorded . . . is the proof of the exact matching between circuit elements. In this regard, I highly esteem the excellent ability of Ward engineers."

WARD *Magic Wand* FM ANTENNAS

FM MODELS



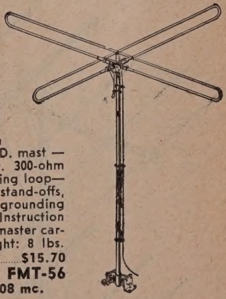
FM FOLDED DIPOLE

Bi-directional.
Matched impedance to 300-ohm line for broad tuning, high signal gain over entire 88-106 mc. band.
Adjustable mounting design for greater ease of orienting.
Pre-assembly into component parts for quick installation.
Contents: Dipole element of ⅜" reinforced aluminum — molded bakelite insulator — 5 ft. 1" O.D. mast and guy wire ring — universal mounting base — conduit clamp—grounding solder lug—Technical Data and Instruction Sheets.
Ind. packed: twelve to a master carton.
Approx. individ. shipping weight: 5 lbs.
List Price **$9.40**

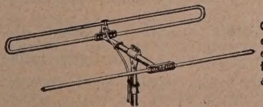
Model FM-55 **88-108 mc.**

FM FOLDED TURNSTILE

Exceptional high signal gain from All DIRECTIONS.
Does not require orienting.
Packed complete, partially Pre-Assembled components for quick and simple installation.
Contents: ⅜" reinforced aluminum folded dipole elements — 5 ft. 1" O.D. mast — molded bakelite insulators — 60 ft. 300-ohm colinear line and ¼ wave length phasing loop—rubber stand-off pads — 6 plastic stand-offs, guy wire ring and conduit clamp — grounding solder lug — Technical Data and Instruction Sheets. Individually packed: six to a master carton. Approx. individ. shipping weight: 8 lbs.
List Price **$15.70**



Model FMT-56
88-108 mc.



FM REFLECTOR KIT — Model FMR-63 88-108 mc.

Combines quickly and easily to make high gain directional array with Model FM-55. Increases gain and eliminates reflections. Most effective when transmitting stations are in same general direction. Maximum energy transfer of signal from antenna to set as result of accurately determined spacing and correct reflector length. — Contents: ⅜" reinforced aluminum reflector element—weather-proofed metal cross arm and brackets plus mounting hardware—Technical Data and Instruction Sheets.
Ind. packed: six to a master carton. Approx. indvid. shipping weight: 3 lbs.
List Price **$5.50**

← Reflector for use with Folded Dipole

THE WARD PRODUCTS CORPORATION

TACO NOISE-REDUCING ANTENNA SYSTEMS

TACO ANTENNA EQUIPMENT

All Taco antennas are designed and manufactured to assure the serviceman and his customer of the most advanced antenna designs. Constant research in the laboratory and in the field assures mechanically and electrically perfect designs. Taco's workmanship is your insurance for long trouble-free performance. Taco Low-band antennas feature Jiffy-Rig construction whereby the installation man merely flips the antenna open and tightens a few screws and the antenna is ready for the roof. The Taco High-band antennas are assembled by the Taco Click-Rig method, whereby the elements are swung into place and automatically locked, due to a spring-loaded action.

For the complete Taco antenna and accessory line, as well as complete technical data on the various antenna types, refer to Taco Catalog Number 35 and the various technical bulletins on individual antenna problems.

NEW 5-ELEMENT TWIN-DRIVEN YAGI

SPECIAL HIGH GAIN MODEL

A new antenna design incorporating the advantages of both the Twin-Driven Yagi and the 5-Element design. High gain provides reception in extreme fringe area installations where ordinary antennas fail. Excellent front-to-back ratio eliminates venetian-blind effect caused by co-channel interference.

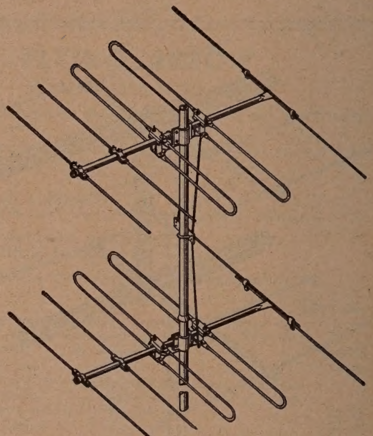
Antenna consists of two directors, two folded-dipole antenna elements driven in parallel, and one reflector. The antenna elements driven in parallel raise the inherently low impedance of the Yagi design to match 300 ohm leadin, thus getting maximum energy from the array.

The 5-Element Twin-Driven antenna is designed primarily for fringe area installations. It is also used in many noisy locations in order to raise the signal-to-noise ratio. Unwanted signals are rejected due to the narrow beam width and sharp directivity of the antenna and the high gain minimizes the effect of noise pickup in the transmission line.

Light in weight, yet unusually sturdy, the Super 980-(*) is ideal for use with a rotator. Mechanically, the new antenna will withstand extremes in weather conditions.

The Super 980-(*) is available as either a single or stacked array, depending upon the available signal strength. The antenna is completely factory-assembled in the famous TACO Jiffy-Rig manner that requires only a few minutes to ready it for installation.

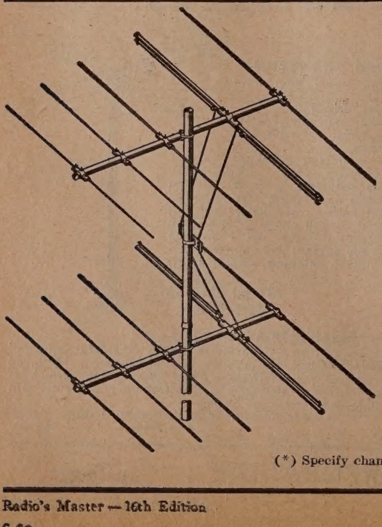
Comes tuned for any one of the low-band channels and is available in a stagger-tuned model, Super 980-(4½) or Super 981-(4½), that will receive both Channels 4 and 5. Specify channel desired.



CAT. No. SUPER 980-(*)—5-Element Two-Bay Twin-Driven Yagi Antenna less mast. (Ship. Wt.: 14 lbs.)............**List Price $47.00**

CAT. No. SUPER 981-(*)—5-Element Single-Bay Twin-Driven Antenna less mast. (Shipping Weight: 7 lbs.)............**List Price $23.00**

CAT. No. 989-(*)—Transmission lines for stacking 2 single-bay No. Super 981 antennas. **List Price $5.25**



5-ELEMENT LOW BAND YAGI

The Taco 5-element Yagi is designed for the sub-fringe area same as the Twin-Driven Yagi shown above. It employs a two diameter type antenna section for stepping up the impedance of the antenna itself. With the directors and reflector element cut for each channel the match is correct for a 300 ohm transmission line.

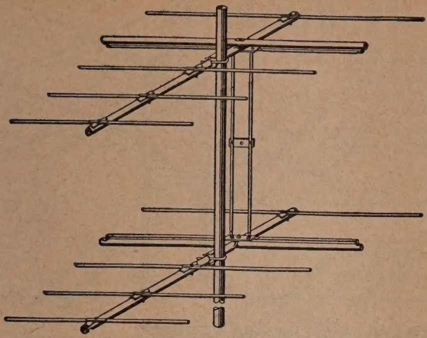
The three directors give the antenna a very narrow pattern which helps to keep out ghosts and unwanted reflections. In areas with mountainous terrain a single bay antenna is frequently the only practical answer to the bothersome reflection problem.

The Taco 5-element Yagi is ruggedly built of hard-tempered heavy wall auminum, designed with a high factor of safety — it's the "Storm-Proof" antenna.

CAT. No. 1325-(*)—ONE BAY YAGI ANTENNA. Consists of: 1 crossarm with U-bolt and saddle; 1 two-diameter driven antenna; 1 reflector and 3 directors mounted on crossarm. (Shipping Weight: 7 lbs.)........................**List Price $16.00**

CAT. No. 1326-(*)—TWO-BAY YAGI ANTENNA. Consists of: 2 Cat. No. 1325-(*) assemblies with stacking lines. (Shipping Weight: 14 lbs.)........**$35.00**

(*) Specify channel desired: 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6.



CLICK-RIG 5-ELEMENT YAGIS

FOR CHANNELS 7-13

TACO's Click-Rig feature is a spring-loaded, fully automatic construction for rapid, foolproof erection. Used in all High-band antennas. Reception in the high frequency TV channels, especially for long distance reception, is often bothered by ghosts and weak signals. This is in part due to: greater loss in lead-in at the higher frequencies; lower sensitivity of the receivers in the high band; lower signal pickup due to shorter antenna elements.

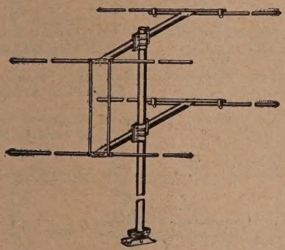
To overcome these disadvantages it is recommended that high gain Yagi antennas, either single bay or stacked two bay Yagi's be used wherever possible. Higher gain antennas improve the signal-to-noise ratio at the receiver terminals, sharper directivity patterns reduce reflections and thus ghosts. A single-bay Yagi will cover 3 to 4 channels whereas a stacked unit will cover only a couple of channels due to the sharp tuning of the elements.

A High-band Yagi can be coupled with a low-band antenna by a Cat. No. 885 Matching Harness for feed through one single transmission line.

CAT. No. 1350-(†)—ONE-BAY YAGI ANTENNA. Consists of: 1 two-diameter antenna element, 1 reflector and 3 directors mounted on crossarm; U-bolt and saddle. (Shipping Weight: 2 lbs.) **List Price $8.00**

CAT. No. 1351-(†)—TWO-BAY YAGI ANTENNA. Consists of: 2 crossarms with U-bolts; 1 two-diameter antenna element, 1 reflector and 3 directors mounted on each crossarm; stacking lines. Click-Rig construction. (Shipping Weight: 5 lbs.) **List Price $16.50**

(†) Specify channels desired: 7, 8, 9, 10, 11, 12, 13)

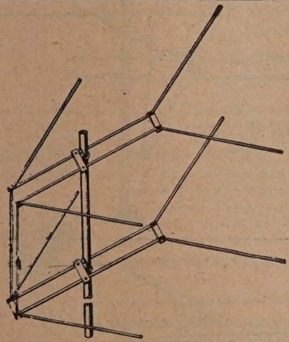


LOW-BAND ALL-CHANNEL LAZY-H ANTENNA

TYPE 935

One of TACO's most famous antennas. Known as "old dependable." Lazy-H design with reflectors provides very high gain throughout the low-band. Used in many fringe areas as a stacked array. Improved electrically and mechanically over original design. When rotated 35° off broadside direction serves as excellent high-frequency antenna. Many of these antennas have been in service for as long as ten years.

CAT. No. 935-LM—LAZY-H ANTENNA. 2 antenna-reflector mounted on separate crossarms mounting clamps stacking lines. (Shipping Weight: 6½ lbs.) **List Price $19.50**



TWIN-DRIVEN-CORNER ANTENNA

The TACO Twin-Driven Corner Antenna is a recent development in the line of all-channel antennas. It has an extremely high gain in channels 7-13. Its single lobe characteristic helps to reduce interference. It is recommended for all but the very fringe areas.

The Twin-Driven feature insures a stable field pattern as driven elements are easier to control than parasitically fed elements. It also accounts for the high front-to-back ratio.

Mechanically, this antenna is extremely light and rigid. It has low wind resistance which assures a quiet installation free from howling sounds. It is ideal for use with a rotator due to its high directivity and low weight.

May be stacked four high for extra gain in fringe areas.

CAT. No. 1700L—Stacked Twin-Driven Corner Antenna, consisting of: 2 bays of antennas with transmission line-crossarm; U-bolt mounting; stacking line with terminal panel and brace. (Shipping Weight: 6 lbs.)....**List Price $20.50**

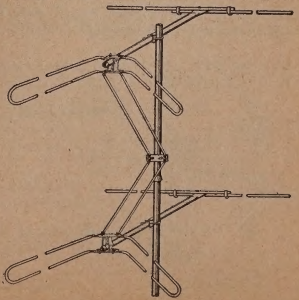
CAT. No. 1703—Single Bay Twin-Driven Corner Antenna, consisting of: two antennas with transmission line crossarm; U-bolt mounting. (Shipping Weight: 4 lbs.) **List Price $8.50**

FOLDED-VEE ALL-CHANNEL ANTENNA

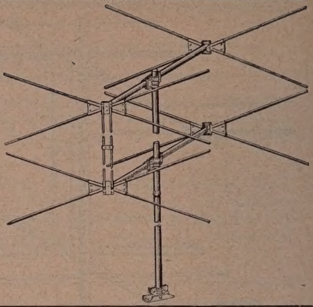
The latest TACO all-channel design. Combines all the inherent broadband characteristics and mechanical rigidity of the folded dipole, along with the advantages of the conical forward angle. Excellent gain throughout all 12 TV channels. Recommended for medium signal strength areas. Available as single or stacked array. Folded dipole design results in an extra strong antenna mechanically.

CAT. No. 1400—Folded-Vee Antenna. Folded Dipole-Reflector with mounting V-bolt assembly. (Shipping Weight: 3 lbs.)........**List Price $12.50**

CAT. No. 1402—Stacking Lines for converting two No. 1400 into stacked array. (Shipping Weight: 2 lbs.)........**List Price $5.25**



LAZY X ANTENNA SERIES 950AL



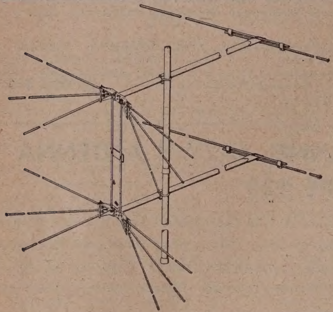
One of the most popular types for areas where several channels are operating in both bands; introduced by Taco in 1940, the Lazy X has proved its versatility in both bands through its high gain, and stability of impedance at different frequencies. High front-to-back ratio helps eliminate reflections and co-channel interference from sides and rear. Available as either a 2 or 4-bay stacked array or as a single antenna. Stacked array providing approximately twice the gain of the single antenna. Matches popular 300-ohm lead-in. All Aluminum construction.

CAT. No. 950AL—Stacked Lazy X Antenna for Channels 2-13. 2 X-Antenna-reflectors, Connecting transmission line between antenna, accessories. (Shipping Weight: 12 lbs.) **List Price $31.00**

CAT. No. 953A—Single Lazy X antenna less mast (Shipping Weight: 5 lbs.) **List Price $14.00**

CAT. No. 954A—Transmission lines for stacking 2 single-bay antennas. (Shipping Weight: ¾ lb.)............ **List Price $2.50**

CAT. No. 949A—Transmission lines for stacking two 2-bay antennas into a four-bay unit. (Shipping Weight: 1½ lbs.) **List Price $4.75**



TRI-X ANTENNA SERIES

This antenna has been designed to provide extra gain on the upper end of the high-band. Where channels 11, 12, or 13, are weak, this antenna will outperform the Lazy-X design. The forward angle has been greatly increased over the Lazy-X. The single rod reflector provides practically the same gain as the X-type reflector. All aluminum construction.

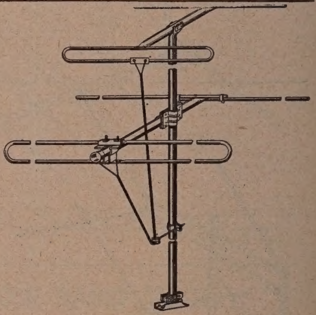
CAT. No. 1000—Stacked Tri-X antenna. Jiffy-Rig construction, 2 single-bays with transmission line for stacking. (Shipping Weight: 10 lbs.)................**List Price $25.00**

CAT. No. 1001—Single Tri-X antenna, Jiffy-Rig construction, single-bay. (Shipping Weight: 5 lbs.)..**List Price $12.00**

CAT. No. 1012—Stacking kit for above Tri-X antennas. Stacks two. Includes connecting transmission lines and terminal panel.......................................**List Price $2.50**

JIFFY-RIG TELEVISION ANTENNAS

HI-LO BAND ANTENNA TYPE 925L



An improved version of the original TACO Hi-Lo Band Antenna. Used in medium to high signal strength areas where both bands are operating. Has advantage of independent orientation for each antenna. Matching network minimizes interaction between elements and makes possible the use of one lead-in. In weak signal areas, separate leads from high and low with a switch at the receiver are recommended, or the addition of the special TACO No. 885 network. Sturdily constructed.

CAT. No. 925L—Hi-Lo Band Antenna. High and Low-band folded-dipole antenna-reflectors, matching stub, accessories, mast swivel base. (Shipping Weight: 5 lbs.)....**List Price $16.00**

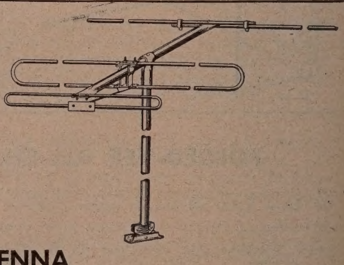
A modification of the Hi-Lo band antenna for service in fringe areas where the signals are weaker. Yagi design in both the high and low-band elements gives added gain and directivity.

CAT. No. 921L-(*†)—Hi-Lo Band Yagi Antenna. 1 Yagi high-band antenna, 1 folded dipole low-band antenna, matching network, accessories. (Shipping Weight: 5 lbs.)...........................**List Price $21.00**

CAT. No. 922L-(*†)—Hi-Lo Band Yagi Antenna. 2 high-band Yagis, 1 low-band Yagi. Matching network for connecting elements, accessories. (Shipping Weight: 6 lbs.)...........................**List Price $30.50**

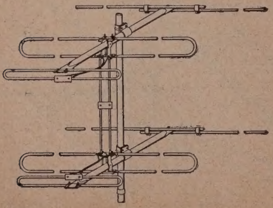
(*) Specify the low-channel desired: 2, 3, 4, 5, 6.
(†) Specify the high-channel desired: 7, 8, 9, 10, 11, 12, 13.

HI-LO BAND IN-LINE ANTENNAS



An all-channel antenna that features simplicity and compactness. Designed for average strength areas where all channels are received from one direction, or for use with a rotator. On the high-band, the low-band antenna acts as a reflector for the high-band antenna. Broad-band folded dipoles show good impedance stability over both bands. Connecting stub works efficiently in most locations of fair signal strength.

CAT. No. 930L—Hi-Lo Band In-Line Antenna. In-line hi-lo band antenna, connecting stub. (Shipping Weight: 5 lbs.)..**List Price $14.50**



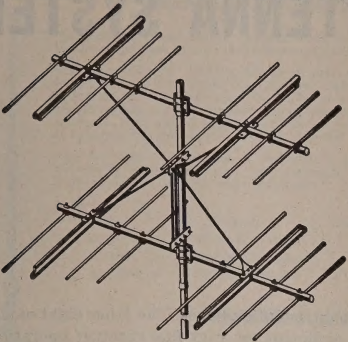
STACKED IN-LINE ANTENNA

Designed for areas where both the high and low bands are desired, this antenna provides almost twice the gain of the single in-line antenna. Antennas are stacked to provide a more constant gain over the 12 channels than the single array. May be used as a higher gain antenna in weaker areas, or again as a broad-band antenna in locations where many channels are received. Ideal for use with rotator, being a single lobe antenna. Matches 300-ohm lead-in and receiver input.

CAT. No. 932L—Stacked In-Line Hi-Lo Band Antenna. 2 In-line antenna-reflector assemblies, stacking transmission lines, mounting hardware. (Shipping Weight: 9 lbs.) **List Price $27.50**

JIFFY-RIG TELEVISION ANTENNAS

TANDEM YAGI ARRAY



The optimum in high-band reception. For the toughest assignments in high-band installations. Exclusively TACO design and manufacture. This antenna will produce acceptable results where other antennas produce nothing.

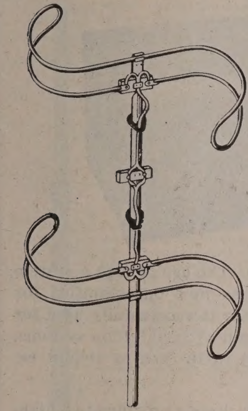
In addition to the high gain, this antenna has the advantage of matching either 300 or 72 ohm line with no modifications. The four Yagi antennas are brought together by 300 ohm transmission lines to one terminal post which has 72 ohm impedance. A ¼ wave transformer is used to step up the impedance for connection to a conventional 300 ohm ribbon transmission line. In noisy locations it may be desirable to use 72 ohm coax, and therefore this antenna offers a real advantage in this respect.

CAT. No. 967L-(†)—Tandem 16 Element Antenna, consisting of: 4 Yagi arrays, 2 crossarm assemblies with U-bolt mounting clamps; four 300 ohm connecting links; two ¼ wave length matching transformers with terminal panel; two 1¼" dia. (Shipping Weight: 8 lbs.)............**List Price $32.75**

(†) Specify channels desired: 7, 8, 9, 10, 11, 12, or 13.

FM ANTENNAS

FM OMNIDIRECTIONAL ANTENNA TYPE 624



An exclusive Taco design permitting FM reception from all directions with nearly the same gain as a single dipole, which is unusual for a non-directional type. Maintains practically constant gain throughout entire FM band. Bandwidth and gain greater than that of turnstile antenna.

Available as either a single antenna or stacked array for the weaker areas. As stacked array, it may be peaked for the weakest station.

CAT. No. 624-L—Omnidirectional antenna, "S" type folded dipole with terminal, 5-ft. mast, accessories. (Shipping Weight: 5 lbs.) **List Price $7.50**

CAT. No. 624ST-L—Stacked omnidirectional antenna. 2 "S"-Type folded dipoles, stacking transmission line, terminal panel and mounting clamp, 2 5-ft. mast sections, accessories. (Shipping Weight: 6½ lbs.)........**List Price $15.75**

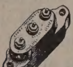
FM FOLDED DIPOLE ANTENNA-REFLECTOR

The folded dipole is rated as the best FM antenna type, inasmuch as the band spread is only 10% above and below the mean frequency. It has a flat response over entire FM band. Ideal for noisy locations due to pinpoint directivity. Rugged mechanically. Electrically perfect.

CAT. No. 620-L—Folded dipole antenna-reflector. Folded dipole, reflector with crossarm, 5-ft. mast. (Shipping Weight: 4¾ lbs.) **List Price $9.50**

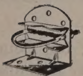
CAT. No. 635—Stacked folded dipole antenna-reflector. 2 folded dipoles, 2 reflectors with crossarms, 2 transmission lines with terminal panels, 2 5-ft. mast sections, mounting hardware. (Shipping Weight: 9½ lbs.) **List Price $18.50**

TV-FM ANTENNA ACCESSORIES



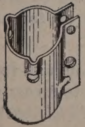
U/L APPROVED LIGHTNING ARRESTER. A very important item in installations often overlooked. Protect yourself as well as your customer by using one of these Taco carbon-pile resistor type arresters. This is the type approved by the Underwriters as well as local codes. Standard package: 10.

CAT. No. 409—Lightning Arrester. (Shipping Weight: 2 lbs.).....................**List Price $1.35 each**



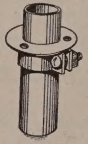
BASE MOUNT. Versatile base mount for masts. Adjustable for any roof angle, adapts to flat, vertical or sloping surfaces. Will accept mast from 1" to 1½" in diameter. U-bolt with V-type saddle assures positive, tight grip to prevent turning. Heavy duty quality. Plated to withstand weather.

CAT. No. 880—Base Mount—Standard packing: 10. (Shipping Weight: 5 lbs.)...........**List Price $0.80**



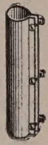
MAST GUY ANCHOR. A fixed mast anchor for guy wires. After being tightened, will prevent mast from turning. Very rugged. Standard package: 10.

CAT. No. 192—Mast Guy Anchor. (Shipping Weight: 1½ lbs.).........................**List Price $0.40**



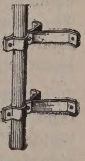
GUY ANCHOR. This anchor has been designed for use where the mast must be rotated for orientation, or where there are only a few spots on the roof for anchoring guy wires. Mast may be erected with guys attached, and tightened with turnbuckles after erection. Standard packing: 10 per carton.

CAT. No. 867—Guy Anchor. (Shipping Weight: 2½ lbs.)......................................**List Price $0.60**



MAST COUPLING. Designed to assure positive coupling of mast sections. Will connect 1¼" or $1\frac{5}{16}$" tubing in tight grip through use of three ¼" bolts. Standard package: 10 per carton.

CAT. No. 189—Mast Coupling (Shipping Weight: 5 lbs.) **List Price $0.85 each**



MAST BRACKETS. Heavy duty brackets for mounting mast to wall, chimney or parapet. Provides rigidity by spacing brackets far apart. Made of heavy steel, hot-galvanized to resist rust. Will accept 1¼" or $1\frac{5}{16}$" diameter masts.

CAT. No. 190-7"—2 Brackets for 7-inch clearance from mounting surface. (Shipping Weight: 2½ lbs.)..**List Price $2.85**

CAT. No. 190-14"—2 Brackets for 14-inch clearance from mounting surface. (Shipping Weight: 4 lbs.) **List Price $4.00**

CAT. No. 190-21"—2 Brackets with brace for 21-inch clearance from mounting surface. (Shipping Weight: 6 lbs.).............................**List Price $5.50**

SEE COMPLETE CATALOG FOR OTHER ACCESSORIES

TACO NOISE-REDUCING ANTENNA SYSTEMS

TACOPLEX MASTER ANTENNA SYSTEM

FOR APARTMENTS

FOR COMMUNITIES

FOR STORES

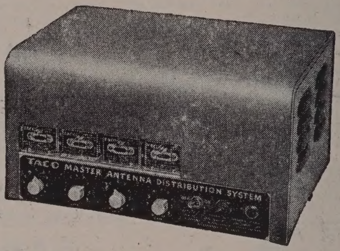
A product of one of the oldest designers and manufacturers of master antenna systems in America—TACO. A result of years of research into the requirements of master TV antenna systems for apartments, stores and communities.

The TACOPLEX Master Antenna Distribution System amplifies the TV signals and provides means for mixing and distributing them. As many as 200 TV receivers can be operated from one Master Chassis. However, several master chassis can be interconnected and operated from one set of antennas. In community systems one antenna system can easily feed 500 receivers. All equipment has been designed and manufactured to provide the dependable day-in, day-out service required by installations in apartments, stores and community installations.

The TACOPLEX System consists of the antenna array, the power amplifier and isolation boxes. All connections are made through coaxial cable to minimize noise pickup, and afford complete flexibility.

The required array is the TACO Yagi type antenna, for maximum signal-to-noise pickup. The signal is fed into the TACOPLEX power amplifier where individual, plug-in type amplifier strips boost the signal 200 times. Each amplifier strip has an individual gain control, thus making it possible to have all channels traveling in equal strength to the receivers. The signals are then fed through a mixer chassis that funnels all signals into the leads connected to the isolation boxes.

The mixer chassis is available in two models—tube-type and tubeless. The tube-type is ideal for store installations as it provides ten outlets. Two of high signal strength which can be used for the service shop where many receivers may be connected to them through isolation boxes. The other eight of signal strength sufficient for very fine receiver operation at the point of demonstration. The use of such a system in TV merchandising opens new opportunities for dealers. The tube-type mixer is successfully used for signal distribution in community installation systems. One thousand feet coaxial cable runs to distant receivers are practical.



The tubeless type of mixer chassis provides two high-signal-strength outlets which feed into transmission lines to the isolation boxes.

The new TACO isolation box-type 1585 is of the non-powered type providing complete isolation with minimum power drain from the transmission line. By using several master chassis in series, hundreds of receivers can be fed from one lofty antenna array.

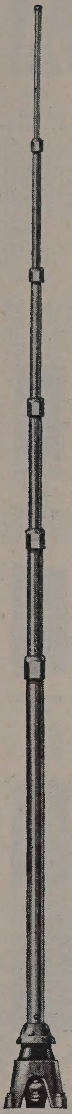
The system using the tubeless type of mixer chassis is recommended for apartment house installations where one TACOPLEX System will provide television service for up to 200 TV receivers.

The present TACOPLEX System is used for Community Service installations where a master antenna is installed for a whole community, and the signal, via a high powered TACOPLEX System, is distributed to subscribers. This makes possible television in many communities beyond the useful range of stations, and has been used in communities as far as 100 miles from the transmitter.

For complete technical data and information, ask for the complete TACOPLEX Cat. No. 36 or write directly to Service Engineering, TECHNICAL APPLIANCE CORPORATION, Sherburne, New York.

PREMAX Telescoping and Whip Antennas

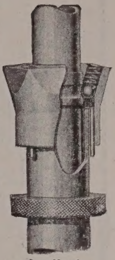
PREMAX STAINLESS STEEL AUTO-MANIC ANTENNA



The Premax "Auto-Manic" Antenna can be raised or lowered with one hand, thus meeting the need for a marine installation that can be lowered simply and easily when passing under bridges or other obstructions.

The "Auto-Manic" locking device on each of the telescoping sections is free to move when the sliding sections travel upward and binds them securely when reverse pressure is applied. Each section can be extended inches at a time with one hand and will lock at any point. At full extension of each section, a positive locking action occurs which is proof against severe strains and vibrations. To lower the antenna, it is only necessary to raise a special ring on the base section which releases the lower lock. As the second section telescopes into the base, it releases the second lock and so on until the entire antenna is retracted, making about a 6′ unit.

The Antenna is made up of sections of a special grade of welded stainless steel tubing, hard-drawn to an extremely high tensile and yield strength. Made in three, four and five sections. Standard Premax Mountings and Insulators will fit these Antennas.



One-Hand Operation— Up or Down

SPECIFICATIONS

No.	Description	Extended Length	Collapsed Length	Base O.D.	Base I.D.	Weight, lbs.
SS-1016	3-Section Telescoping	Appx. 16′	Appx. 6′0″	1.00″	.900″	6½
SS-1022	4-Section Telescoping	Appx. 22′	Appx. 6′6″	1.25″	1.120″	12
SS-1028	5-Section Telescoping	Appx. 28′	Appx. 7′0″	1.50″	1.370″	18

PREMAX ALUMINUM ANTENNAS FOR LIGHT WEIGHT

Premax Adjustable Aluminum Antennas have the light weight with corrosion resistance and adequate strength to meet the needs for marine, mobile and commercial installations where convenience in erecting and dependable performance are requisites. They are built up of specially-drawn, seamless, tempered aluminum tubing with diameters and gauges to withstand wind velocities up to 60 m.p.h. Positive locking device is provided. Available in six lengths.

HEAVY DUTY NON-ADJUSTABLE ALUMINUM ANTENNA

Specially heat-treated, heavy-duty, non-adjustable Aluminum Antenna designed to withstand winds up to 100 m.p.h. The tubing is step-tapered from 31/32″ base to ½″ top on the 17½′ mast.

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	C'laps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
AL-106	1-Pc. Taper Rod	6′3″	6′3″	.313″	....	¼
AL-312	2-Sec. Tele.	12′4″	6′4″	.500″	.334″	1½
AL-518	3-Sec. Tele.	18′5″	6′4″	.750″	.584″	3
AL-324	4-Sec. Tele.	24′4″	6′4″	1.000″	.834″	5
AL-530	5-Sec. Tele.	30′0″	6′5″	1.250″	1.084″	7
AL-535	6-Sec. Tele.	35′8″	6′5″	1.500″	1.310″	12
HEAVY-DUTY, NON-ADJUSTABLE						
AM-017	1-Pc. Taper Tube	17′9″	17′9″	.969″	.689″	5½

(For Base Insulators and Mountings, See Page S-65)

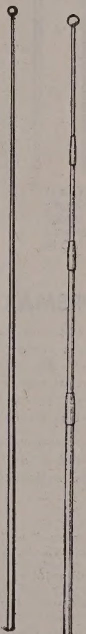
STEEL ANTENNAS FOR LOW COST

Low-cost, satisfactory Adjustable Tubular Steel Antennas that can meet budget requirements for commercial, municipal, amateur and other installations. Made of carefully engineered high-tensile, copper-nickel steel tubing, heavily cadmium plated and highly resistant to corrosion. Available in two, three, four, five and six-section models, varying from 11′ 8″ to 33′ 9″ extended length, fully telescoping and adjustable at any height. Simple, positive locking device provides secure and efficient electrical contact between sections. It is advisable to guy these antennas or support by stand-off insulators against abnormal winds or severe strains. NOT recommended for marine use on salt water.

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	C'laps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
112-M	2-Sec. Tele.	11′8″	6′1″	.656″	.556″	4
318-M	3-Sec. Tele.	17′3″	6′2″	.875″	.775″	7
224-M	4-Sec. Tele.	22′9″	6′3″	1.063″	.963″	11
130-M	5-Sec. Tele.	28′3″	6′4″	1.250″	1.150″	15
136-M	6-Sec. Tele.	33′9″	6′5″	1.500″	1.400″	20

(For Base Insulators and Mountings, See Page S-65)



ONE-PIECE SOLID TAPER WHIPS—TYPE E

The Type E Antennas have been designed for maximum strength and the required flexibility. Available in three types:

Aluminum Type—Employing a new aluminum alloy of exceedingly high strength. Recommended where durability, lightness and corrosion-resistance are paramount. 5/16″ base tapering to ⅛″ tip. Has an adaptor to fit all Premax mountings.

Chrome Silicon Steel Type—Exceptionally high tensile strength and uniformity of temper. Special heat treatment give high fatigue values. Base ¼″ tapering to 3/32″ tip.

High-Tensile Stainless Steel Type—Special formula stainless steel, double previous strength—a hardened and tempered grade that compares favorably with the best spring steel, yet has the added advantage of stainless corrosion-resisting properties. ¼″ base, 3/32″ tip.

SPECIFICATIONS

Length Over-all	Aluminum	Chrome-Silicon Steel	High-Tensile Stainless
72 inches	**EA-872**	**EC-672**	**ES-772**
84 inches	**EA-884**	**EC-684**	**ES-784**
96 inches	**EA-896**	**EC-696**	**ES-796**

(Various types of Premax Mobile-Mountings are shown on page S-65)

JOINTED STEP-TAPER WHIPS—TYPE A

Type A Rods are made up of rods of varying diameters, jointed securely and permanently into a single step-tapered Antenna with ¼″ base fitting all Premax Mountings. Available in extremely high carbon content steel, heat-treated and oil-tempered and heavily cadmium-plated; also in polished hard-drawn stainless steel, highly corrosion-resistant.

SPECIFICATIONS

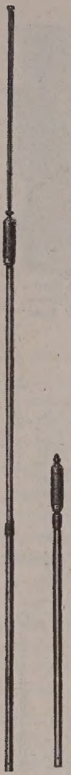
Length	Stainless Steel	Length	Cadmium-Plated Steel
72 inches	**AS-172**	72 inches	**AC-172**
78 inches	**AS-178**	78 inches	**AC-178**
84 inches	**AS-184**	84 inches	**AC-184**
90 inches	**AS-190**	90 inches	**AC-190**
96 inches	**AS-196**	96 inches	**AC-196**

NOTE—All Premax Whip Antennas can be supplied when desired, with Base Adaptors to fit either 5/16″—18 or ⅜″—24 threaded mounts. For 5/16″—18 specify TYPE L ADAPTOR, for ⅜″—24 specify TYPE W ADAPTOR.

5107 HIGHLAND, NIAGARA FALLS, N. Y. PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC.,

PREMAX **Mobile and Beam Antennas**

SERIES B CENTER LOADED ANTENNAS FOR 2 TO 8 MC. COVERING AMATEUR "75", MARINE, AIRPORT, C.A.P. AND PUBLIC SERVICE FREQUENCIES



Type C Center-Loaded Antenna 2 to 3 Mc.

Premax Center Loaded Antennas are practically a "must" for efficient operation on all communication frequencies—mobile and marine—between 2 and 8 Mc. The basic 75 meter Antenna covers the entire mobile phone band. Other coils are available to cover the 2,000 to 3,000 Kc. marine, airport 3105 Kc., CAP 2374 Kc. and public service frequencies.

The 75 meter Mobile Antenna consists of a 6-foot tapered whip of either high-tensile aluminum alloy, high-tensile stainless steel or high-carbon heat-treated steel, mounted above a loading coil and a special aluminum alloy base rod 24 inches long, with couplings to fit any standard Premax Mount. Coil is wound on a specially treated wood form, weatherproofed after winding with low-loss insulating varnish.

With this Premax Center Loaded Antenna, a gain of 8 decibels or more can be secured over conventional "whip" types, which is equivalent to multiplying the power by 6.3 times. The importance of this gain is immediately apparent as it is a most inexpensive way of extending both the transmitting and receiving range.

This antenna may also be used for multi-band amateur operation by shorting out turns (approximately 75% on 14 Mc.) or by completely jumpering out the coil to make an efficient quarter-wave antenna on 10 meters.

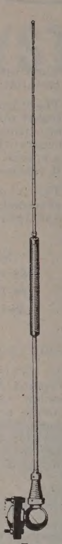
Where it is not possible to utilize a 9½-foot antenna, the base section may be omitted. This results in a base-loaded Antenna with an effective gain of 6 decibels—equivalent to quadrupling the power over a plain type antenna.

SPECIFICATIONS — SERIES B ANTENNAS

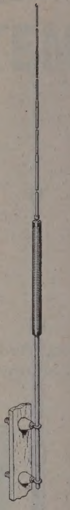
For Frequency	Mounting Supplied	Plated Steel Whip	Stainless Steel Whip	Type	High
75-Meter Amateur	none*	BXC-386	BXS-386	Cen. Loaded	9½′
	none*	BLC-386	BLS-386	Base Loaded	8′
2000-3000 Kc. For Marine Use	Type XL		B25-SL	Cen. Loaded	9½′
	Type XLS		B25-SLS	Cen. Loaded	9½′
	Type V		B-25-SV	Cen. Loaded	9½′
	Type VS		B25-SVS	Cen. Loaded	9½′
3105 Kc. For Airport	none*	BXC-316	BXS-316	Cen. Loaded	9½′
2374 Kc. For C.A.P.	none*	BXC-236	BXS-236	Cen. Loaded	9½′

No. BX—Base Section only. Can be used with Base-Loaded Type to convert to Center Loaded Type.

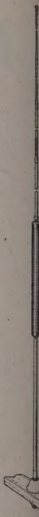
* Amateur, Airport and C.A.P. Antennas can be used with various Premax Mountings as shown on page S-61. Type RS or Type S are particularly recommended.



Type BX With RS Mount



Type B25-SL



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B25

SERIES C CENTER-LOADED TELESCOPING MARINE ANTENNA, 2 TO 3 MC.

The Premax Center-Loaded Collapsible Vertical Antenna, Type C, is especially designed for marine use and gives a remarkable gain over the signal produced by a straight vertical where the loading coil is housed in the transmitter cabinet. At the high-frequency end of its 2,000 to 3,000 Kc. range it gives a measured effective signal power gain of 6 decibels . . . equivalent to quadrupling transmitter power output.

This Antenna consists of two telescoping, adjustable base sections of seamless aluminum, monel or stainless steel tubing on which the loading coil is mounted, with a tapered top whip section. The total extended length is about 17 feet. The base section collapses to a single unit and the whip section telescopes through the coil into the lower sections, making a collapsed length of 7 feet. Coil is wound on low-loss bakelite tubing and treated after assembly with weatherproof varnish.

The base presents such a low impedance that little loss is experienced due to icing, wet weather or water spray. The line feeding the base is a low impedance line and is not critical as to length and body-capacity effects.

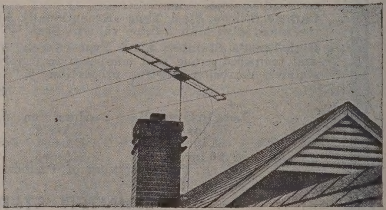
SPECIFICATIONS

No.	Type	Base O.D.	Base I.D.	Weight
CLA-619	Aluminum	1.000″	.834″	5 lbs.
CLM-519	Monel	.893″	.799″	7 lbs.
CLS-1019	Stainless	1.000″	.902″	7 lbs.

PREMAX ROTARY BEAM KIT—6, 10, 11 METERS

A 20-pound Beam for 6, 10 and 11 meters, built to commercial standards! Has a braced frame of heavy-duty angle aluminum and solid fibre insulation blocks that will not crack or snap under vibration and shock. Each telescoping element can be tightly clamped to provide positive connection. Parasitic elements may be left open at the center with tuning hairpins inserted or may be used as six elements on 6 meters.

The RB-6309 Kit includes frame and three pairs of elements with necessary insulators and hardware, including T-match accessories but without transmission line. Complete in single carton.



PREMAX CORULITE ELEMENTS

Premax Corulite Elements are designed to meet the need for lightweight but sturdy elements for use in horizontal arrays and similar applications. They are unusually light in weight and their special corrugated or reeded design provides exceptional strength and rigidity so essential in horizontal types of installation. All parts are heavily electro-plated to provide corrosion resistance and high electrical conductivity. A positive clamp, spot-welded to the tubing, permits adjustment in length and assures rigid joints and positive electrical contact between the telescoping sections. Ease of adjustment between the two halves of each component element is provided by the Premax "Hairpin" Tuning Bar. By its use it is possible to have all of the elements set at a single physical length and the variation in their electrical length may be accomplished by the "Hairpin."

Corulite Elements are available in two or four-section units as shown in the specifications below. These elements meet all requirements for the various arrays in general use and are ideal for combinations in commercial, FM, television or amateur bands.

SPECIFICATIONS

No.	Description	Extended Length	Collapsed Length	Base O.D.	Recommended For	Weight Per Pair
108-M	2-Section..............................	8′2″	4′7″	.750″	10-meter	2 lbs.
618-M	4-Section..............................	17′0″	5′3″	1.000″	20-meter	5½ lbs.

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5107 HIGHLAND, NIAGARA FALLS, N. Y.

PREMAX Mountings-Insulators-Accessories

Type 1 Base Insulator; heavy-duty with compression rating up to 10,000 lbs. Galvanized malleable iron or chrome-plated bronze. Available in two styles; rigid or hinged posts.

Type 1

Rigid Post Galv.	Rigid Post Bronze	Hinged Post Galv.	Hinged Post Bronze	Dia. Post in 32nds
1PG-24	1PB-24	1HG-24	1HB-24	24
1PG-25	1PB-25	1HG-25	1HB-25	25
1PG-26	1PB-26	1HG-26	1HB-26	26
1PG-28	1PB-28	1HG-28	1HB-28	28
1PG-30	1PB-30	1HG-30	1HB-30	30
1PG-34	1PB-34	1HG-34	1HB-34	34
1PG-35	1PB-35	1HG-35	1HB-35	35
1PG-41	—	1HG-41	—	41
1PG-43	1PB-43	1HG-43	1HB-43	43
1PG-44	—	1HG-44	—	44

TYPE 1X—SOCKET TOP

No. 1-XG—Galvanized. Top tapped standard ¾″ 16-thread.

No. 1-XB—Bronze. Top tapped standard ¾″ 16-thread.

Type 2 Base Insulator; light design for masts up to 18′ or higher if guyed or supported by standoff insulators. Brown-glazed porcelain with galvanized malleable iron top post and base support cemented into insulator.

Type 2

No. 2P-24	¾″ Top Post	Fits 318-M
No. 2P-25	$\frac{25}{32}$″ Top Post	Fits MM-825
No. 2P-26	$\frac{13}{16}$″ Top Post	Fits AL-324

Deck Bushing of brown glazed porcelain with galvanized malleable flange which bolts thru rubber gasket to roof or deck.

Bushing No.	I.D.	Total Lgth.	Above Deck	Flg. Dia.
5D-24	¾″	6″	3″	4″
5D-40	1¼″	8″	4¼″	4½″
5D-56	1¾″	8½″	4½″	5⅜″

Type 6 Base Insulator for tower platform, rooftops or Marine. Lead-thru construction permits antenna connections below roof or deck. Flanges 6″ diameter with stud and bolts for ½″ to 3″ deck. In galvanized malleable iron or chrome-plated bronze.

Type 6

Rigid Post Galv.	Rigid Post Bronze	Hinged Post Galv.	Hinged Post Bronze	Dia. Post in 32nds
6PG-24	6PB-24	6HG-24	6HB-24	24
6PG-25	6PB-25	6HG-25	6HB-25	25
6PG-26	6PB-26	6HG-26	6HB-26	26
6PG-28	6PB-28	6HG-28	6HB-28	28
6PG-30	6PB-30	6HG-30	6HB-30	30
6PG-34	6PB-34	6HG-34	6HB-34	34
6PG-35	6PB-35	6HG-35	6HB-35	35
6PB-41	—	6HG-41	—	41
6PG-43	6PB-43	6HG-43	6HB-43	43
6PG-44	—	6HG-44	—	44

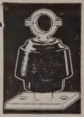
Type 10-S Standoff Insulator, heavy-duty type. Chrome-plated bronze base and head-caps, porcelain insulator. Has solid clamp or hinged clamp for use with hinged-base insulator.

Solid Clamp No.	Hinged Clamp No.	Fits Tube O.D.	Height to Center
10S-2832	10SH-2832	⅞″ to 1″	about 4½″
10S-3236	10SH-3236	1 ″ to 1⅛″	about 4½″
10S-3642	10SH-3642	1⅛″ to 1$\frac{5}{16}$″	about 4½″

Type 13-S

Type 13-S fits all sizes of Premax Antennas and adaptable to installations of verticals or horizontal radiators. Heavy, rugged cast caps and base plates, brown porcelain insulator. Aluminum or chrome-plated brass, solid or hinged cap.

Solid Cap Alumin.	Solid Cap Brass	Hinged Cap Alumin.	Hinged Cap Brass	Fits Tube O.D.
13SA-24	13SC-24	13HA-24	13HC-24	¾″
13SA-28	13SC-28	13HA-28	13HC-28	⅞″
13SA-32	13SC-32	13HA-32	13HC-32	1″
13SA-34	13SC-34	13HA-34	13HC-34	1$\frac{1}{16}$″
13SA-40	13SC-40	13HA-40	13HC-40	1¼″
13SA-48	13SC-48	13HA-48	13HC-48	1½″

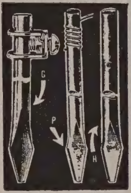


Type 3

Type 3 Standoff Insulator for supporting verticals or for use in pairs as complete antenna or element mounting. Galvanized iron or bronze with porcelain body, 3″ in diameter.

Galv. No.	Brass No.	Fits Tube O.D.
3SG-16	3SB-16	½″
3SG-20	3SB-20	⅝″
3SG-24	3SB-24	¾″
3SG-28	3SB-28	⅞″
3SG-32	3SB-32	1″
3SG-34	3SB-34	1$\frac{1}{16}$″
3SG-40	3SB-40	1¼″
3SG-48	3SB-48	1½″

GROUND RODS



Style J (at left of illustration) is the most popular type. Has a quick-acting clamp that secures positive contact on any #4 to #14 conductor. Pointed end for easy driving. Steel, heavily copper-plated.

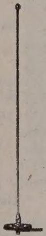
The ⅜″ is most popular diameter, but also available in ½″ and ⅝″.

No. J-64 ....4′ by ⅜″

No. J-66 ....6′ by ⅜″

Style H (drilled pole, P (pigtail wire), and G (screw clamp) illustrated are available in ½″ by 5′ to 8′ and ⅝″ by 6′ and 8′ lengths.

160 MEG ANTENNA



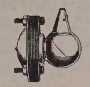
The Premax 160 mc. Roof Antenna is designed so that complete installation can be accomplished from the outside of the car by one man. A single small hole is cut in the metal roof, thru which the coaxial line may be fished and connected to the insulator mounting. The entire unit is then securely clamped to the roof and sealed by a rubber gasket. The antenna is stainless steel wire 18″ long with ball tip and threaded fitting. Suitable for all frequencies in the 152 to 162 mc. band.

NO. DSK-118—Complete Antenna Assembly, less transmission line.

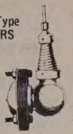
NO. DS-118—Antenna only.

NO. DSJ—Antenna with one-hole mounting, porcelain insulator.

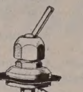
Type R-1



Type RS



Type F

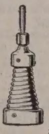


TYPE R-1 Universal Mounting consists of solid aluminum split-ball fixture which can be adjusted to any angle. Attaches through heavy plastic insulation disc fitted with waterproof gasket. New type backplate provides positive ground and shielding for co-ax connector.

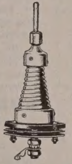
TYPE RS Universal Mount as above, combined with spring in one unit. Includes new shielding and grounding plate.

TYPE F—New single-hole, super-strong, ball-and-socket mounting for fender, cowl or gravel pan. Will support 8′ whip. 30° adjustment. Chrome-plated brass with heavy plastic insulation. Replaces any existing fender or cowl antenna without new holes. Fits all Premax ¼″ whips.

Type SA



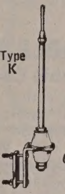
Type S



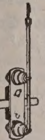
TYPE S Spring Mount for roof or horizontal surface is a heavy-duty spring with plastic insulation, rubber gasket and steel backplate. Socket top to fit antenna. Over-all height about 5″, basc diameter 3″.

TYPE SA Spring Adaptor is a supplemental mounting to be used with any Premax Mobile Mounting except R-1 and permits antenna to withstand shocks when in contact with overhead obstructions. Height 4¾″, diameter 1⅝″.

Type K



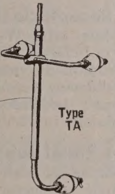
Type L



TYPE L Insulated Bumper Mounting; permits 10″ adjustment in antenna height. Has two pairs of ceramic insulators spaced 6″ apart. Bracket parts heavy cadmium-plated steel.

TYPE XL Insulated Panel Mounting is similar to Type L above excepting that it does not have the steel bracket.

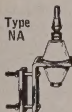
TYPE K Insulated Bumper Mounting permits 10″ maximum height adjustment of antenna. Insulators are heavy-duty glazed ceramic cones; bracket heavy cadmium-plated steel.



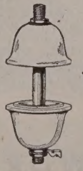
Type TA

TYPE TA Trunk or Panel Mounting fits any contour of surface. Insulators are white glazed ceramic cones; lower support a solid brass rod joined to 12″ brass tube with locking device at top; upper support 24″ brass rod adjustable at any height on tube. Antenna tube provides for 10″ maximum adjustment in antenna height. All metal parts heavily cadmium-plated.

Type NA



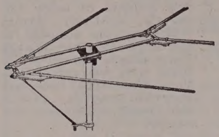
TYPE NA Bumper Mounting permits attachment by means of two heavy bolts and steel backplate. Special heavy-duty glazed ceramic cone with locking device.



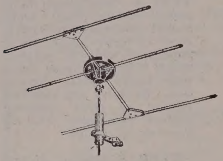
Type V

TYPE V — Through-deck Mounting for B-25 Antenna or similar. (See page S-64) White porcelain cones, brass stud threaded $\frac{7}{16}$-24.

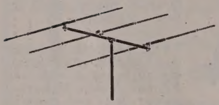
WORKSHOP ANTENNAS and ACCESSORIES



DUBL-VEE ANTENNA



SERIES A ANTENNA



10-METER BEAM ANTENNA

MODEL VV — DUBL-VEE TV ANTENNA

The original patented DUBL-VEE antenna. All-channel, high gain, sharp directivity, and close match assure superlative reception — clear, steady, sharp pictures. Streamlined design and high structural strength make it equal to the most severe weather conditions. Assembly is easy and quick — a matter of seconds — saves time, expense, and trouble.

The remarkably high gain extends receiving distance, especially on high channels (see table).

MODEL 2VV — Double-stacked DUBL-VEE Antenna with twin lead cable harness connecting bays.

MODEL 2VV-A — Deluxe Double-stacked DUBL-VEE. Employs carefully engineered stacking bars to connect bays and make the entire assembly more rugged.

SERIES A — 3-Element TV Antenna — This is a high-gain (5 db.) directional antenna, made in 12 models — one for each TV channel. It is the basic unit of all WORKSHOP multi-channel systems and provides the ultimate in television reception. Designed for use with coaxial cable, ghosts, snow, and all types of interference are cut to a minimum. Elements are rugged, lightweight, ½ inch duraluminum. Pre-assembled, fold-up elements make installation fast, easy, foolproof — clamps on masts up to 1¼ inches in diameter. For multiple mounting on a single mast, see table.

SERIES 2A — Super High-Gain 6-Element Array — This array consists of two 3-element Series A bays spaced ½ wave apart and connected by a cable harness. Gain is 7.8 db. on its specified channel and 5 db. on adjacent channels. Provides outstanding reception up to 100 miles. Uses RG/8U or other 52 ohm coaxial line. Can be used with 300 ohm line in conjunction with Model T-300 matching transformer.

AMATEUR ANTENNAS — The Workshop offers a complete line of antennas for all amateur bands — 2, 6, 10 and 20 meters and for UHF. For exceptionally high gain on the 6- and 10-meter bands, double-stacked arrays are available. Write for "Amateur" Catalog.

Channel	Actual Measured Gain	
	Model VV	Model 2 VV
2	1.5	2.5
3	2.0	3.5
4	2.5	5.0
5	3.5	6.0
6	4.0	7.0
7	6.0	9.5
8	6.5	9.5
9	7.0	9.5
10	7.5	10.0
11	7.5	10.0
12	7.5	9.5
13	7.0	9.5

SERIES A ANTENNAS

Model	For Channel	Model	For Channel
A-2	2*, 3	A-7	7*, 8
A-3	2, 3*, 4	A-8	7, 8*, 9
A-4	3, 4*, 5	A-9	8, 9*, 10
A-5	4, 5*, 6	A-10	9, 10*, 11
A-6	5, 6*,	A-11	10, 11*, 12
		A-12	11, 12*, 13
*Optimum Channel		A-13	12, 13*

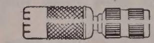
SPECIFICATIONS

	Series A	Series 2A
Gain	5 db.	7.8 db.
Impedance	72 ohms	52 ohms
Directivity	68° horizontal	68° horizontal 64° vertical
VSWR	1.25	1.25
Front-to-back ratio	20 db.	20 db.

SOLDERLESS CABLE FITTINGS

Silver Plated Solderless Cable Connector (Male)

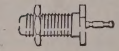
Model W-50



Used with W-59 (RG-59/U) coaxial cable. Specially slotted to withstand considerable strain. Mates with W-60 receptacle (on R-4A switch) and W-80 junction listed below. Individually packaged and plainly marked. **List Price $0.60**

Silver Plated Chassis Receptacle (Female)

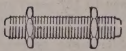
Model W-60



Mates with W-50 cable connector. For chassis or panel mounting. Threaded stem ⅝ inch long. Soldering terminal protrudes from rear. Individually packaged and plainly marked. **List Price $0.80**

Silver Plated Cable or Panel Junction (Female)

Model W-80



Mates at either end with W-50 male connector. A complete splice requires one W-80 junction and two W-50 connectors which must be ordered separately. Each W-80 individully packaged and plainly marked. **List Price $1.00**

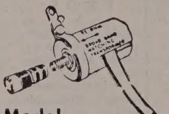
Cable Adaptor

Model W-100

Required when changing from larger size W-11 (RG-11/U) or W-8 (RG-8/U) to smaller W-59 (RG-59/U) coaxial cables. No soldering necessary. W-50 cable connector furnished. Individually packaged and plainly marked. **List Price $2.50**

ACCESSORIES

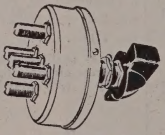
Matching Transformer



Model T-72

Matches 72 ohm coaxial cable such as Workshop W-59 (RG-59/U) to 300 ohm receivers. Voltage step up of 2 : 1, with a flat response over the TV channels from 52-216 mcs. A W-50 solderless cable connector is furnished. Size 2 inches long, 1-inch diameter. Strap provided for grounding and mounting container on receiver chassis. Negligible mismatch when used with W-8 52-ohm coaxial cable and W-100 adaptor. Individually packaged. **List Price $4.00**

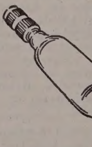
New Coaxial Switch (SP4T)



Model R-4A

This virtually lossless, constant impedance switch will connect any one of four single-channel TV antennas to a receiver. By simply using additional switches it can also be used for demonstrating any number of TV receivers in a display room, or for low-level audio applications.

Receptacle fittings mate with W-50 solderless connectors for W-59 cable and must be ordered separately. Decals are supplied for panel marking of TV channels. Only one 7/16-inch hole need be drilled for panel mounting. Size—2⅜ inches front to back; 2-inch diameter. Individually boxed. **List Price $12.00**



Model T-300

Exterior Matching Transformer

Completely weatherproof device for converting 72 ohm antennas for use with inexpensive 300 ohm Twin Lead transmission line at reasonable efficiency. Can also be used with 300 ohm antennas to realize benefits of 72 ohm coaxial cable. Individually packed. **List Price $3.50**

Prices subject to change without notice

THE WORKSHOP ASSOCIATES, INC.

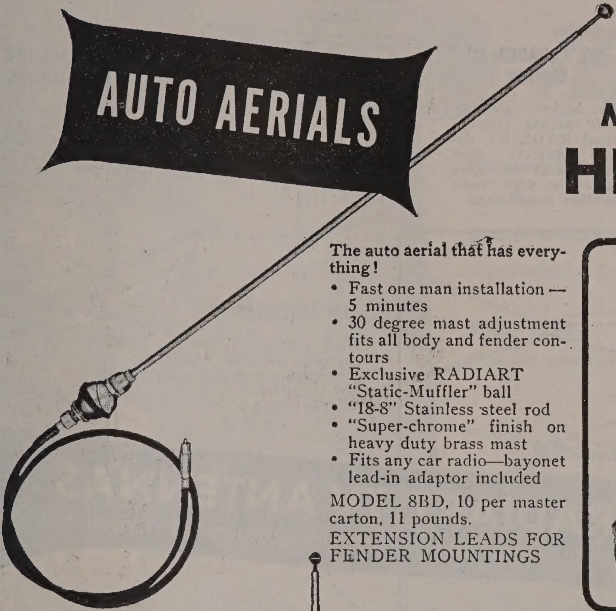
135 Crescent Road, Needham 94, Mass. ***Specialists in High-Frequency Antennas***

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION

CLEVELAND 2, OHIO

AUTO AERIALS



Model 8BD

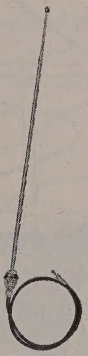
HI•BALL

The auto aerial that has everything!

- Fast one man installation — 5 minutes
- 30 degree mast adjustment fits all body and fender contours
- Exclusive RADIART "Static-Muffler" ball
- "18-8" Stainless steel rod
- "Super-chrome" finish on heavy duty brass mast
- Fits any car radio—bayonet lead-in adaptor included

MODEL 8BD, 10 per master carton, 11 pounds.

EXTENSION LEADS FOR FENDER MOUNTINGS



DELUXE MODEL 4BX3

Three section design extends to 59½".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required

SUPERIOR STANDARD MODEL 4BX2

Two section design extends to 43".

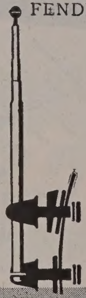
TWO INSULATOR SIDE MOUNT TYPES

Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds

MODEL 3S, 63" extended, 3 sections. 10 per master carton, 13¼ pounds

MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds

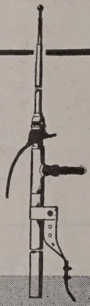


DISAPPEARING MOUNT

A handsome addition to any car . . . collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one 9/16" mounting hole required.

MODEL 3D, 60" extended. 3 sections, 2 pounds each

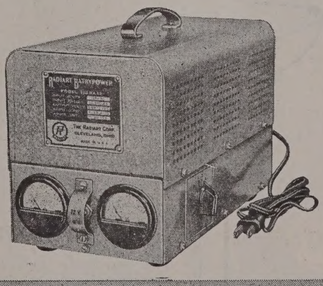
10 per master carton weighing 19 pounds.



BATRY POWER

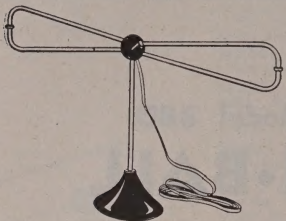
Here is the ideal, compact, efficient unit for testing or demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

Model No.	Output	Watts	Size	Wt. Lbs.
110BA6	6V DC @ 10A	60	7⅝ x 12¼ x 8½	16
110BA12	6V DC @ 20A 12V DC @ 10A	120	7⅝ x 13 x 8½	24½



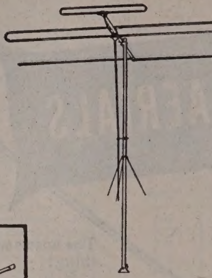
THE RADIART CORPORATION
CLEVELAND 2, OHIO

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES



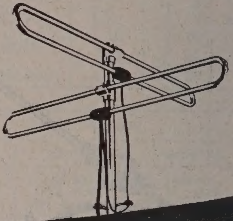
THE "LOADED X" INDOOR

The highest rated indoor antenna. This unusual RADIART design delivers peak performance comparing favorably with many outdoor installations.



"STRATE-LINE" ANTENNAS

Another feature in the complete RADIART line, this STRATE-LINE array is designed for both high and low band unidirectional reception.

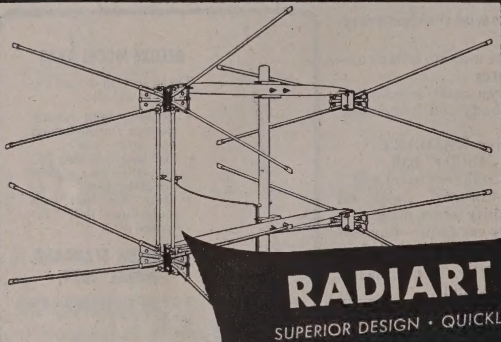


FM ANTENNAS

High quality FM antennas for peak performance under all conditions. Well designed . . . sturdy . . . easy to install.

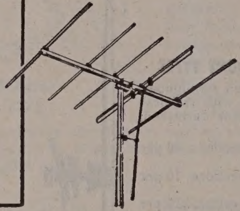
RADIART TV ANTENNAS

SUPERIOR DESIGN · QUICKLY INSTALLED · TROUBLE-FREE PERFORMANCE



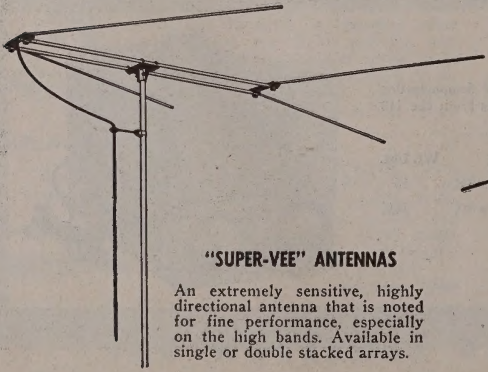
"LAZY X" CONICALS

A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna.



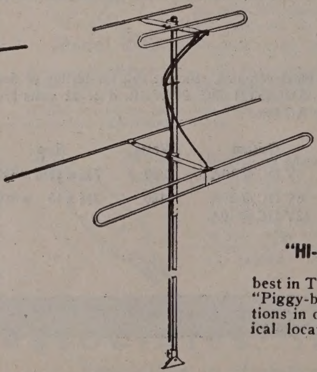
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.



"SUPER-VEE" ANTENNAS

An extremely sensitive, highly directional antenna that is noted for fine performance, especially on the high bands. Available in single or double stacked arrays.

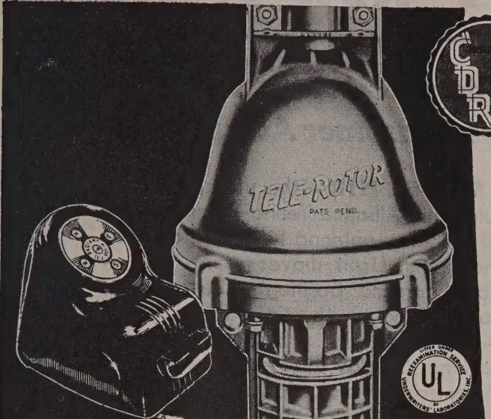


"HI-lo" ANTENNAS

best in TV reception, where "Piggy-back" style for stations in different geographical locations is indicated.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO



TELE-ROTOR

This heavy-duty TELE-ROTOR has no match! It's more powerful . . . will turn any TV antenna array under any weather conditions. Easily installed . . . it is trouble-free in performance. Easiest of all to operate!

MODEL TR-2 . . . . . rotator with "compass control" cabinet having illuminated "perfect pattern" dial . . . (uses 8 wire cable) . . . $49.95

Give your Customers the Best

You Can't Beat A TELE-ROTOR

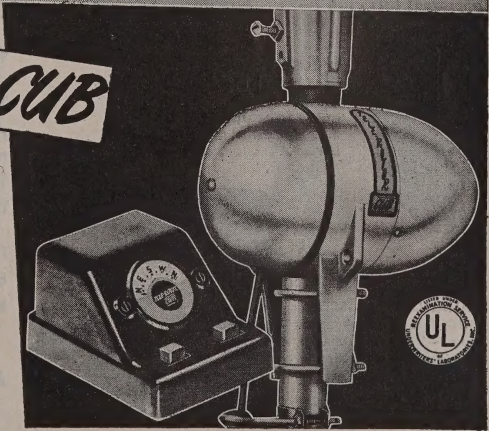
CONSISTENTLY DEPENDABLE ROTATORS

TELE-ROTOR CUB

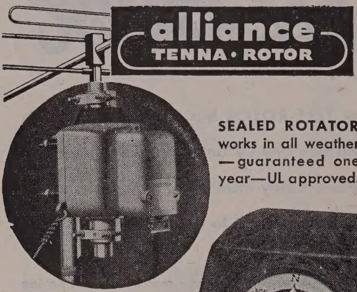
The new TELE-ROTOR "CUB" is ideal for average installations. The same husky motor as the Heavy-Duty model . . . the" CUB" is the fastest and easiest of all rotators to install. All-In-Line design . . . with true in-line thrust between antenna and mast. The ¾" STEEL shaft rotates on a case hardened steel ball . . . with in-line reamed oilless bearings.

MODEL 502 . . . . . . Rotator with plastic control cabinet having indicating meter for "hairline" tuning. (Uses 5 wire cable) . . . $44.95

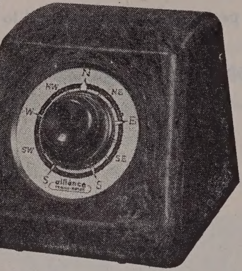
MODEL 501B. . . . . . . rotator with control cabinet having end-of-rotation signal. Light flashes every 7.2° showing antenna is turning. (Uses 5 wire cable) $34.95



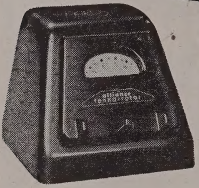
ALLIANCE TV PRODUCTS—Antenna Rotators • Boosters
ALLIANCE TENNA-ROTOR—3 MODELS
ALLIANCE TENNA-SCOPE—*NEW* BOOSTER



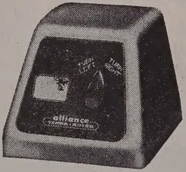
SEALED ROTATOR works in all weather—guaranteed one year—UL approved.



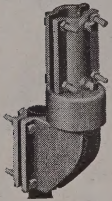
DELUXE MODEL HIR Directional Fully Automatic Rotator! "Just set it and forget it!" List . . . **$44.95**



MODEL DIR has N—E—W—S direction indicator dial! Especially noted for its extreme accuracy. UL approved! List . . . **$44.95**



MODEL ATR—this standard model with illuminated screen. Shows when limit of travel in either direction is reached. One year guarantee—UL approved! List **$34.95**



THRUST BEARING BRACKET (Model TBB) recommended for heavier installations—transfers antenna weight from rotor through mast to ground. List **$7.95**

OFF
2
3
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11
CHANNEL
alliance

ALLIANCE TENNA-SCOPE BOOSTER—unusually high gain—one simple control—interference-rejecting—automatic on-off switch—performs on all channels. List **$29.95**

National TV Advertising Assures Consumer Acceptance!

- **MODEL HIR**—the ultimate, fully automatic Alliance Tenna-Rotor. Simply set pointer—antenna turns to that point and stops. Light moves along dial—shows antenna position while rotating. No fumbling or "hunting" for direction—eraseable dial provides directional marking. Quickly accessible connections on control box make for fast installation. N—E—W—S directions shown. By far the most practical and convenient rotator!

- **MODEL DIR**—provides positive accurate instant control of rotation—has direction indicator dial.

- **ALLIANCE TENNA-SCOPE**—new Alliance Booster with two tubes offers electronic features for maximum reception in both fringe and primary TV areas. Features exceptional high channel reception; uniformity of picture and sound. Superbly styled walnut plastic case blends with all furniture. Brings in more stations, clearer, brighter images, stronger signals—works with indoor or outdoor antenna. Low noise factor.

- Special Alliance 4-conductor "ZIP" cable can be used with all Alliance Tenna-Rotors to speed installation. Alliance TV products are backed by more national advertising than any other TV accessories! Alliance Tenna-Rotor is the universal rotator!

FOR COMPLETE DETAILED SPECIFICATIONS, BOTH ELECTRICAL AND MECHANICAL, ON EACH ALLIANCE PRODUCT—WRITE THE FACTORY FOR CATALOG SHEETS.

ALLIANCE MANUFACTURING COMPANY
ALLIANCE, OHIO

RCA ELECTRONIC COMPONENTS

TELEVISION ANTENNAS

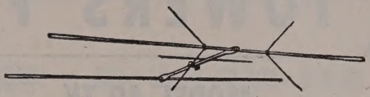
COMPLETELY NEW DESIGN — BUILT TO LAST RCA 12-CHANNEL TELEVISION ANTENNA — TYPE 204A1

BASED UPON YEARS OF FIELD EXPERIENCE

• Easily Assembled • Ruggedly Constructed • Uni-Directional

Here's an RCA "Leader" to meet the majority of your everyday antenna needs. Engineered and developed by RCA for plus-value service, RCA-215A1 is intended for use in most receiver locations where both high and low-frequency stations are in the same general direction. Unique RCA "V" attachments provide uniform directional characteristics for all 12 channels.

RCA-215A1 12-Channel Television Antenna is simple in design and appearance. Sturdily built of aluminum, it will withstand high winds, sleet, and ice. Designed for use with 300-ohm transmission line, the 215A1 rates "A" for antenna achievement: — for over-all performance and unusually flat response over each of the two television bands. Supplied with all necessary hardware but less mast. Completely illustrated instructions for installation are included.



215A1

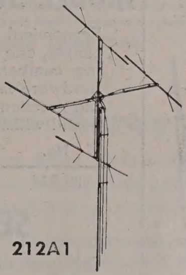
$13.50
Suggested List Price

THE RCA REVERSIBLE-BEAM TV ANTENNA ARRAY — TYPE 212A1

For Locations with Co-channel Interference

The RCA Reversible-Beam TV Antenna Array receives signals from only one direction at a time; eliminates co-channel interference where stations are approximately 180° apart. It also eliminates adjacent-channel interference where the receiver lacks selectivity. RCA-developed "V" attachments provide uniform directional characteristics for all twelve channels. A high overall front-to-back ratio is achieved through the use of driven elements, instead of parasitic elements. This design also makes possible the unique feature of lobe switching.

Sturdily built throughout of high-quality aluminum, the RCA Reversible-Beam Antenna consists of an array of four eight-foot dipoles in the form of a square. A dual transmission line connects the horizontal and vertical dipoles to an attractively packaged diplexing network located at the rear of the receiver. By the mere flick of a switch on the diplexer, antenna directivity can be reversed.



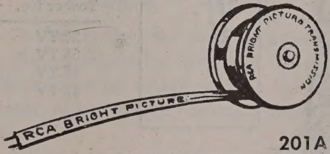
212A1

$59.50
Suggested List Price

ANTENNA ACCESSORIES

Bright Picture Transmission Line

Especially designed for Television and FM. Special chemical-resistant plastic finish insures continued flexibility even in extreme heat or cold. Ultralow loss—less than 0.8 db per 100′ at 50 Mc; less than 1.2 db per 100′ at 100 Mc. 4.5 μμf per foot capacitance. Propogation velocity 83%. Extra strong—supports a mile of its own weight (75 lbs.) before breaking. Stock No. 201A1. Sugg'd List Price: $50.00 per 1000′.

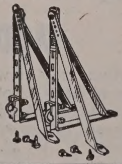


201A1

Antenna Mounting Brackets

Readily adjustable to permit mounting on any roof—regardless of overhang. Can be attached to brick, stone or wood. Entire bracket is plated with bright zinc, preventing rusting and subsequent staining of building surfaces. Special angular supports eliminate sagging. Stock No. 227A1. Sugg'd List Price: $6.75 per pair.

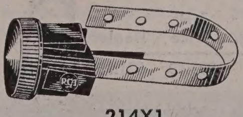
227A1



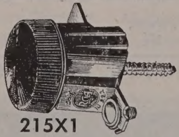
Twin-Lead Lightning Arrester

For use with FM and TV antennas. Easy to install—cutting or stripping of transmission line is unnecessary. Fits any ½″-2″ pipe. Continually dissipates static surges. Does not unbalance line. Brown plastic case. Stock No. 214X1. Sugg'd List Price: $1.10.

New outdoor type arrester—wood screw firmly secured in body—no special tools needed. Stock No. 215X1. Sugg'd List Price: $1.25



214X1

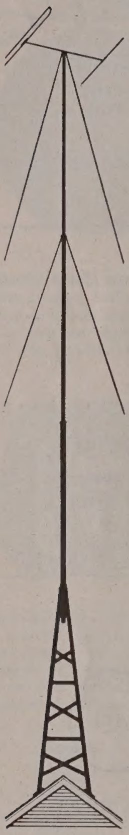


215X1

All prices in effect 3/1/51.

Monitor

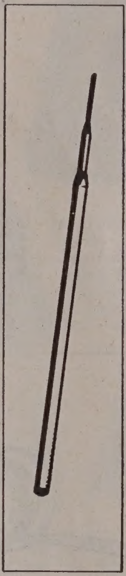
TOWERS FOR TELEVISION



MODEL 40 TK

Complete 40′ installation including 010 TK and 30 AM, described below. Tower 10′ high with especially designed 30′ telescoping mast allows for simple one man erection of antenna 40′ over a roof. Includes base to fit all roofs, self contained permanent ladder, two sturdy cast iron mast clamps adjustable for mast diameter 1″ to 2″, and guy washers. Exclusive built-in mast joint is simple, rigid. Safety catch holds mast during erection, installer has hands free. Heavily galvanized, built to withstand 80 mile wind. Shipped flat with major assembly done at factory.

Tower No.	Height	Wt. Lbs.	List Price	Net Dealer Price
40 TK	40′ (10′ Tower & 30′ mast)	80	$54.60	$32.76



MODEL 30 AM

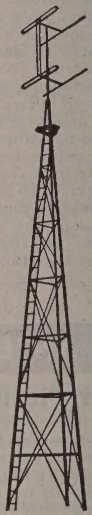
Economical 30′ three-section telescoping steel mast for simple, one man straight-up vertical erection, eliminating cumbersome tip-ups and high climbing. Special hardware makes tight rigid joints, and holds mast during erection, installer has hands free. Light and sturdy —will withstand 80 mile wind.

No.	Height	Wt. Lbs.	List Price	Dealer
30 AM	30′ Mast	30	$24.15	$14.49

SELF-SUPPORTING MODEL TV

Self-supporting tower built to support the heaviest TV and Amateur antennas, designed to withstand an 80 mile wind. Three post steel angle construction, heavily galvanized. Base spread is approximately one-fifth of height. Shipped knocked down with full instructions, all fittings, hardware, ladder, platform and two adjustable clamps for mast diameter 1″ to 2″. Towers will be drop shipped direct to dealers or their customers. Specify whether for ground or roof mounting.

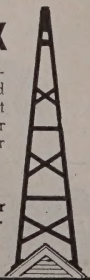
Tower No.	Height	Wt. Lbs.	List Price	Dealer
22 TV	22′	280	$ 67.73	$ 50.80
35 TV	35′	434	115.50	86.63
48 TV	48′	650	172.20	129.15
62 TV	62′	970	256.20	192.15



MODEL 010 TK

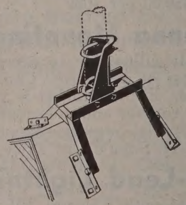
Self supporting steel tower 10′ high. Includes base to fit all roofs, self contained permanent ladder, and two sturdy mast clamps, spaced 16″ apart, adjustable for mast diameter 1″ to 2″. Folded flat for shipment. Heavily galvanized.

Tower No.	Height	Wt. Lbs.	List Price	Dealer
010 TK	10′ Tower	50	$36.49	$21.89



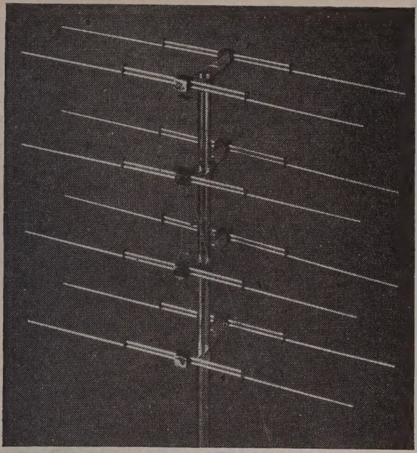
ROOF MOUNT

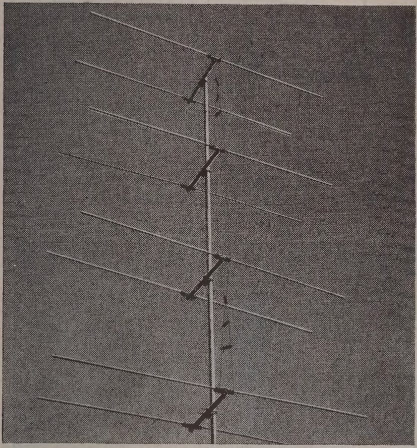
Fits any roof. Sturdy casting and two U bolts clamp firmly to base of mast, diameter 1″ to 2″. Mount pivots in 2 directions to allow double tip-up. Built strong enough to support mast temporarily without guys during erection.

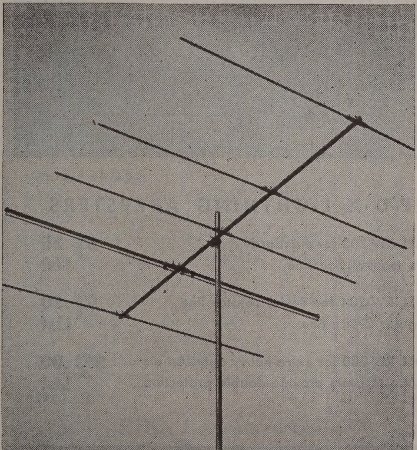


No.	Wt. Lbs.	List Price	Dealer
1 FM	9¼	$7.95	$4.77

BAKER MANUFACTURING COMPANY EVANSVILLE, WISCONSIN







VEE-D-X ANTENNAS

SUPER - Model RW-13A

The highest gain and most powerful antenna ever manufactured. Holds every record for long distance reception.

- Four-bay, full wave, 32 element stacked array.
- Sharp beam angle minimizes ghosts, noise and co-channel interference.
- Center impedance 280 ohms.
- Universal phasing harness eliminates need for separate matching networks.
- Electrical half-wave spacing improves vertical radiation pattern, providing optimum signal-to-noise ratio.
- All screws and miscellaneous hardware cadmium-plated to prevent electrolysis and rusting.
- Shipping weight 35 lbs.

$129.50
LIST

Colinear Array - CA Series

A broad band, 4-bay, pre-assembled array that can be cut for any desired high channel but will also resonate on low channels. Ideal for fringe area high channel reception.

- Super strength light weight construction assures permanency.
- Sharp horizontal directivity. Minimizes interference.
- Compact in size. Light in weight, only 4¼ lbs.
- Supplied complete with attached phasing harness, less mast.
- New style extra heavy duty plastic insulator blocks separate elements.

$26.13
LIST

YAGI - JC

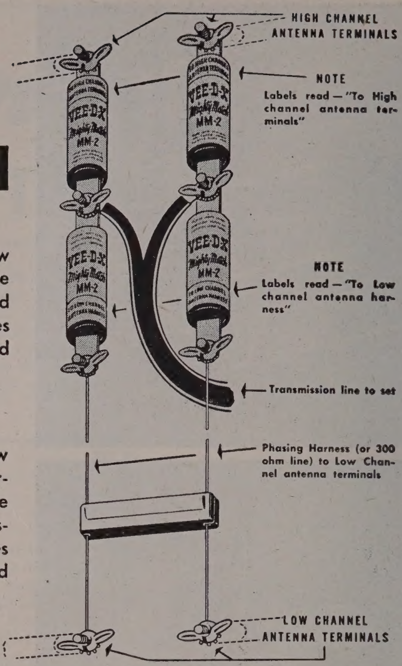
A high gain, 5 element Yagi that provides powerful signal at low cost. Pre-assembled for fast, easy installation. JC Yagis may be stacked for additional gain by using a JH phasing harness. Antennas and harnesses are ordered by channel number.

- Standing wave ratio 1.28.
- Center impedance 317 ohms.
- 14.6 db. forward gain.
- Supplied with mast clamp.
- Narrow beam width assures high signal-to-noise ratio.
- Most compact five element beam on the market.
- All screws and miscellaneous hardware cadmium-plated to prevent electrolysis and rusting.

JC — Low Channels	$17.60 List	JH — Low Channels	$3.50 List
JC — High Channels	9.57 List	JH — High Channels	2.50 List

The LaPointe-Plascomold Corporation, Windsor Locks, Connecticut

VEE-D-X MIGHTY MATCH

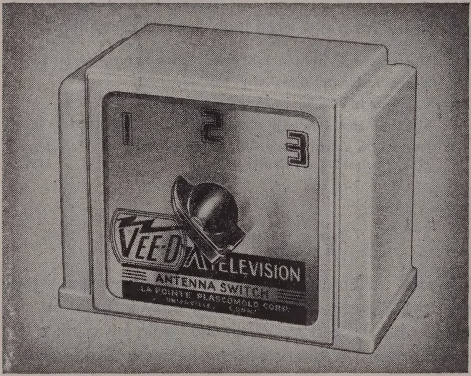

HIGH CHANNEL ANTENNA TERMINALS
NOTE
Labels read — "To High channel antenna terminals"
VEE-D-X Mighty Match MM-2
NOTE
Labels read — "To Low channel antenna harness"
Transmission line to set
Phasing Harness (or 300 ohm line) to Low Channel antenna terminals
LOW CHANNEL ANTENNA TERMINALS

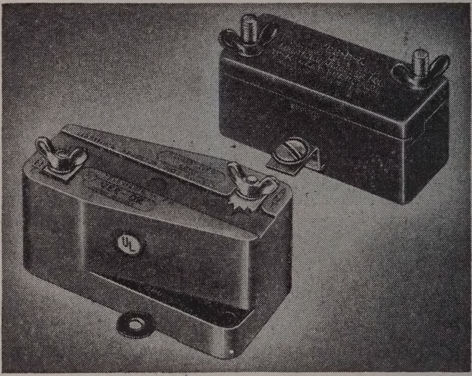
The VEE-D-X divider network is a great new development that permits the use of a single transmission line between separate high and low antennas mounted on same mast. Saves transmission line — saves installation time and money — saves extra accessory costs.

HOW MIGHTY MATCH OPERATES

The Mighty Match isolates the high and low channel antennas by preventing the undesirable high frequency signal received by the low band antenna from entering the transmission line. The Mighty Match also eliminates the partial shunting effect of the high band on the low band antenna.

$4.20 — Set of 4 Filters List


1
2
3
VEE-D-X TELEVISION
ANTENNA SWITCH
LA POINTE PLASCOMOLD CORP.
UNIONVILLE, CONN.



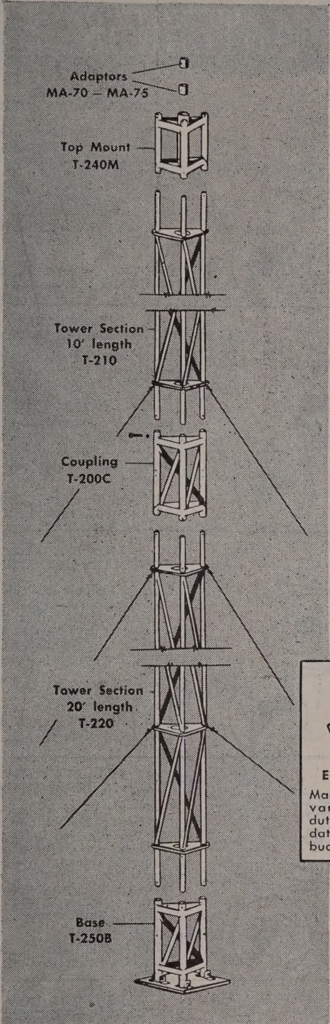
VEE-D-X 3-Way Antenna Switch—Model SW-1

For stacked arrays or multiple antennas . . . instant change-over to each antenna. Connect three separate antennas to the back terminal strip for single receiver operation. Connect three separate receivers to these same points for single antenna or receiver demonstration. Model SW-1 is housed in an attractive ivory plastic case with satin finished aluminum face. **$4.95 List**

VEE-D-X LIGHTNING ARRESTERS

MODEL RW-200 for standard 2-wire transmission line	$1.25 List
MODEL RW-204 for 4-wire rotator line or regular 2-wire line	$1.50 List
MODEL RW-300 for extra heavy duty. An air gap plus resistors provide double protection	$2.00 List

The LaPointe-Plascomold Corporation, Windsor Locks, Connecticut



VEE-D-X
SECTIONAL TOWER

For Microwave — Communications — TV & FM — Radar

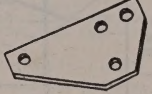
VEE-D-X towers are designed for use at any height from 10 to 200 feet, depending on load. They are self-supporting up to 20 feet and, where space is limited, semi-guyed* type installations may be used at 30, 40, and 50 foot heights. To facilitate erection of tower, the base mount is hinged so that several sections may be assembled on the ground and swung into position. VEE-D-X towers may be ordered by separate components or as a complete package for a specific height. (Either guyed or semi-guyed.)

* Semi-guyed towers employ one set of guy cables attached at a height of 10 ft. up the tower and anchored at a 6 ft. radius from the base.

- **Rugged, all-welded construction diagonally laced with angle iron for maximum rigidity.**
- **Can be erected on ground or on flat or peaked roof.**
- **Patented plate spaced at two foot intervals prevents twisting and affords rigidity found in no other tower.**
- **Safe and easy to climb.**
- **Completely galvanized, light weight tubular steel . . . 20 ft. section 80 lbs.**

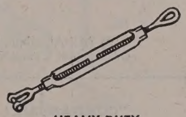
Write for additional engineering and construction data.

ACCESSORIES FOR GUYING VEE-D-X TOWER



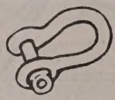
EQUALIZER PLATE TW-15

Manufactured of heavy galvanized steel for rugged duty. Designed to accommodate three heavy duty turnbuckles and anchor shackle.



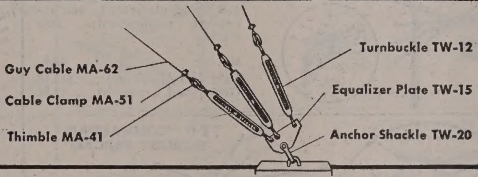
HEAVY DUTY TURNBUCKLE TW-12

Made from forged steel, galvanized to prevent rust. Jaw and eye type ½" x 6".



ANCHOR SHACKLE TW-20

Heavy duty anchor shackle TW-20 is designed for use with TW-15 equalizer plate. Galvanized to prevent rust and corrosion.



TOWER COMPONENTS

		List
T-200C	Coupling	$9.55
T-210	Tower Section 10' length	36.75
T-220	Tower Section 20' length	73.65
T-320	Tower Section 20' length	90.35
T-240M	Top Mount for 2" OD Mast	9.85
T-424M	Top Mount for 2¼" OD Mast	10.55
T-428M	Top Mount for MA-120 Rotator Adaptor	14.55
T-434M	Top Mount for 2½" OD Mast	11.55
T-250B	Base	16.75

Packaged Tower Guy Accessories are ordered by Tower height number.

PACKAGED TOWERS
(Normally Equipped with T-240M)

		List
PTG-10	10' Tower	63.35
PTG-20	20' Tower	100.25
PTG-30	30' Tower	146.55
PTG-40	40' Tower	183.45
PTG-50	50' Tower	229.75
PTG-60	60' Tower	266.65
PTG-70	70' Tower	312.95
PTG-80	80' Tower	349.85
PTG-90	90' Tower	396.15
PTG-100	100' Tower	433.05

PACKAGED TOWERS
(Semi-guyed Type)

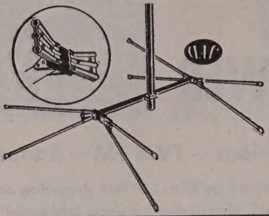
		List
PTS-30	30' Tower	163.25
PTS-40	40' Tower	187.15
PTS-50	50' Tower	246.50

TOWER GUY ACCESSORIES

TW-12	½" x 6" Heavy Duty Forged Turnbuckle	4.30
TW-15	3-Guy Equalizer Plate	3.35
TW-20	½" Anchor Shackle (round pin)	2.50
MA-41	¼" Thimble	14.00/C
MA-51	¼" Cable Clamp	30.00/C
MA-62	¼" Guy Cable	67.50/M

The LaPointe-Plascomold Corporation, Windsor Locks, Connecticut

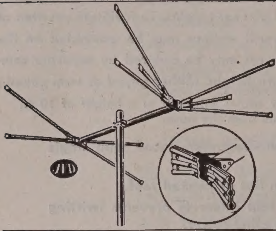
JFD Ranger TELEVISION ANTENNAS



JFD "COMMANDAIR" CONICAL

The lowest-priced, highest-value all-aluminum conical line on the market! Bracket designed to take any combination of element arrangements. Completely preassembled. Excellent all-channel reception. Less mast.

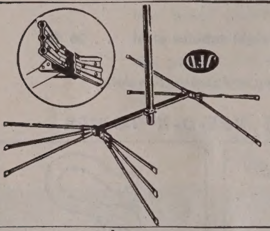
No.	List
C660 (All-Aluminum)	$10.10
C360 (Steel Crossarm)	9.60



JFD "COMMANDAIR" CONICAL

Employs high frequency elements for improved response on upper channels. Preassembled, no hardware bag. Constant center impedance on all channels. Bracket designed to take any combination of element arrangements. Less mast.

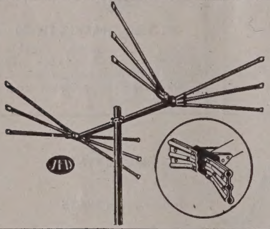
No.	List
C670 (All-Aluminum)	$10.70
C370 (Steel Crossarm)	10.10



JFD "COMMANDAIR" CONICAL

Third dipole element provides exceptional broad band response across both bands. Preassembled, no hardware bag. Also available in partial steel construction at "economy" price. Less mast.

No.	List
C680 (All-Aluminum)	$11.60
C380 (Steel Crossarm)	11.00

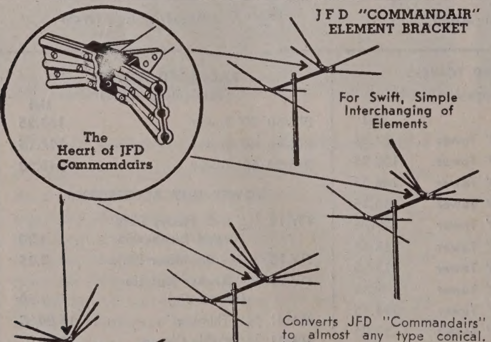


JFD "COMMANDAIR" CONICAL

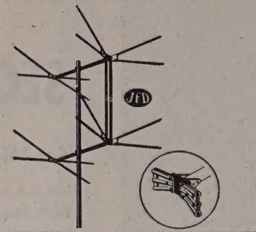
6 dipole and 6 reflector design augments front-to-back ratio and improves directivity. Versatile element bracket design permits interchanging and cutting of elements to suit reception requirements. Less mast.

No.	List
C690 (All-Aluminum)	$13.10
C390 (Steel Crossarm)	12.55

JFD "COMMANDAIR" ELEMENT BRACKET


The Heart of JFD Commandairs
For Swift, Simple Interchanging of Elements

Converts JFD "Commandairs" to almost any type conical. Made of high-strength, non-corrosive, non-rust aircraft aluminum. Uniquely designed to permit quick and easy interchanging of elements for maximum reception. Reinforced at all points of stress and strain.

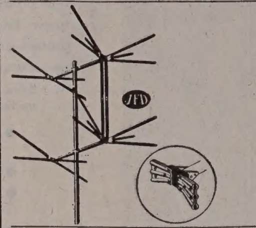


JFD STACKED "COMMANDAIR" CONICAL

Delivers terrific all-channel reception. ¼ wavelength stacked bays provide greater signal pick-up with reduced multi-path reflections. Bracket designed to take any combination of element arrangements. Less mast.

(¼ wave. stacked)

No.	List
C661 (All-Aluminum)	$21.30
C361 (Steel Crossarm)	20.20

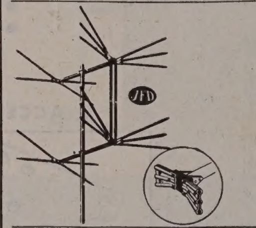


JFD STACKED "COMMANDAIR" CONICAL

High frequency elements deliver sharper upper-channel reception. ¼ wavelength stacked for higher gain, less noise and fading. Bracket designed to take any combination of element arrangements. Jumper Bars included. Less mast.

(¼ wave. stacked)

No.	List
C671 (All-Aluminum)	$22.50
C371 (Steel Crossarm)	21.30

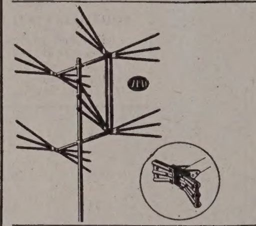


JFD STACKED "COMMANDAIR" CONICAL

Stacked 6-dipole conicals produce unsurpassed broad band response across all channels Unique element bracket design permits interchanging of elements to suit location. Less mast.

(¼ wave. stacked)

No.	List
C681 (All-Aluminum)	$24.55
C381 (Steel Crossarm)	23.05

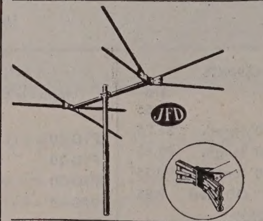


JFD STACKED "COMMANDAIR" CONICAL

Features stacked 6 dipole and 6 reflector conical arrays for exceptionally high broad band response on all channels Bracket designed to take any combination of element arrangements. Jumper Bar included. Less mast.

(¼ wave. stacked)

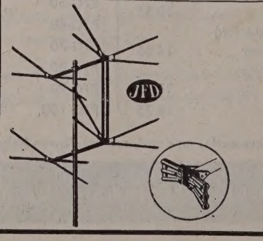
No.	List
C691 (All-Aluminum)	$27.55
C391 (Steel Crossarm)	26.10



JFD SOLID ROD ALL-ALUMINUM CONICAL

NEW! Powerful! Completely Corrosion-proof! Break-proof! Vibration-proof! Howl-proof! Made of 61ST6 ¼" OD solid aluminum elements. Bracket is designed to take any arrangement of antenna elements to suit location conditions. Less mast.

No.	List
SR660	$10.10



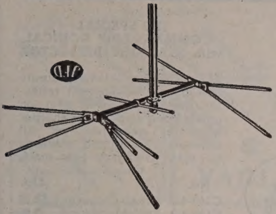
JFD STACKED SOLID ROD ALL-ALUMINUM CONICAL

NEW! Powerfully constructed! Solidly built to last and last. Break-proof! Howl-proof! Corrosion-proof! Vibration-proof! Made of 61ST6 ¼" OD solid aluminum elements. Bracket designed to take any combination of element arrangements. Less mast.

(¼ wave. stacked)

No.	List
SR661	$21.30

JFD *Ranger* TELEVISION ANTENNAS

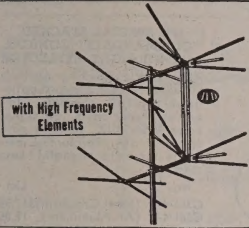


JFD "D-Xer" ALL-BAND CONICAL

The most powerful conical on the market!

½" heavy wall aircraft aluminum alloy drawn tubing. Reinforced with 8" wooden dowels to eliminate element sway, bend and whip. Heavy-duty construction insures lasting durability. Complete with Dipole and Reflector HF Elements for Peaked High Frequency Response.

TA160 (less mast)........$14.65

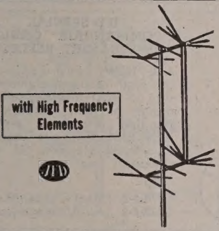


JFD "DOUBLE D-Xer" STACKED CONICAL

Built like a battlewagon!

Still preferred! ½" heavy-wall aircraft aluminum alloy drawn tubing. All elements reinforced with 8" wooden dowels. ¼ wavelength stacked for extra gain and directivity. Complete with Dipole and Reflector HF Elements for Peaked High Frequency Response.

TA161 (less mast)........$30.70

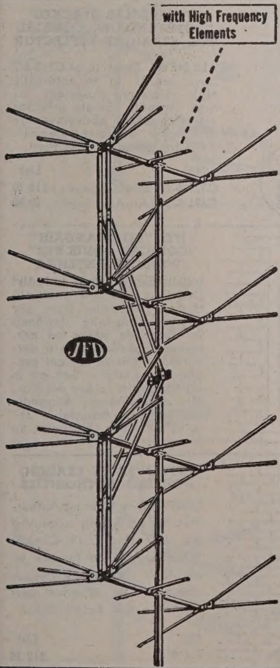


JFD "D-Xer" STACKED CONICAL

No Better Conical at Any Price!

Still preferred! ½ wavelength stacked bays for added broad band pick-up. ½" heavy-wall aircraft aluminum alloy seamless tubing. All elements reinforced with 8" wooden dowels. Complete with Dipole and Reflector HF Elements for Peaked High Frequency Response.

TA162 (less mast)........$32.45



JFD "SUPER D-Xer" DOUBLE STACKED CONICAL

For "Impossible" Reception Areas!

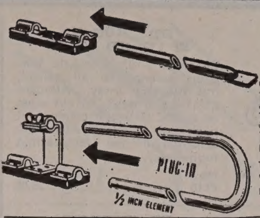
All Aluminum
America's No. 1 Antenna.

Reaches out farther and brings them in stronger. Better than ever electrically and structurally. Double reinforced to withstand worst weather.

Delivers unsurpassed gain for pulling in weak signals from long distances. Consists of ¼ wavelength stacked bays and ½ wavelength stacked sections for good broad band response. Includes two TA161 arrays, two sets of J160 Jumper Bars and one J162 Aluminum Jumper Harness.

½" heavy-wall aircraft aluminum alloy seamless tubing. All elements reinforced with 8" wooden dowels. Complete with Dipole and Reflector HF Elements for Peaked High Frequency Response.

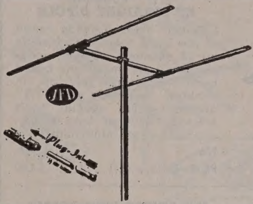
No.	List
TA164 (less mast)	$64.90



ALL-ALUMINUM JFD "PLUG-IN" TV ARRAYS

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! New! Improved! Fast and easy installation! Simply plug in elements and tighten wing nuts. ½" seamless aircraft aluminum tubing. No rivets, no holes to weaken elements. Full strength of round tube is retained. See below.

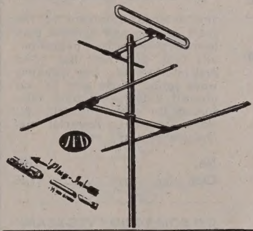


JFD "PLUG-IN" STRAIGHT DIPOLE with REFLECTOR

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! Fully assembled. . . . Simply insert elements and tighten in place with attached wing nuts. No tools, not even a screw driver is necessary. ½" aircraft aluminum tubing. Channels 2-6.

No.	List
PL1 (less mast)	$6.70

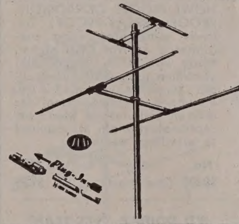


JFD "PLUG-IN" LO-STRAIGHT HI-FOLDED DIPOLE

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! Completely assembled from top to bottom. Push elements in place and tighten for immediate assembly. No tools needed. Rugged ½" aircraft aluminum tubing. All channel reception.

No.	List
PL 35 (less mast)	$10.30

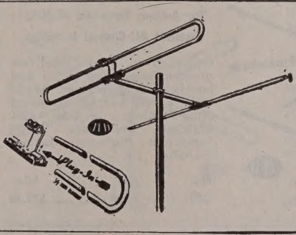


JFD "PLUG-IN" DUO-ORIENTING HI-LO STRAIGHT DIPOLE

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! Completely preassembled. Elements are tightened in place by means of sturdy attached wing nuts. No tools required. Rugged ½" aircraft aluminum tubing. All-channel reception.

No.	List
PL3 (less mast)	$9.95

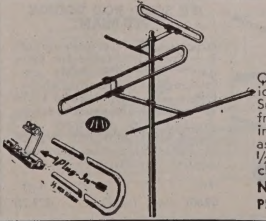


JFD "PLUG-IN" FOLDED DIPOLE with REFLECTOR

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! No loose parts. Fully preassembled. Slip elements in place, tighten wing nuts —that's all. Not even a screw driver is necessary. Heavy ½" aircraft aluminum tubing. Channels 2-6.

No.	List
PL4 (less mast)	$8.80



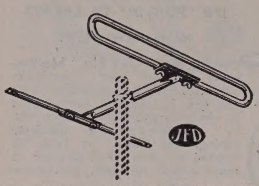
JFD "PLUG-IN" DUO-ORIENTING HI-LO FOLDED DIPOLES

NEW! NEW! NEW!

Quicker than "Quik-Rig," Mechanically Sturdier and Electrically Superior! Completely assembled from top to bottom. Push elements in place and tighten for immediate assembly. No tools needed. Rugged ½" aircraft aluminum tubing. All-channel reception.

No.	List
PL5 (less mast)	$11.40

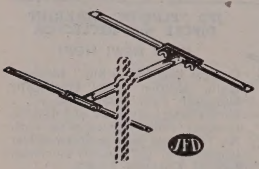
JFD Ranger TELEVISION ANTENNAS



JFD "PLUG-IN" HF FOLDED DIPOLE

Channels 7-13. Converts low-band antenna to all-channel, duo-orienting array. Attaches quickly and easily to old mast by means of U-bolt clamp. All parts in place. Aluminum construction for long-lasting ruggedness.

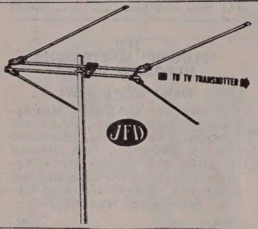
No.	List
PL10 (less mast)	$3.05



JFD "PLUG-IN" HF STRAIGHT DIPOLE

Channels 7-13. Extends range of low-band antenna to include all 12 channels. Orients independently for maximum broad band response. Sets up in minutes. Fits masts up to 1¼" diameter. No special tools needed. Built of long-lasting, corrosion-proof aluminum.

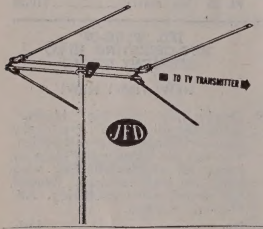
No.	List
PL12 (less mast)	$2.80



JFD SINGLE "VEE-BEAM"

The antenna discovery of the year! Setting new antenna performance records. Exceptionally high gain with less noise and interference. Low standing wave ratio. Made with ⅜" od aircraft aluminum tubing reinforced for extra strength. Instant assembly. Powerful mechanical design.

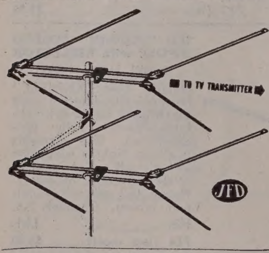
No.	List
C800 (less mast)	$9.65



JFD SOLID ROD "VEE-BEAM"

HOWL-PROOF! CORROSION-PROOF! BREAK-PROOF! Delivers same outstanding performance as No. C800 above. Made with 61ST6 ¼" od solid aluminum rod. Gains up to 10 db. Single-stack gain of 7 db. on upper channels. Ideal for difficult installations where exceptional strength is required to withstand weather.

No.	List
SR800 (less mast)	$9.65



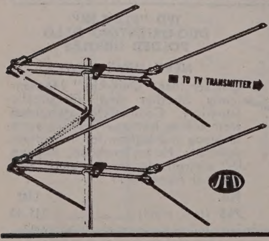
JFD DOUBLE "VEE-BEAM"

The Antenna Sensation of 1951!

Excellent All-Channel Reception.

Gains up to 10 db. Delivers greater power, less noise and interference to receiver. Made with ⅜" od aircraft aluminum alloy tubing. Includes J801 Matched Impedance Mast-Supported Aluminum Jumper Harness.

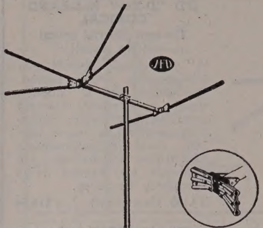
No.	List
C801 (less mast)	$23.70



JFD SOLID ROD DOUBLE "VEE-BEAM"

Howl-proof! Corrosion-proof! Break-proof! Stacked for extra gain. Same remarkable performance as C801 array above. Offers extra advantage of 61ST6 ¼" od solid aluminum rod construction. 10 db. gain. Includes J801 Matched Impedance Mast-Supported Aluminum Jumper Harness.

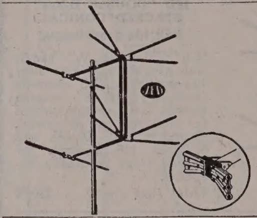
No.	List
SR801 (less mast)	$23.70



JFD SPECIAL "COMMANDAIR" CONICAL with STRAIGHT REFLECTOR

ALL NEW! Four-element dipole design and two-element reflector design increases gain on upper band and insures sharper ghost-free reception on all channels. Reinforced elements for extra strength! Less mast.

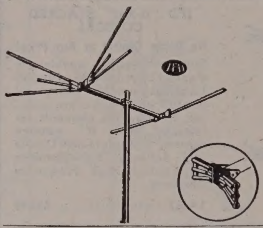
No.	List
C360-4-2 (Steel Crossarm)	$8.25
C660-4-2 (All-Aluminum)	8.80



JFD SPECIAL STACKED "COMMANDAIR" CONICAL with STRAIGHT REFLECTOR

ALL NEW! Stacking of bays increases broad band sensitivity across all channels. Improves reception in low signal areas especially. Delivers gain up to 9 db. Reinforced elements for extra strength! Less mast.

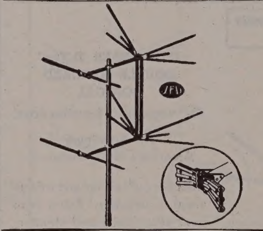
No.	List
C361-4-2 (Steel Crossarm)	$17.55
C661-4-2 (All-Aluminum)	19.05



JFD SPECIAL "COMMANDAIR" CONICAL with STRAIGHT REFLECTOR

ALL NEW! Four-dipole plus two high frequency element design in front and two-reflector design in rear. Affords outstanding directional pick-up, especially on upper channels. Reinforced elements for extra strength! Less mast.

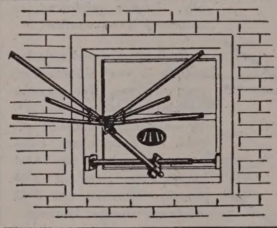
No.	List
C370-6-2 (Steel Crossarm)	$8.80
C670-6-2 (All-Aluminum)	9.35



JFD SPECIAL STACKED "COMMANDAIR" CONICAL with STRAIGHT REFLECTOR

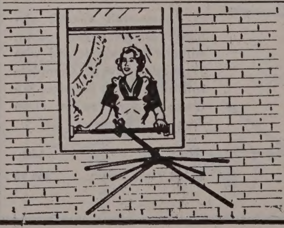
ALL NEW! Stacking of C360-6-2 bays results in exceptionally high response, especially on high channels. Single reflector elements assure above-average directivity. Reinforced elements for extra strength! Less mast.

No.	List
C371-6-2 (Steel Crossarm)	$18.70
C671-6-2 (All-Aluminum)	19.80



JFD "COMMANDAIR" CONICAL "QUIK-RIG" WINDOW ANTENNA

Installs Easily! Works Instantly! Designed to deliver good all-channel reception from any angle. Especially designed for locations where no permanent installations are permitted. Follows conical propagation pattern. Sets up in jig-time. Tilts to any position. Fits any window. Ruggedly constructed. Adjustable 32" to 42" in width. No bolts, no screws to fuss with.

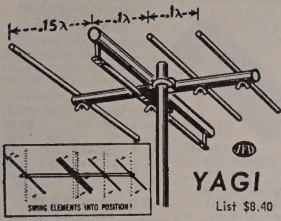


APPROVED BY LEADING HOUSING AUTHORITIES

Leading City Housing Authorities have officially approved the JFD No. C119 Conical Window Antenna for use on all their projects. This is proof of its superior performance and construction.

No.	List
C119	$12.35

JFD Ranger TELEVISION ANTENNAS

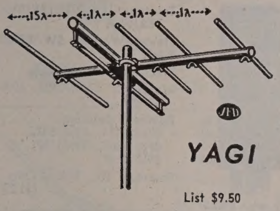


List $8.40

JFD 4-ELEMENT "Sky-Ranger" HIGH BAND YAGI

Super-high gain. All-Aluminum construction. Instant "Quik-Rig" assembly. High impedance driven element delivers direct match to 300 ohm lead-in. 1" od aluminum collector element. All elements cut to channel for superior reception.

No. 4Y7-4Y13 Available for High Band Channels 7-13. (Specify Channel Number)

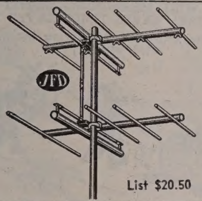


List $9.50

JFD 5-ELEMENT "Sky-Ranger" HIGH BAND YAGI

Ultra-high gain. All-Aluminum construction. Instant "Quik-Rig" assembly. High impedance driven element delivers direct match to 300 ohm lead-in. 1" od aluminum collector element. All elements cut to channel for exceptionally fine reception.

No. 5Y7-5Y13 Available for High Band Channels 7-13. (Specify Channel Number)

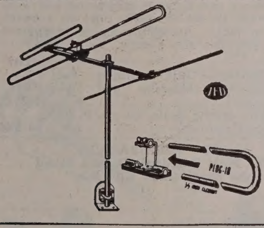


List $20.50

JFD 5-ELEMENT STACKED HIGH BAND YAGI

Completely pre-assembled for instant installation. Stacked to furnish maximum pick-up. Also available in 4-Element Series No. 4Y7S-4Y13S series. Corrosion-proof all-aluminum construction.

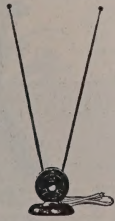
No.
5Y7S-5Y13S — Available for High Band Channels 7-13.
(Specify Channel Number)



JFD "PLUG-IN" STRAIGHT LINE HI-LO ARRAY

NEW! NEW! NEW! Completely preassembled. Simply slip elements in place and tighten with wing nuts. ½" aircraft aluminum alloy tubing. Excellent all-channel reception. Two broad band folded dipoles and low band reflector operate off 300 ohm line.

No.	List
PL150 (less mast)	$12.35

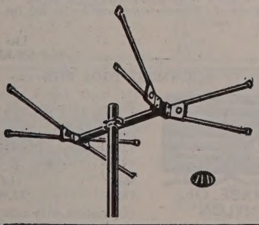


JFD "PANORAMA" INDOOR TV ANTENNA

Absolutely Tip-Proof!
1 Million Sold!

Handsome "Tip-Proof" weighted base of satin-finish Mahogany plastic matches finest furniture. All-channel reception, 3-section, triple-chrome plated brass telescopic dipoles. No tightening necessary. Ratchet-feature holds elements in place. Complete with 300 ohm twin lead.

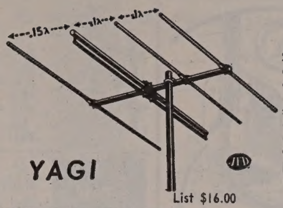
No.	List
TA135	$6.95



JFD "D-Xer" HI-BAND CONICAL

Features reinforced elements for greater strength. One of the best antennas available for areas where exceptionally high response is desired on upper channels. Attaches to mast quickly and conveniently by means of U-bolt clamp. All-aluminum construction.

No.	List
TA171 (less mast)	$7.90

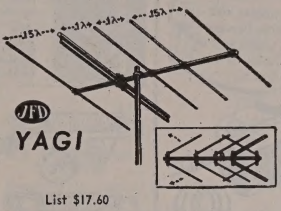


List $16.00

JFD 4-ELEMENT "Sky-Ranger" LOW BAND YAGI

Super-high gain. All-Aluminum construction. High impedance driven element delivers direct match to 300 ohm lead-in. Instant "Quik-Rig" assembly. 1" od aluminum collector element. All elements cut to channel for extra db. gain.

No. 4Y2-4Y6 Available for Low Band Channels 2-6.
(Specify Channel Number)



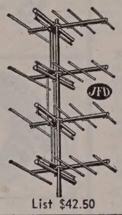
List $17.60

JFD 5-ELEMENT "Sky-Ranger" LOW BAND YAGI

Ultra-high gain. All-Aluminum construction. High impedance driven element delivers direct match to 300 ohm lead-in. Instant "Quik-Rig" assembly. 1" od aluminum collector element. All elements cut to channel for clearer, brighter pictures.

No. 5Y2-5Y6 Available for Low Band Channels 2-6.

(Specify Channel Number)

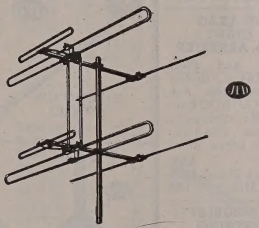


List $42.50

JFD 5-ELEMENT DOUBLE STACKED HIGH BAND YAGI

Completely pre-assembled. Booms in long distance signals hundreds of miles away. Complete with Transposed ½ Wavelength Jumper Bars and Jumper Harness. Powerful all-aluminum construction. Also available in 4-Element Series No. 4Y7DS-4Y13DS.

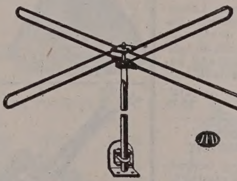
No.
5Y7DS-5Y13DS—Available for High Band Channels 7-13.
(Specify Channel Number)



JFD "PLUG-IN" STACKED STRAIGHT LINE HI-LO ARRAY

NEW! NEW! NEW! No loose parts. Completely preassembled. Just insert ½" aluminum elements and tighten by means of wing nuts. Stacked for greater directivity and gain on all channels. Highly directional characteristics maintain high front-to-back and front-to-side ratios on all channels.

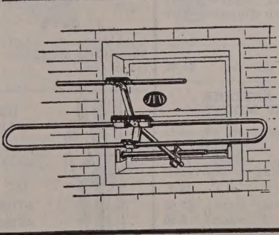
No. (less mast)	List
PL151 (¼" wav. stacked)	$26.50



JFD FM OMNIDIRECTIONAL FOLDED DIPOLES

88-108 mc. One of the most popular FM arrays in use today. Scientifically polarized for almost uniform reception from all directions. Assures good signal strength without orientation. 300 ohm impedance. Weather-proof all-aluminum construction.

No.	List
FA206	$17.05

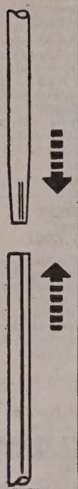


JFD HI-LO WINDOW TV ANTENNA

Straight-High folded-low dipole design delivers more powerful reception on all 12 channels. High band dipoles adjustable to conical V-cone pattern. Corrosion-proof aluminum construction. Excellent all-channel reception.

No.	List
C120	$12.35
EX119 Extension For 5' windows.	2.50
EX30 Extension For 6' windows.	3.50

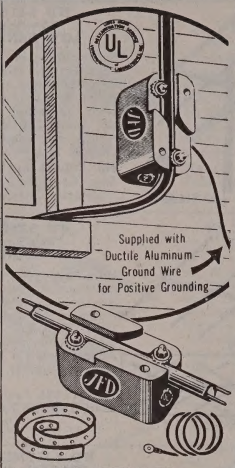
TELEVISION BRACKETS & ACCESSORIES



STEEL EXTENSION MASTS

Elevate all antennas for stronger signal pick-up.

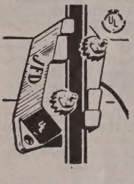
No.	List
M55 (5'-1¼" OD)	**$1.65**
M100 (10'-1¼" OD)	**$3.30**



JFD TWIN LEAD LIGHTNING ARRESTER

UL Approved for use in U.S.A. C.S.A. Approved for use in Canada. Can also be used with Coaxial Cables. Complete with 4' Aluminum Ground Wire for wall mounting and Hanger Strap for pipe mounting. **No** stripping. No impedance change. Nickel-plated brass hardware.

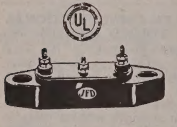
No.	List
AT102 (regular twin lead)	**$2.25**
AT103 (oval jumbo and tubular twin lead)	**$2.25**



JFD TWIN LEAD LITTLE GIANT LIGHTNING ARRESTER

For Regular and Oval Jumbo Twin Leads. Underwriters' Laboratories Approved for OUTDOOR-Indoor use. **No** stripping. No impedance change. Nickel-plated brass hardware.

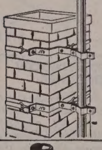
No.	List
AT105 (Without Strap)	**$1.25**
AT105S (with Strap)	**1.50**



JFD DOUBLET LIGHTNING ARRESTER

Underwriters' Laboratories Approved. Designed to match all antennas. Fits all type of twin lead and coaxial cable lead-ins.

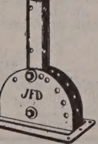
No.	List
403	**$0.75**



JFD ANTENNA CHIMNEY MOUNT

Unlimited spacing between brackets. Holds masts ½" to 1½" OD. Supplied with 21 ft. steel strapping and hardware.

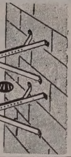
No.		List
BR2	(2 per set)	**$3.40**



JFD ANTENNA BASE MOUNT

Permits mounting of masts up to 1⅜" OD, anywhere—on walls, window sills, peak, gabled or flat roofs.

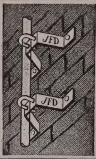
No.		List
BR8	(to 1⅜" masts)	**$7.50**
BR8-2	(to 2" masts)	**8.50**



JFD ADJUSTABLE WALL MOUNT
3-Leg Support

Anchors ⅞"-1¼" masts 6-15" from wall. Ideal for clearing projecting parts. Also available with No. BR11X for 24" wall clearance.

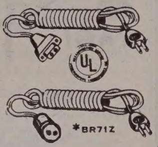
No.		List
BR11	(set of two)	**$7.50**



U-BOLT BRACKET

Sturdy U-Bolt bracket (1½" x ⅛") grips 1"-1½" OD masts. Extremely powerful. Corrosion resistant steel. Complete with hardware.

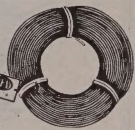
No.	Wall Clearance	List
BR46-3	(3")	**$2.00**
BR46-4	(4")	**2.30**
BR46-7	(7")	**2.75**



AC SAFETY CORD

Cuts off line voltage when TV receiver cabinet is opened. Used with JFD Interlock Plug No. BR75.

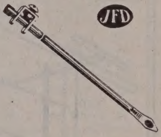
No.		List
BR71-6	(6')	**$0.80**
BR71-9	(9')	**1.01**
BR71-12	(12')	**1.22**
BR71-15	(15')	**1.43**
* **BR71Z**	(Spec. Zenith)	**1.00**



JFD No. 8 ALUMINUM GROUND WIRE

Recommended for use by Nat'l Electrical Code.

No.	List
BR79—100 ft.	**$ 3.00**
BR79—500 ft.	**14.00**



JFD PLATED GROUND ROD

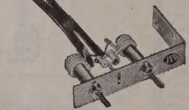
Acts as dependable year-round ground stake. Made of copper-plated, heavy gauge 4 ft. steel rod ⅜" OD.

No.		List
BR80-4	(4')	**$1.50**
BR80-6	(6')	**2.25**

JFD PICTURE TUBE
"No Scratch Panty"

Protects fragile picture tubes against scratches and breakage.

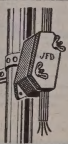
No.	List
BR97-12 (for 7"-12" tubes)	**$3.50**
BR97-17 (for 15", 16", 17" tubes)	**$4.50**
BR97-20 (for 19", 20" tubes)	**$4.95**



JFD TV WAVE TRAPS

BR106-10-30 Traps out amateur Harmonic Interference.
BR106-80-110 Traps out FM Image Interference.
BR106-30-60 Traps out 30-60 mc. amateur Harmonic Interference.
BR106-60-90 Traps out 60-90 mc. Diathermy Interference.

List Price **$2.75**



JFD 4-WIRE 8-CONTACT LIGHTNING ARRESTER

Protects antenna rotator installations. No stripping.

No.	List
AT104 (Without Strap)	**$1.50**
AT104S (with Strap)	**1.75**

Protects TV Picture Tube

and set against current overload

JFD TV VOLTAGE REGULATORS

Produces steadier TV pictures despite line voltage changes. Operates on 110v AC or DC.

No.	Watts	TV-Set	List
94-4	200	7"	**$2.85**
94-5	250	9"-10"	**2.85**
93-7	300	12"-16"	**2.85**
93-8	375	16"-24"	**2.85**

Use the Ballast the Manufacturers Use in their Original Equipment

List ea. $2.25

JFD TV BALLAST

Emerson: 397021, 397022, 397023, 571,606, *397036.

Teletone: TBR102D, TBR103D, TBR104D.

Stewart-Warner: SW-507300.

Pilot: 35-37.

Electromatic: 408100.

Motorola: 17A470303, 17A-485459.

Raytheon-Belmont: B9M16534, B9M15822, B9M16067, B9M17571, B9M18941.

Emerson: No. 397036 Only ($1.25)

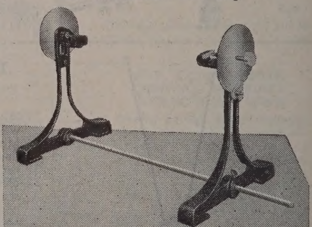
JFD WIRE MEASURING OUTFIT
SAVES WORK! SAVES TIME! SAVES WIRE!

(Complete with Reel, Measuring Machine, Wire Winder)

This compact and accurate measuring and winding unit can be set up in jig time on a bench, counter or table. Amazingly simple to operate, it works smoothly and silently.

No.		List
66C	(Complete with Folding Reel, Measuring Machine and Wire Winder)	**$125.00**
66M	(With Metric Scale for use in Foreign Countries)	**175.00**

JFD "REPAIRACK"
"The Most Practical Chassis Stand the Serviceman Can Buy"



Holds television, FM, radio and phono turntable chassis securely in position. Rotates freely and permits access to remotest corners of set. Removable chassis clamps simplify placing of chassis on stand. Rigidly supports up to 200 lbs. in weight.

No.	List
No. 79-3	**List $28.00**

JFD TV ALIGNMENT TOOL KITS

MADE OF NYLON

Six tools (each with 2 aligning ends) offer a total of 12 different tuning tips for every imaginable TV - FM adjustment.

No.	List
TK60	**$3.95**

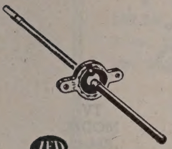
(Complete with case)

JFD TELEVISION BRACKETS & ACCESSORIES

JFD DETENT SWITCH CONTROLS

Complete with Locating Plate

Features strong phosphor bronze spring. Made with brass and phenolic shafts for use as replacements in 630 and 721 type TV receivers employing RCA and other type TV tuners; Emerson, Admiral, Capehart, Fada, Olympic, Air King, DeWald, Garod, Regal, Packard-Bell, Philmore, Techmaster, Truetone, Coronado and U. S. Television sets.

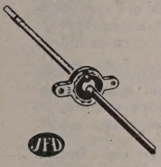


JFD DETENT SWITCH FOR 630TS CHASSIS

With Short Shaft

Replaces RCA Part No. 71463. Used in RCA Television Tuner Part No. 71531 — Replacement Type 201E1.

No.		List
DT10	(With Loc. Plate)	$2.80
DT20	(Without Loc. Plate)	1.68

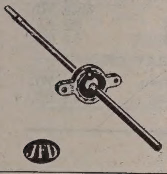


JFD DETENT SWITCH FOR 630TS CHASSIS

With Long Shaft

Replaces RCA Part No. 72743. Used in RCA Television Tuner Part No. 71531 — Replacement Type 201E1.

No.		List
DT11	(With Loc. Plate)	$3.15
DT21	(Without Loc. Plate)	1.68

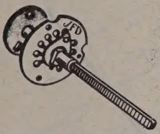


JFD DETENT SWITCH

With Extra Long Shaft For Admiral TV Sets

Replaces Admiral Part No. 76B14. Used in entire Model Series No. 30A and No. 8C.

No.		List
DT12	(With Loc. Plate)	$4.15
DT22	(Without Loc. Plate)	2.10

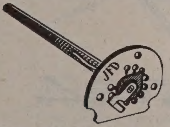


JFD DETENT SWITCH

With All Phenolic Shaft

Replaces RCA Part No. 73440. Used in RCA Television Tuner Replacement Type Nos. 74941, 73435, and 74571.

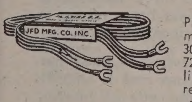
No.	List
DT13	$4.75



JFD DETENT SWITCH

With All Phenolic Shaft. Replaces RCA Part No. 75162. Designed for use in all new 1950-1951 RCA models.

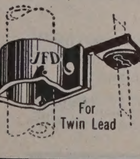
No.	List
DT14	$4.00



JFD MATCHING TRANSFORMER With SPADE TERMINAL LUGS

Provides excellent match between any 300 ohm antenna and 72 ohm transmission line or 72 ohm input receiver.

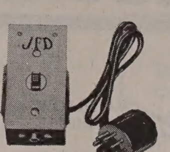
No.	List
BR112	$ .80



WIRE RETAINER LEAD INSULATOR

Anchors transmission lines to masts and holds guy wire. Fits ¾"-1½" masts. Made of galvanized steel.

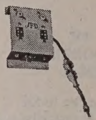
No.		List
BR60TL	(for twin lead)	$0.35
BR60RG	(for coaxial)	.35



JFD PHONO-RADIO SWITCH

Quickly connects record players, etc., to audio amplifier of radio receivers. Complete with wired tube socket adapter for use with single ended 1st audio tubes such as 6SQ7 and 12SQ7.

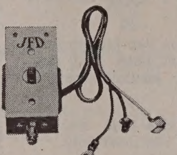
No.	List
ST184	$3.30



JFD PHONO-RADIO SWITCH

Adapts 78 r.p.m. instruments for use with 45 r.p.m. or 33⅓ r.p.m. players through the same sound system. Equipped with cable adapter to fit either 3-pin receptacle or coaxial phono jack.

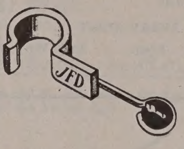
No.	List
ST144	$4.35



JFD PHONO-RADIO SWITCH

Designed to connect 78 r.p.m., 45 r.p.m. and 33⅓ r.p.m. players to radios not equipped with phono-jacks. No wiring or soldering necessary. Complete with midget tip plug.

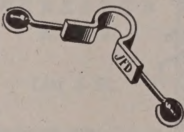
No.	List
ST145	$2.50



JFD CLIP-ON

No.	Size	List
SPT100	(1")	$0.10
SPT1.16		.10
SPT125	(1¼")	.10
SPT138	(1⅜")	.12
SPT150	(1½")	.12
SPT158	(1⅝")	.13
SPT175	(1¾")	.13
SPT178	(1⅞")	.13
SPT200	(2")	.14

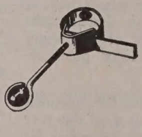
To order coaxial sizes substitute **R** for **T.**



JFD DOUBLE CLIP-ON

No.	Size	List
DSPT100	(1")	$0.20
DSPT116		.20
DSPT125	(1¼")	.20
DSPT138	(1⅜")	.25
DSPT150	(1½")	.25
DSPT158	(1⅝")	.27
DSPT175	(1¾")	.27
DSPT178	(1⅞")	.27
DSPT200	(2")	.30

To order coaxial sizes substitute **R** for **T.**



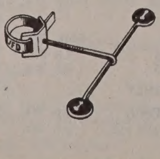
JFD ADJUSTABLE STAND-OFFS

Fit any size mast.

FOR TWIN LEAD

No.	Size	List
UT350	(3½")	$0.20
UT550	(5½")	.25
UT750	(7½")	.30
UT1200	(12")	.50

To order coaxial sizes substitute **R** for **T.**



DOUBLE ADJUSTABLE STAND-OFF

Firmly grip dual lead-ins. Polyethylene insert.

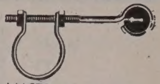
FOR DUAL LEADS

No.	Size	List
DUT350	(3½")	$0.35
DUT550	(5½")	.39
DUT750	(7½")	.40
DUT1200	(12")	.55

To order coaxial types substitute **R** for **T.**

JFD MAST LEAD-IN STAND-OFF INSULATORS

FOR TWIN LEAD



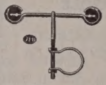
FOR 1" MASTS

No.		List
TL100-350	(1" Clamp—3½" Screw Eye)	$0.15
TL100-550	(1" Clamp—5½" Screw Eye)	.20
TL100-750	(1" Clamp—7½" Screw Eye)	.21
TL100-1200	(1" Clamp—12" Screw Eye)	.32

FOR 1¼" MASTS

No.		List
TL125-350	(1¼" Clamp—3½" Screw Eye)	.15
TL125-550	(1¼" Clamp—5½" Screw Eye)	.20
TL125-750	(1¼" Clamp—7½" Screw Eye)	.21
TL125-1200	(1¼" Clamp—12" Screw Eye)	.32

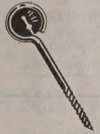
FOR DUAL TWIN LEADS



FOR 1¼" MASTS

No.		List
DTL125-350	(1¼" Clamp—3½" Screw Eye)	$0.35
DTL125-550	(1¼" Clamp—5½" Screw Eye)	.38
DTL125-750	(1¼" Clamp—7½" Screw Eye)	.40
DTL125-1200	(1¼" Clamp—12" Screw Eye)	.55

JFD SCREW EYE—No. 8 Wire



For Twin Lead

No.	Size	Price
BR18TL3	(3½)	$ 6.00/C
BR18TL5	(5½)	8.00/C
BR18TL7	(7½)	10.00/C
BR18TL12	(12)	20.00/C

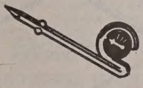
For Coaxial Cable

No.	Size	Price
BR18RG3	(3½)	$ 6.00/C
BR18RG5	(5½)	8.00/C
BR18RG7	(7½)	10.00/C
BR18RG12	(12)	20.00/C
No. 9 Wire		
X18TL3	(3½)	4.45/C

NAIL "DRIVE-IN" INSULATORS

For Twin Lead

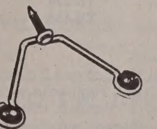
Hammers in quickly and easily. Polyethylene insert.



No.		List
NT100	(3½" #8 wire)	$0.10
NT200	(3½" #6 wire)	.15
NT207	(7" #6 wire)	.20

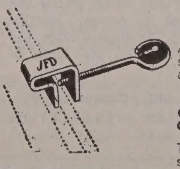
To order coaxial sizes substitute **R** for **T.**

JFD DOUBLE MASONRY "DRIVE-IN"



Anchors both high & low-band lead-ins. Prevents line tangling. Complete with P-K Patent Masonry Drive Nail.

No.	List
DFN100T	$0.24
DFN100R	.24



JFD GUTTER STAND-OFF

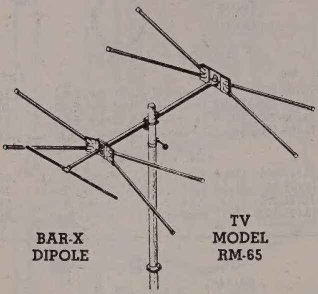
Anchors twin lead-ins safely and securely against roof gutters.

No.	Size	List
GST350	(3½")	$0.35
GST750	(7½")	.40

To order coaxial sizes substitute **R** for **T.**

RADELCO
CLEVELAND

RADELCO AERIALS

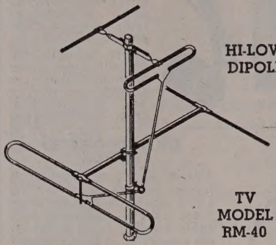


BAR-X DIPOLE

TV MODEL RM-65

Vastly superior to ordinary conicals! Director Bar in front of receiving dipole greatly increases signal strength on high channels. Rugged 1¼" galvanized steel mast with 1" cross boom. Heavy duty construction throughout. Aluminum elements specially engineered to reduce vibration and noise. Accessories consist of swivel base, guy ring and clamp-type standoff insulator.

Model	List	Description
RM-65	**$12.45**	10' mast and accessories.
RM-65S	**10.45**	5' mast only.
RM-652	**22.45**	2 bays, 10' mast and acc.
RS-751	**8.95**	Single array only.
RS-752	**18.95**	2 bays, jumper bars.



HI-LOW DIPOLE

TV MODEL RM-40

A fine general purpose antenna for local and near fringe reception. Ruggedly constructed with 1¼" galvanized steel mast and heavy duty 1" galvanized steel cross beam.

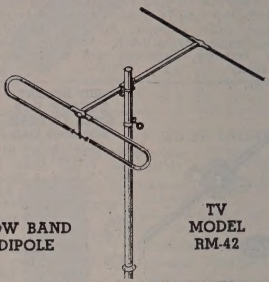
Model RM-40 includes two 5-ft. sections of 1¼" mast, swivel base, guy ring, clamp-type standoff insulator, jumper cable and arrays.

Model RM-40S includes high and low channel arrays and 5-ft. mast only.

Model	List	Ship. Wt.
RM-40	**$12.45**	9.2 lbs.
RM-40S	**10.45**	7.5 lbs.

HIGH BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RT-51	**$2.85**	174-216 mc.	1.3 lbs.



LOW BAND DIPOLE

TV MODEL RM-42

Ideal for local and near fringe areas where only low channels are operating. Add RT-51 array for high channel reception. Same rugged construction as RM-40.

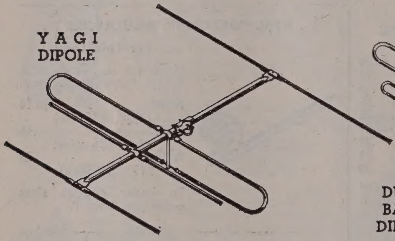
Model RM-42 includes two 5-ft. sections of 1¼" galvanized steel mast, swivel base, guy ring, clamp-type standoff insulator and low channel array.

Model RM-42S includes low channel array and 5-ft. most only.

Model	List	Ship. Wt.
RM-42	**$10.45**	8.8 lbs.
RM-42S	**8.45**	6.2 lbs.

LOW BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RS-52	**$7.45**	54-88 mc.	4.5 lbs.

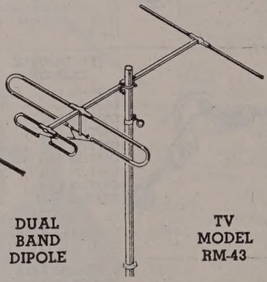


YAGI DIPOLE

TV MODELS YS-234 YS-456

Radelco Tri-Channel Yagi covers 3 channels instead of only one! High gain with flat response across 3 channels instead of high gain at the center of one channel only. Guaranteed to absolutely show no side band cutting. Impedance is practically constant at 300 ohms across the full three channel coverage. Ideally suited for stacking. In many cities the Tri-Channel Yagi will do the work of two antennas.

Model	List	MC.	Channels	Wt.
YS-234	**$11.95**	54-72	2-3-4	6.1 lbs.
YS-456	**10.95**	66-88	4-5-6	5.5 lbs.



DUAL BAND DIPOLE

TV MODEL RM-43

A multi-channel antenna made with a special dual band array. Particularly useful where all stations are in same general direction. Especially sensitive on high channels.

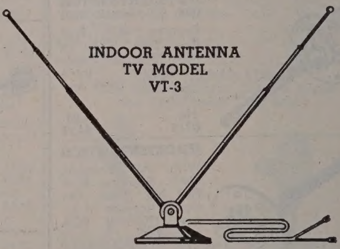
Model RM-43 includes two 5-ft. sections of 1¼" galvanized steel mast, swivel base, guy ring, clamp-type standoff insulator and array.

Model RM-43S includes array and 5-ft. mast only.

Model	List	Ship. Wt.
RM-43	**$12.45**	9.8 lbs.
RM-43S	**10.45**	7.5 lbs.

ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RS-531	**$9.45**	54-216 mc.	5.5 lbs.



INDOOR ANTENNA TV MODEL VT-3

The Radelco VT-3 is a high quality antenna made with three sections of chrome-plated seamless brass tubing to provide excellent indoor reception.

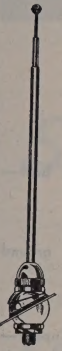
The VT-3 has a heavily weighted mahogany lacquered base and is smartly designed to harmonize with all furnishings. The VT-3 is equipped with 5-ft. lead and is individually packed in a corrugated carton.

Attractively priced at the low list of $4.45 . . . makes it one of the finest values today in indoor antennas.

Model	List	Ship. Wt.
VT-3	**$4.45**	1.4 lbs.

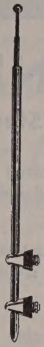
RADELCO CLEVELAND

RADELCO AERIALS



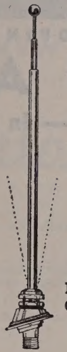
Model
MH-3
3 Sec. 57"
List $5.65
★
MH-3A
3 Sec. 70"
List $6.25

MONARCH COWL-FENDER



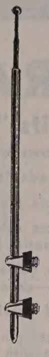
Model
CS-3
3 Sec. 60"
List $3.85

CHAMPION SIDE COWL



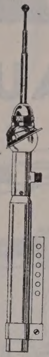
Model
CO-3A
3 Sec. 57"
List $5.15

ROTOLOK COWL-FENDER



Model
RAD-3
3 Sec. 70"
List $5.15
★
RAD-4
4 Sec. 92"
List $6.25
★
RAD-5
5 Sec. 112"
List $7.25

DELUXE SIDE COWL



Model
FD-3
3 Sec. 4"-55"
List $7.45
★
FD-3A
3 Sec. 9"-68"
List $7.95

CONCEALED COWL-FENDER

Model MH-3—Ball-joint metal mounting base, adjustable from flat to 30°. Base sufficiently large to cover largest holes. Lovely chrome finish. Waterproof construction. Holds angular adjustment permanently. 36" cable.

Model CS-3—A competitively priced aerial built to RADELCO's high quality standard. Chrome-plated brass tubing. Shielded polyethylene cable with black cover. Screw-on connector and chrome capped insulators.

Model CO-3A—Easy mounting, all tightening outside. Half-inch mounting hole. Chrome-plated mounting base. Exclusive VISE-LOCK eliminates clumsy braces. Fits any fender or top cowl. 36" Radar type cable.

F-254 FORD REPLACEMENT MAST

For 1941-42-46-47 Ford-Mercury Roof Antenna that operates behind windshield center post.

F-254 **List $2.25** **2 Sec.** **54"**

Model RAD-3, 4, 5—Built to superior quality standards. Automotive specification chrome-plate. Low loss 100% shielded 36" Radar cable with screw-on connectors.

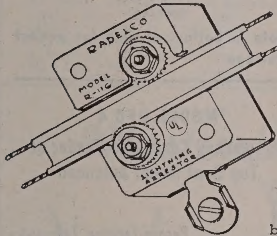
Model FD-3, 3A—Chrome-plated all-metal adjustable mounting base. Strong, non-crushable! Waterproof, electrically efficient, guaranteed trouble free. 48" Radar cable.

B-448 BUICK REPLACEMENT MAST

Replacement mast for roof aerials on all Buicks 1940 to present.

B-448 **List $2.75** **4 Sec.** **45"**

★ ★ ★ RADELCO TV & FM ITEMS ★ ★ ★



RADELCO LIGHTNING ARRESTOR R-116

List $ .90

Combination resistance bleeder and gap-type arrestor. Small and compact for easy wall installation. Arrestor network is completely enclosed in molded Bakelite housing. No stripping of insulation . . . positive piercing contacts provide perfect electrical path, regardless of variation in width or thickness of insulation. Does not disturb impedance of twin line. Improves both picture and sound by carrying off small static charges. Ground terminal accommodates up to .125" wire. Complete with wood screws. Individually packaged, 50 to master carton.

MAST EXTENSIONS

Heavily galvanized, internal lock-seam steel tube with swedged end and key way lock.

ME-48	**List $1.35**	**1" Dia. x 4' long**
ME-60	**List $1.60**	**1¼" Dia. x 5' long**

STANDOFF INSULATOR

Clamp-type for masts from 1" to 1¼"
R-102 **List $ .20**

TERMINAL BLOCK

Mast mounting terminal block for coupling phasing bars to lead cable.
R-111 **List $ .75**

CHIMNEY MOUNT

Bracket arms of double strength. Complete with four adjusting eyebolts and extra thick ¾" steel strap, heavily galvanized for long, dependable service.
R-105 **List $2.75** Ship. Wt. 3.3 lbs.

WALL MOUNT

Exclusive design with double strength brackets allowing 5" clearance from wall. Large bearing plate with four mounting holes, suitable for wood siding or masonry walls. Adjustable for 1" to $1\frac{5}{16}$" masts.
R-106 **List $1.85** Ship. Wt. 2.5 lbs.

JUMPER AND PHASING BARS

Jumper bars are used to connect two arrays into a double stack. Phasing bars are used to connect two double stack arrays to a terminal block on the mast forming a quad stack.

RQ-42	**JUMPER BAR**	**List $ .75 ea.**
RQ-45	**PHASING BAR**	**List .85 ea.**

QUAD STACK PHASING KITS

Four phasing bars RQ-45 plus one R-111 Terminal Block. Couples two double stack arrays into a quad stack.
R-114 **List $4.00**

GROUND ROD

Four-foot copper coated ground rod complete with terminal bolt.
R-110 **List $ .95**

SWIVEL MOUNTING BASE

Type R-107 is for 1¼" mast. One-inch mast uses Type R-104.
R-107..............................**List $ .50** **R-104**..............................**List $ .40**

RADELCO FM DIPOLES

Folded Dipole HD-21—Bi-directional for near fringe and local reception. With two 4-ft. mast sections, standoff insulator, guy ring, wall bracket, base and 50 ft. 300 ohm line. Freq. 88-108 mc. **List $11.45**

Dipole and Reflector HD-21R—Recommended for localities remote from station. Same accessories as HD-21. Freq. 88-108 mc. **List $13.95**

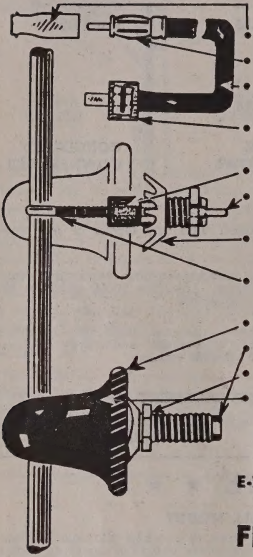
Difold Dipole HD-31—Circular reception pattern for localities with several stations in different directions. Same accessories as HD-21. Freq. 88-108 mc. **List $12.25**

Spirling NEW... PERMA-TENSION

TELESCOPING

AUTO RADIO ANTENNAE

In Antennae its "SPIRLING"— In Silver its "Sterling"

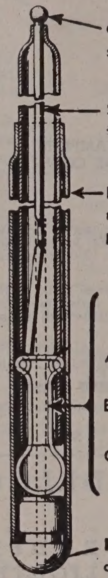


SIDE COWL MOUNTING

- Delco adapter supplied
- Motorola plug
- Low loss extra long Polyethylene coaxial Hi Q cable
- Plug-in cable fitting with lock washer—cannot loosen
- Pressed bakelite insulation
- Contact pin making perfect contact with cable
- Sharp toothed lock washer assures perfect grounding
- Straight eyebolt—direct positive contact from rod to cable
- Rubber form fitting cushions
- Shielding cup to eliminate noise
- Special fine thread hex nut
- Beautiful streamlined insulators

"PERMA-TENSION"
TELESCOPING ROD
E-Z ONE MAN INSTALLATION
Cable will fit all models.

FREE Three color 18" x 24" display card for mounting 4 antennae.



Colored static discharge ball—small and neat appearing

Stainless steel, precision ground top section—cannot rust

Durable Admiralty Brass—Copper—nickel and brite chrome finish; rustproof

PATENTED "PERMA-TENSION" CONSTRUCTION.

A. Provides positive electrical contact

B. Smooth non-stick rods, guarantees perfect telescoping for life of car

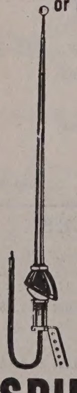
C. Patented "Perma-Tension" guarantees against rattling

Patent No.
2488480

Hole in bottom of plug for perfect drainage

MODEL UMC 3

Streamlined Upper Mount Top Cowl or Fender Antennae



Perma-Tension Telescoping, self-aligning rocker which insures a snug fit with either flat or convex surface with a wide variation of angle. Easily installed, waterproof, Vinyl-Plasticized, Polyethylene, Lo-Loss shielded coaxial Cable. Individually packed in carton.

Three sections, extending 25" to 66".

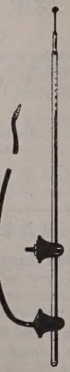
Including 48" cable.

MODEL UMC 3A

Three sections, extending 21" to 56" including 36" cable.

SIDE COWL ANTENNAE

Perma-Tension Telescoping



Model SC-366
Extends from 25" to 66"

Model SC-396
Extends from 35" to 96"

Model SC-460
Extends from 20" to 60"

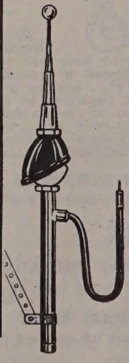
Model SC-480
Extends from 25" to 80"

Model SC-4100
Extends from 30" to 100"

Chrome cups available.

MODEL DFC 4

Streamlined Concealed Fender or Top Cowl Mount Antennae



Perma-Tension Telescoping, self-aligning rocker which insures a snug fit with either flat or convex surface. Easily installed, WATERPROOF, VINYL - PLASTICIZED, Polyethylene, Lo-Loss shielded Hi-Q coaxial cable. Individually packed in carton.

Four sections, showing only 3" when closed. Extending to 60".

Including 48" cable.

SPIRLING PRODUCTS CO., INC. New York City

NOISELESS...RATTLE-PROOF...RUST-PROOF...DURABLE

Spico

INDOOR ALL-CHANNEL TELEVISION & FM ANTENNAS

REVOLUTIONARY NEW "Adjusta-knob" Super-Phantom

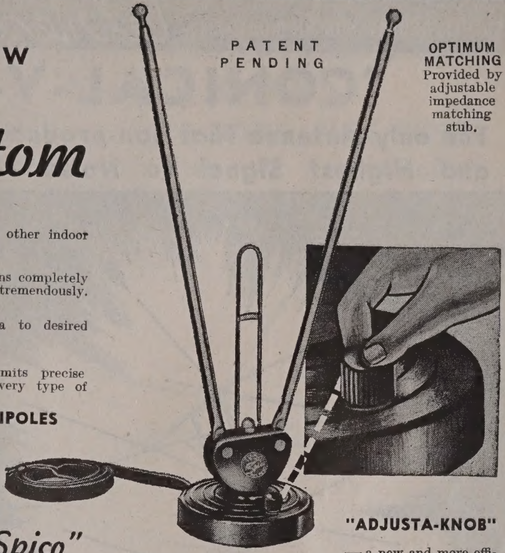
MODEL TV-503

Provides better reception over greater distances than any other indoor TV Antenna!

EXHAUSTIVE TESTS PROVE:

"SUPER-PHANTOM" sharply reduces, and in many locations completely eliminates ghosts and interference, improving reception tremendously.

- **ADJUSTA-KNOB**
  New "fingertip" tuning control adjusts antenna to desired channel.
- **OPTIMUM MATCHING**
  New designed adjustable "Matching Stub" permits precise Optimum Impedance Matching of antenna to every type of Television Set.
- **TELESCOPIC 3-SECTION PLATED BRASS DIPOLES**
  To provide greatly increased gain.



PATENT PENDING

OPTIMUM MATCHING Provided by adjustable impedance matching stub.

"ADJUSTA-KNOB" — a new and more efficient method of adjusting antenna to each individual channel by "fingertip" tuning control, for absolutely peak TV signal.

"Spico"

SUPER-PHANTOM

MODEL TV-503 Shipping Wt. 1½ lbs. Individually boxed and packed 25 to master carton. List Price.................... **$7.95**

And for LOCAL AREAS . . . "Spico" Phantom-Jenna

PATENT PENDING

MODEL TV-501—Similar to "Super-Phantom" described above, except dipoles are fixed length, non-telescoping, only 17½" long. Phantom-Tenna is equipped with MATCHING STUB for optimum set matching, and ADJUSTA-KNOB for peaking TV Signal, eliminating need for telescopic adjustment. Made of plated brass tubing. Packed in attractive individual boxes. Shpg. Wt.: 1 lb., 5 oz., 25 to master carton. List Price........................ **$6.95**

All "Spico" TV and FM Indoor Antennas feature:

- Plated Brass Tubing
- Non-Scratch Felt Pad
- No Lugs or Solder Shown
- All Bakelite Housing and Base
- All Concealed Wiring
- Complete with 300-ohm lead

The "Spico" line is carried by leading Jobbers as one of the fastest selling and most profitable lines of TV & FM Indoor Antennas!

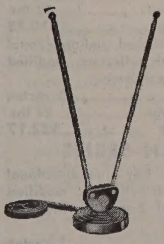
"Spico" Masterette

PATENT PENDING

MODEL TV-6

A portable indoor telescopic TV antenna of the conventional type for normal reception areas. Neat looking, beautifully designed to fit in with the decor of any room. Well built and priced REMARKABLY LOW . . . a handsome ECONOMY number! Telescopic three sections made of plated brass tubing throughout to insure permanent rust-free contacts.

Superior in construction and eye-appeal, to any indoor TV antenna now on the market, in its price class—has proved to be a BIG SELLER with Distributors throughout the country!



MODEL TV-6
Packed 2 to a box.
50 to a master carton.

List Price **$4.95**

"Spico" "Jenna-Master"

MODEL TV93B

U.S. Patent No. 156379

An engineering job that gives peak mechanical performance and outstanding reception. Tenna-Master is superbly designed to blend with and add to the beauty of the most tastefully furnished home.

Exclusive patented feature of LOCK-NOTCH VERTICAL ORIENTATION assures permanent non-skid automatic positioning, eliminates tightening or loosening of dipole elements.

Tenna-Master is one of the most popular models in the Spico line—many thousands sold to date!

MODEL TV93B

$6.95
List Price

Engineer-approved and sold by nationally known TV set manufacturers. Distributed thru jobbers only.

SPIRLING PRODUCTS CO., INC., New York 13, N. Y.

"ONE OF AMERICA'S LEADING MANUFACTURERS OF TV & FM INDOOR ANTENNAS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921

RUTHERFORD AVENUE ON ROUTE 35

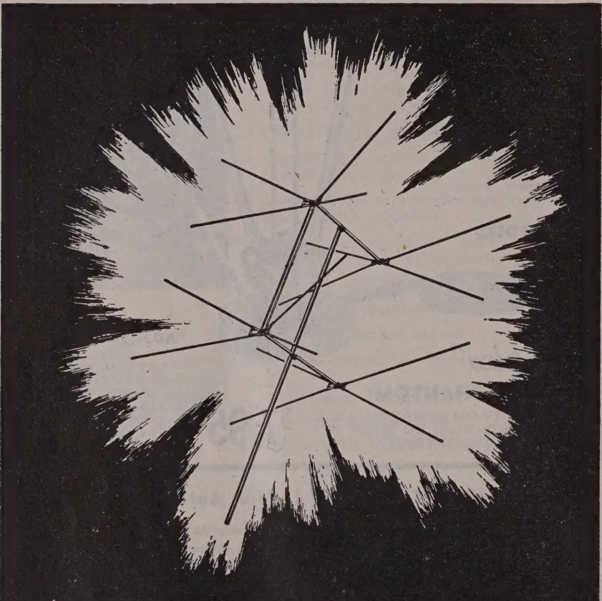
telrex INC.

ANTENNA
• DEVELOPMENT •
• MANUFACTURING •

ASBURY PARK 1, NEW JERSEY

"CONICAL-V-BEAMS"

The only Antenna that can produce FULL TONE, FULL VIDEO and Highest Signal to Noise ratio on all Frequencies!



America's Standard of Comparison

No Other Antenna Type Can Have All These Features.

- ★ All Station Reception
- ★ FULL audio and Video Response
- ★ Maximum signal to noise ratio
- ★ Better than 12 db Front to Back Ratio on all Frequencies
- ★ The only antenna that will produce gain and bandwidth on the new UHF
- ★ A Model for every reception area — primary to extreme fringe.
- ★ "Conical-V-Beams" are produced under Re-issue Patent No. 23,346

Other U.S. and Foreign patents pending

METRO SERIES

M2X-TV — Single Bay, uni-directional "Conical-V-Beam" with reflectors.

Shipped 3/carton
Shipping wgt. ....10 lbs.
List Price $10.33

M4X-TV — 2 bay, stacked uni-directional "Conical-V-Beam" with reflectors.

Shipped 3/carton
Shipping wgt. ....19 lbs.
List Price $22.17

DE LUXE SERIES

2X-TV — Single bay, uni-directional "Conical-V-Beam" with reflectors. Finest quality materials — fine performer.

Shipped 1/carton
Shipping wgt. ....5 lbs.
List Price $14.00

4X-TV — 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. America's outstanding TV antenna.

Shipped 1/carton
Shipping wgt. ....9 lbs.
List Price $28.00

4X-TVS — (4X-TV ½ wave) 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. ½ wave transmission line bars, full wave spacing at Channel 6, 30% more gain performance on Channels 2 to 6.

Shipped 1/carton
Shipping wgt. ....9 lbs.
List Price $32.00

UNIVERSAL SERIES

U2X-TV — Single bay, uni-directional "Conical-V-Beam" with reflectors; modified for selective channel emphasis.

Shipped 3/carton
Shipping wgt. ....12 lbs.
List Price $10.33

U4X-TV — 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors; modified for selective channel emphasis.

Shipped 3/carton
Shipping wgt. ....24 lbs.
List Price $22.17

MONARCH SERIES

K2X-TV — Single bay, uni-directional "Conical-V-Beam" with reflectors; modified for Selective Channel Emphasis. The Best that money can buy!

Shipped 1/carton
Shipping wgt. ....5 lbs.
List Price $14.00

K4X-TV — 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors; modified for Selective Channel Emphasis. The Best that money can buy!

Shipped 1/carton
Shipping wgt. ....9 lbs.
List Price $28.00

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921

RUTHERFORD AVENUE ON ROUTE 35

telrex INC.

ANTENNA
• DEVELOPMENT •
• MANUFACTURING •

ASBURY PARK 1, NEW JERSEY

"CONICAL-V-BEAMS"

The only Antenna that can produce FULL TONE, FULL VIDEO and Highest Signal to Noise ratio on all Frequencies!

TECHNICAL NOTES

Telrex "Conical-V-Beams" technically and practically assume characteristics similar to solid cones, giving broad band and high gain response with full audio and video band pass over the entire television frequency range. *Therefore, "Conical-V-Beams" outperform any other antenna.*

* * *

Nominal center impedance is 150 ohms and non-varying due to conical configuration. The dipoles are tilted forward presenting a "V" to the incoming wave, forcing the forward lobe to remain in line irrespective of channel being received. Thus the Telrex dipole is an effective ½ wave element on channel 2, increasing to ⅝ wavelength on channel 3, and increasing in effective "V" beam action to channel 13 where it becomes a full wavelength on each leg with the maximum receiving lobe being in line. The reflectors are effective at all frequencies with a front to back ratio of better than 12 DB on all frequencies. *The "Conical-V-Beam" is the only antenna which can produce in this manner.*

* * *

Unlike other methods of covering both bands, Telrex antennas do not introduce phase shift or favor one band versus the other and only one transmission line is used. Where stations are displaced beyond the normal acceptance lobe of a single "Conical-V-Beam" or array, the DO-X (Duo Orienting) array is recommended. This permits separate orientation of two groups of stations at any angle. Only one transmission line is needed due to the unique Telrex coupling line and phasing loop.

* * *

When the stations are within a 5 to 15 degree sector, the Telrex antenna used for maximum efficiency at low frequencies becomes a much more efficient antenna on the high frequencies than a separate cut-to-frequency stacked antenna.

* * *

The 150 ohm non-varying center impedance makes it possible to use any of the commercially available transmission lines from 75 ohm coaxial, to 300 ohm ribbon, with a standing wave ratio never exceeding 1.6 to 1 on any channel. Standing waves cause excessive phase-shift, blurred pictures, multiple images and decreased sensitivity.

* * *

"Conical-V-Beams" will outperform any cut-to frequency antennas.

* * *

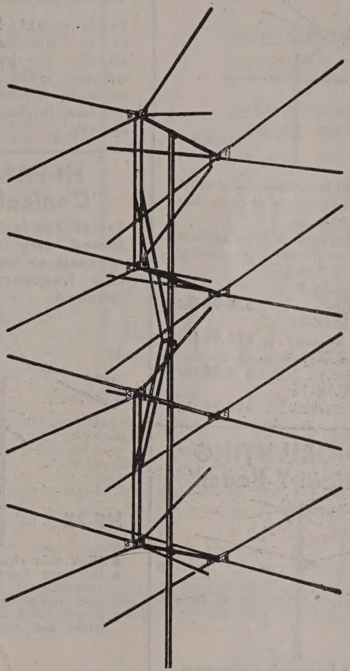
You are invited to consult our engineering staff on any unusual antenna problems.

* * *

"Conical-V-Beams" are produced under Re-issue Patent No. 23,346.

CONQUEROR OF VAST DISTANCES!

UNEQUALED FOR LONG RANGE RECEPTION



THE ULTIMATE in arrays for Long Distance Reception! The Telrex 8X-TV or K8X-TV will outperform ANY antenna or combination of cut to frequency antennas. Unequalled for long distance reception up to 200 miles.

If the 8X does not provide a useable signal, TV reception is impractical or impossible.

8X-TV DE LUXE	**K8X-TV MONARCH**
Standard, uni-directional, 4-bay "Conical-V-Beam".	Uni-directional, 4-bay, "Conical-V-Beam" modified for selective channel emphasis.

Shipped 1/carton
Shipping wgt. .... 18 lbs.
List Price **$59.00**

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921
RUTHERFORD AVENUE ON ROUTE 35

telrex INC.

ANTENNA
• DEVELOPMENT •
• MANUFACTURING •
ASBURY PARK 1, NEW JERSEY

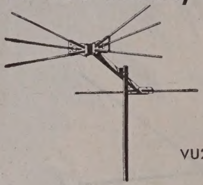
"CONICAL-V-BEAMS"

The only Antenna that can produce FULL TONE, FULL VIDEO and Highest Signal to Noise ratio on all Frequencies!

VANGUARD SERIES

"Conical-V-Beams"

The New Economy Line



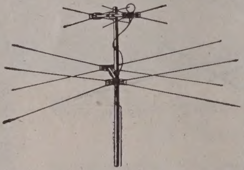
VU2X-8

- Designed for results and profits!
- High performance at extra low cost.
- The Vanguard will outperform and outsell any comparably priced TV Antenna.

Model VM2X-6 (single bay)	**$ 8.04** List
Model VM4X-12 (2 bay stacked)	**$16.98** List
Model VU2X-8 (single bay)	**$ 8.80** List
Model VU4X-16 (2 bay stacked)	**$18.70** List

DUO-ORIENTING

"Conical-V-Beam"



Designed to receive any combination of stations displaced by any angle:

FOR PRIMARY AREAS

- Duo-orienting, uni-directional "Conical-V-Beams" with reflectors
- Top bay for Hi frequency—lower bay for Hi-Low frequency reception
- Complete with phasing loop, coupling line and solid hi-strength aluminum elements
- An all-station duo-orienting array, superior to any Hi-lo type

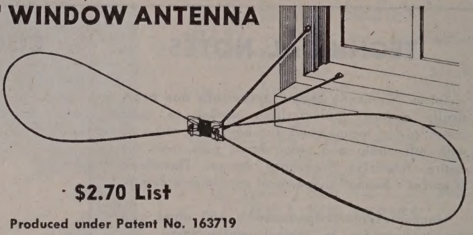
Shipped	1/carton
Shipping wgt.	6 lbs.
List Price	**$15.27**

"Conical-V-Beams" are produced under re-issue Patent No. 23,346.

"SUPEREX" WINDOW ANTENNA

Designed for Primary Signal Areas

Easily mounted on any window sill. Can also be mounted indoors on walls, behind furniture, in closets, etc.



$2.70 List

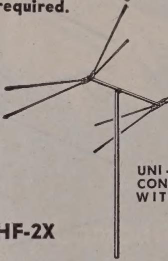
Produced under Patent No. 163719

- Ideal where roof antennas are prohibited.
- Highly concentrated reception lobes make it easier to minimize ghosts due to reflections.
- Effective, inexpensive, inconspicuous.
- Top performance at low cost in high signal areas.

HI-FREQUENCY

"Conical-V-Beams"

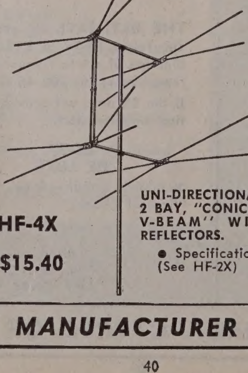
Engineered specifically for areas served only by Hi-Frequency channels or where separate Hi-Low frequency orientation is required.



UNI-DIRECTIONAL CONICAL-V-BEAM WITH REFLECTOR.

HF-2X **$6.95 List**

- High gain channels 7-13.
- Optimum front to back ratio for reflection of unwanted signals and maximum signal to noise ratio.
- Broad inline lobe simplifies orientation and minimizes signal flutter.



UNI-DIRECTIONAL, 2 BAY, "CONICAL-V-BEAM" WITH REFLECTORS.

- Specification (See HF-2X)

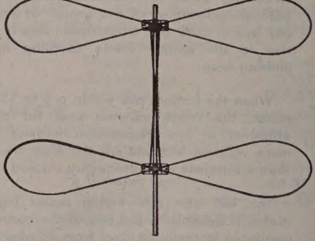
HF-4X

$15.40

CLOVER-V-BEAM

Transposed-stacked, bi-directional array produces high gain on all frequencies.

Engineered to give outstanding reception in primary and secondary areas — at LOW COST.



Patents Pending

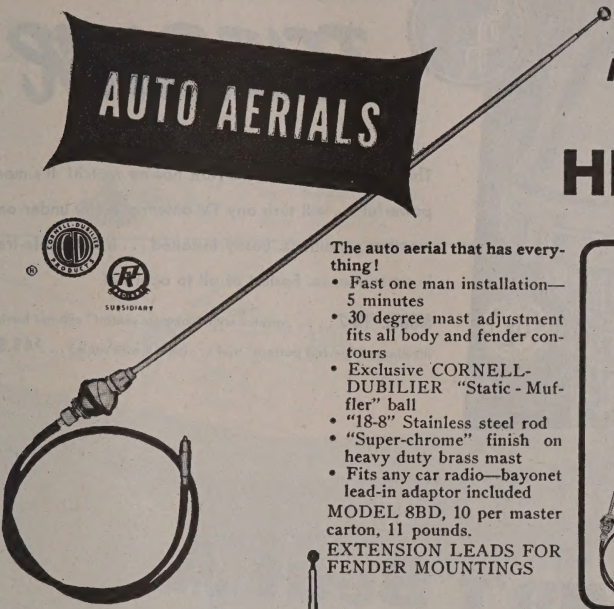
2-BDS **$7.64 List**

A NEW THEORY IN PRACTICAL FORM PROVIDING A COMPACT *DIPOLE ARRANGEMENT* for superior results indoors and out. Preassembled to its own integral mast for speedy assembly. Weight: 1½ lbs.

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTORS



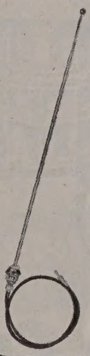
Model 8BD
List $4.95
HI•BALL

The auto aerial that has everything!

- Fast one man installation—5 minutes
- 30 degree mast adjustment fits all body and fender contours
- Exclusive CORNELL-DUBILIER "Static-Muffler" ball
- "18-8" Stainless steel rod
- "Super-chrome" finish on heavy duty brass mast
- Fits any car radio—bayonet lead-in adaptor included

MODEL 8BD, 10 per master carton, 11 pounds.

EXTENSION LEADS FOR FENDER MOUNTINGS



DELUXE MODEL 4BX3

Three section design extends to 59½" **List $3.95**

SUPERIOR STANDARD MODEL 4BX2

Two section design extends to 43".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required **List $2.95**

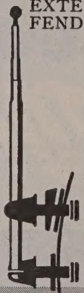
TWO INSULATOR SIDE MOUNT TYPES

Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds — **List $3.25**

MODEL 3S. 63" extended, 3 sections. 10 per master cartdn, 13¼ pounds — **List $4.25**

MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds — **List $5.25**

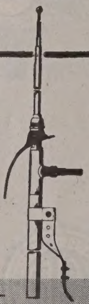


DISAPPEARING MOUNT

A handsome addition to any car . . . collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one ⅞" mounting hole required.

MODEL 3D, 60" extended. 3 sections, 2 pounds each — **List $6.75**

10 per master carton weighing 19 pounds.

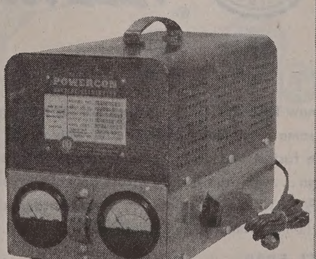


BATTERY ELIMINATOR "POWERCON" BATTERY CHARGER

Here is the ideal, compact, efficient unit for testing or demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

Model No.	Output	Watts	Size	Wt. Lbs.
110BA6	6V DC @ 10A	60	7⅝ x 12¼ x 8½	16
110BA12	6V DC @ 20A or 12V DC @ 10A	120	7⅝ x 13 x 8½	24½

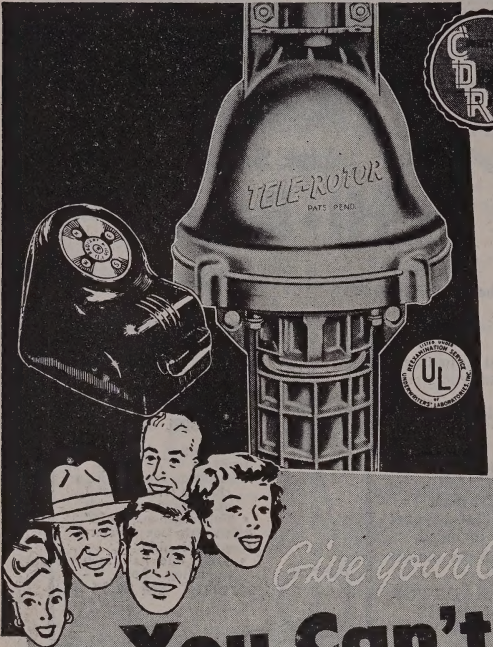
Model 110BA6 — List Price $63.20 **Model 110BA12 — List Price $98.35**



PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

CORNELL DUBILIER

CAPACITORS — CONVERTORS — VIBRATORS — AUTO, TV & FM ANTENNAS



TELE-ROTOR

This heavy-duty TELE-ROTOR has no match! It's more powerful . . . will turn any TV antenna array under any weather conditions. Easily installed . . . it is trouble-free in performance. Easiest of all to operate!

MODEL TR-2 . . . . . rotator with "compass control" cabinet having illuminated "perfect pattern" dial . . . (uses 8 wire cable) . . . $49.95

Give your Customers the Best

You Can't Beat A *TELE-ROTOR*

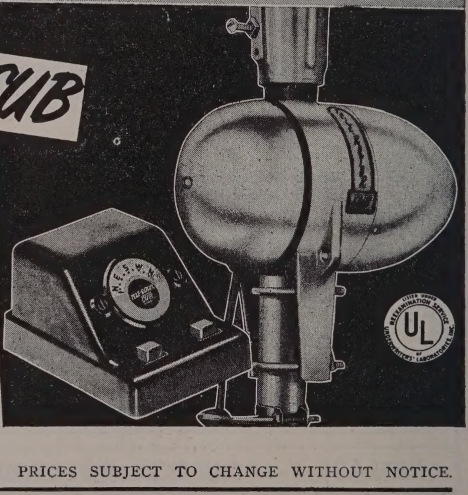
TELE-ROTOR® *CUB*

SUBSIDIARY

The new TELE-ROTOR "CUB" is ideal for average installations. The same husky motor as the Heavy-Duty model . . . the" CUB" is the fastest and easiest of all rotators to install. All-In-Line design . . . with true in-line thrust between antenna and mast. The ¾" STEEL shaft rotates on a case hardened steel ball . . . with in-line reamed oilless bearings.

MODEL 502A . . . . . . Rotator with plastic control cabinet having indicating meter for "hairline" tuning. (Uses 5 wire cable) . . . $44.95

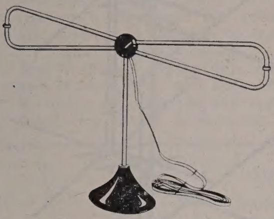
MODEL 501A . . . . rotator with control cabinet having end-of-rotation signal. Light flashes every 7.2° showing antenna is turning. (Uses 5 wire cable) $34.95



PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

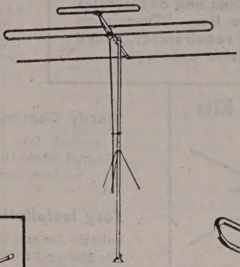
CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTORS



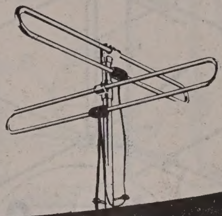
THE "LOADED X" INDOOR

The highest rated indoor antenna. This unusual CORNELL-DUBILIER design delivers peak performance comparing favorably with many outdoor installations.



"STRATE-LINE" ANTENNAS

Another feature in the complete CORNELL-DUBILIER line, this STRATE-LINE array is designed for both high and low band uni-directional reception.

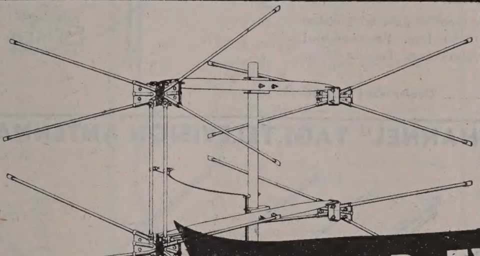


FM ANTENNAS

High quality FM antennas for peak performance under all conditions. Well designed . . . sturdy . . . easy to install.

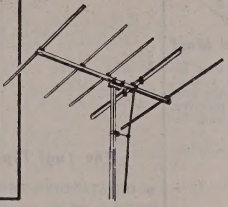
C-D TV ANTENNAS

SUPERIOR DESIGN • QUICKLY INSTALLED • TROUBLE-FREE PERFORMANCE



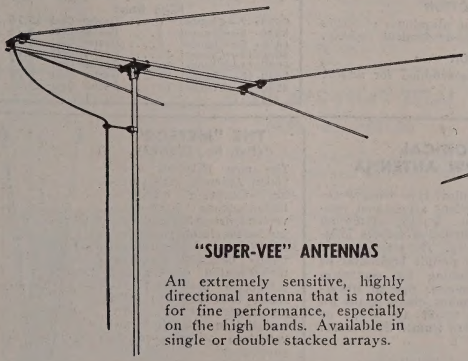
"LAZY X" CONICALS

A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna.



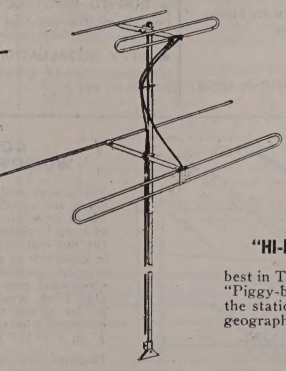
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.



"SUPER-VEE" ANTENNAS

An extremely sensitive, highly directional antenna that is noted for fine performance, especially on the high bands. Available in single or double stacked arrays.



"HI-lo" ANTENNAS

best in TV reception, where "Piggy-back" style for the the stations are in different geographical locations.

SUBSIDIARY

SINCE 1921

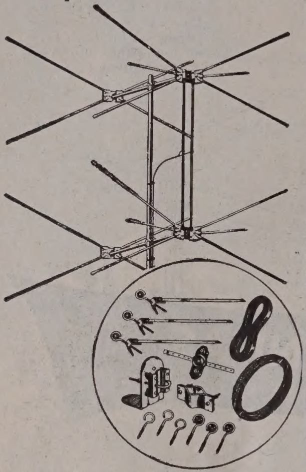
insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

Television Antennas . . . Accessories

Shown on this page are but a few of the wide variety of television antennas and accessories that comprise the Insuline line. "There's an Insuline Antenna for every requirement." Send for latest complete television catalogue.

Complete Installation Kits



Includes Stacked Antenna and Mast

Packaged television installation kits that include stacked antenna of the latest conical type, Mast and Lead-in Wire for fringe area reception. For every type or make receiver. Suitable for a wide variety of television installation problems.

Contains the following units for a complete installation:

- Stacked Conical Antenna
- 10 ft. Steel Mast (1¼″ d.)
- Tri-position antenna base mount
- 50 ft. 300 ohm lead-in wire
- 100 ft. guy wire
- 3 Insulated Stand-offs
- 3 Insulated Stand-offs with Strap
- 3 Guy Wire Screw Eyes
- Guy Wire Clamp
- Lightning Arrester

No. 6326..........................Dealer Cost $26.21

"STACKED BI-CON"

Engineered to build up weak signals for superb all-channel reception . . . even in fringe areas. Offers stable impedance over entire range for better, brighter pictures. Has DUAL REFLECTORS FOR PEAK PERFORMANCE.

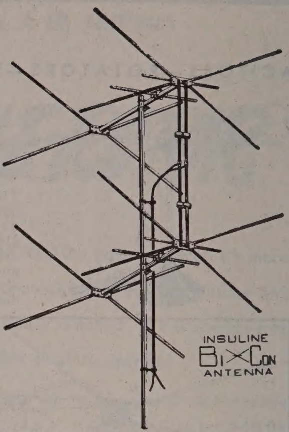
Sturdy Construction

A conical type antenna that features all-metal fabrication . . . weather-resistant heavy wall non-corrosive aluminum dipoles.

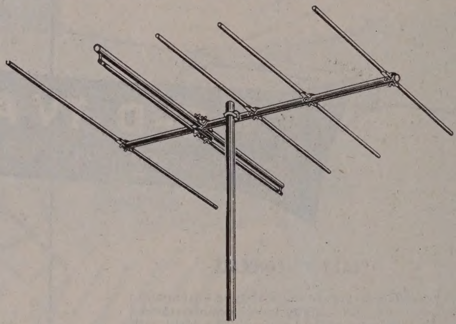
Easy Installation

Suitable for any receiver . . . with either 72, 150 or 300 ohm line. Pre-assembled units for quick installing. Easy-to-follow instructions.

No. 6481....................Dealer Cost $21.66



The "UNI-CHANNEL" YAGI TELEVISION ANTENNA



The Yagi Type antenna for better pictures in weak signal areas.

● OUTSTANDING PERFORMANCE

Precision cut to exact length of individual channel. This five-element unit offers excellent forward gain . . . high front to back ratio . . . minimum interference . . . desired match for 300 ohm line.

● RUGGED CONSTRUCTION

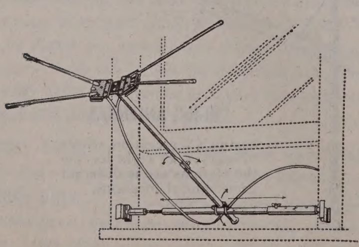
Durable weather-resistant aluminum elements . . . excellent functional-mechanical rigidity.

● JIFFY INSTALLATION

Completely factory pre-assembled for almost instant set-up.

CATALOG DESCRIPTION

No		
Low Band		
6620-2	Channel 2	Dealer Cost $10.55
6620-3	Channel 3	Dealer Cost 10.55
6620-4	Channel 4	Dealer Cost 10.55
6620-5	Channel 5	Dealer Cost 10.55
6620-6	Channel 6	Dealer Cost 10.55
High Band		
6630- 7	Channel 7	Dealer Cost $5.75
6630- 8	Channel 8	Dealer Cost 5.75
6630- 9	Channel 9	Dealer Cost 5.75
6630-10	Channel 10	Dealer Cost 5.75
6630-11	Channel 11	Dealer Cost 5.75
6630-12	Channel 12	Dealer Cost 5.75
6630-13	Channel 13	Dealer Cost 5.75



CONICAL WINDOW ANTENNA

The newest conical type window antenna for excellent all-channel television reception. Durable aluminum and steel construction assures long-life and stability. The steel support is designed to permit horizontal or vertical positioning for maximum directional response. Special adjustable 1″ d. window clamp spans 30 to 50 inches to fit any wood or casement window frame. Steel mast: 1″ d. x 21½″ l.

Features ease of installation.

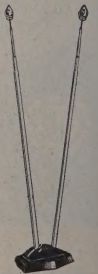
No. 6451............Dealer Cost $9.16

THE "METEOR"
(Pat. No. 158679)

The new INDOOR Television Antenna with amazing reception qualities. Instantaneous horizontal-vertical orienting and tuning for maximum reception. All-Channel selection. Beautifully designed gleaming nickel-plated dipoles and attractive molded black-sheen bakelite base with non-scratch cushion. Jiffy installation. Also improves reception when used to supplement existing outdoor antennas.

With 300-ohm Lead

No. 6470....Dlr. Cost $3.75

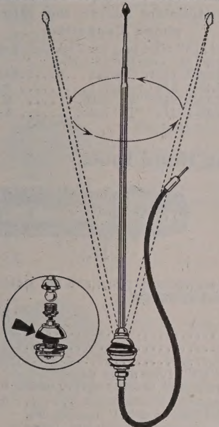


SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

Insuline's Latest Improved Auto Radio Antennas

Pioneers in the auto radio antenna field, Insuline's engineers are constantly improving and adding to its line to maintain leadership . . . quality performance . . . lasting service. Shown hereon are but a few of the many types and models. For the complete listing and description of antennas and accessories, send for Insuline's latest auto radio antenna catalog.



THE "VARI-MOUNT"

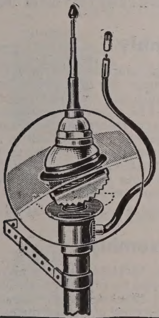
The latest fender and cowl mount antenna that featurs a specially designed ball pivot that affords a variety of angle mounts.

Designed especially for the newest type streamlined cars. Includes unique bakelite insulator unit for greater "shorting" protection.

Heavily plated admiralty brass tubing—36″ HI-Q Lo-Loss cable . . . polyethyle insulation with vinylite jacket. Easily installed. Equipped with both Delco and Motorola fittings.

No. 4588..............**Dlr. Cost $3.30**
3 Section—Extends to 62″

No. 4589..............**Dlr. Cost $2.67**
2 Section—Extends to 49″



Disappearing ANTENNAS

For Fender and Cowl Mount Suitable for all cars, old and new

56″ of exposed antenna collapses to 6½″. Does not obstruct vision.

Features unique ball pivot base permitting easy angle adjustment to match contours of latest type cars.

Includes new type lead-in connectors for firmer contact; casted fittings for rigid construction; improved insulation for greater protection against signal grounding . . . 36″ HI-Q Lo-Loss lead.

No. 4571B......................**Dealer Cost $4.50**
3 Section—Extends to 56″

No. 4584......................**Dealer Cost $5.41**
4 Section—Extends to 76″

Auto Radio
ANTENNAS
Simple to Install on ALL cars old or new!
Rust Proof • Rattle Proof • Dust Proof
Peak Reception

DISPLAYS THAT SELL!

FREE, ALL-METAL

Triple-use, sturdy, colorful unit that serves as counter, window, or floor display.

Unique, attention-compelling design . . . made for long and steady service (14″x16″). Pay only for the following fully mounted antennas.

No.

4568, Side Cowl
4571, Concealed
4588, "Pivot Topper"
4545, Buick Rod
4546, Ford Rod
4541, "Rocker"

Cat. No. 4499
Dealer Cost $17.94

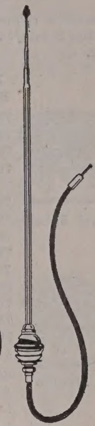
"Solo-Mount"

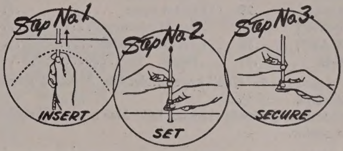
(Patent Pending)

The "One-Man Installation" Fender-Cowl Mt. Antenna

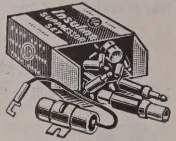
Features time-saving labor-saving "jiffy" installation. Three quick steps—and it's mounted. For all types of cars. 36″ HI-Q Lo-Loss cable.

No. 4583..........**Dealer Cost $3.57**
3 Section—Extends to 60″





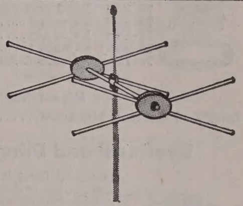
UNIVERSAL WIRE WOUND SUPPRESSOR SET



Complete universal kit suitable for ALL types of cars. Includes wire wound suppressors for distributor and spark plug; dome light or ammeter condenser; universal type generator condenser; front wheel static pickup suppressors; copper braid for grounding to complete noise-free installation. Full instructions.

No.	Dealer Cost
SK-6—All 6 Cyl. Cars	**$3.67 Kit**
SK-8—All 8 Cyl. Cars	**4.01 Kit**

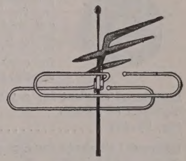
THE "TELE-CON"



The "booster" that simulates a television antenna. Provides 50 inches of added antenna to increase reception range. Gleaming chrome-plated brass with red end ornaments that glow. Simple to install.

No. 4622........**Dlr. Cost $1.50**

THE "PLASTI-TOP"



A streamlined "booster" topped with decorative ornament of sparkling red fluorescent plastic with special edge-lit effect. Gleaming, chrome-plated brass.

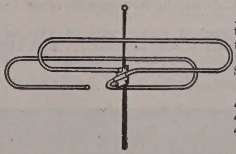
No.		Dealer Cost
4615	3¾″ x 12″	$1.43
4616	2¼″ x 8¼″	.92
4617	2¼″ x 8¼″ (Aluminum)	.58

"PLASTI-TOP" ORNAMENT

Sparkling fluorescent plastic ornament separately. Fits any "booster."

No. 4620......................................**Dealer Cost $ .25**

THE "VIDI-TENNA"

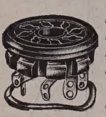


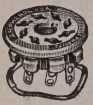
Adds 52 additional inches of antenna area for sensitive, long-range reception. Fits any auto antenna. Highly polished brass construction. Simply installed in a jiffy.

No.		Dealer Cost
4610	3¾″ x 12″	$1.25
4612	2¼″ x 8¼″	.73
4613	2¼″ x 8¼″ (Aluminum)	.45

Retainer Ring "S" Type Sockets

Extremely compact sockets, furnished complete with retainer rings. Mount in 1-11/64" keyed hole. Use Amphenol No. 25-LD-1 Punch and Die.


Black Bakelite


Steatite

Black Bakelite	List	Contacts	Steatite	List
78-S4	$ .13	4 Contacts	49-SS4	$ .47
78-S5	.13	5 Contacts	49-SS5	.47
78-S6	.13	6 Contacts	49-SS6	.47
78-S7C*	.17	7 Comb. for 7L, 7S	....	....
78-S7L*	.13	7 Large	49-SS7L*	.59
78-S7S	.13	7 Small	49-SS7S	.47
78-S8	.17	8 Octal	49-SS8	.47
78-S8L	.21	8 Loktal	....	....
78-S9	.21	9 Octal Style	....	....
78-S11	.29	11 Octal Style	....	....
78-A7P†	.30	7 for Miniatures	.....	....
78-A9P†	.45	9 for Miniatures	.....	....
78-B	.07	Blank	....	....

* Mounts in 1-21/64" keyed hole. Use 25-LD-2 Punch and Die.

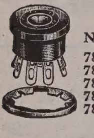
† Mounts in standard socket hole. Has miniature socket in center.

Magnal Socket Has 1-1/16" pin circle for cathode ray and television tubes. Mounts in 1-5/8" hole. Steatite.

No. 49-SS11L 11 Contact, Magnal ....**List $1.21**

Miniature Retainer Ring Type Sockets

Mount in 5/8" round or "D" shaped hole with No. 2-9 retainer rings.



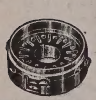
Black Bakelite

Number	Description	List
78-S3S	For 3 prong min. photo cells	$ .17
78-S4S	4 Contact	.17
78-S5S	5 Contact	.21
78-S6S	6 Contact	.21
78-7P	7 Contact. Miniature	.21

Mica-Filled Bakelite

78-7PT 7 Contact. Miniature .... .28

Duodecal and Diheptal Tube Sockets



Designed for television viewing tubes, oscilloscopes and other cathode-ray tubes. Provides means of grouping leads within the socket housing and bringing them out radially. Grouping of the wires in the enclosed raceway eliminates flexing at solder terminals, minimizing breakage. Socket cap and body molded from high quality electrical bakelite. Designed for easy assembly and dis-assembly . . . requires no special tools.

Duodecal Socket for a maximum of 12 equally spaced pins on a circle diameter of 1.063".

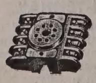
No. 59-402...**List $1.56**

Diheptal Sockets for a maximum of 14 equally spaced pins on a circle diameter of 1.750".

No. 59-415 Small—for 2.050" D. Tube base..............**List $1.67**

No. 59-417 Medium—for 2.250" D. Tube base........... **1.67**

Barrier Type Industrial Octal Socket



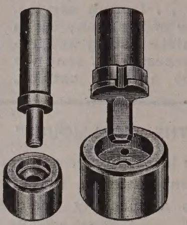
Molded in one piece of Melamine. Contacts are removable. R.M.A. numbered reversible screw type terminals.

No. 146-103 Standard Socket without Tie Point Inserts—Top Mounted....**List $1.58**

No. 146-104 Socket with Four Molded-in Threaded Inserts for Tie Points—Top Mounted................**List $2.16**

Laboratory Punch and Dies

For punching mounting holes for Amphenol connectors, plugs and receptacles. Made of tool steel, properly hardened.



For Amphenol Retainer Ring Mounting Tube Sockets, Radio Plugs, etc.

Drill 1/2" hole for pilot punch.

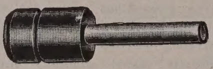
No.	Size of Hole	List
25-LD-1	1-11/64" keyed	$12.00
25-LD-2	1-21/64" keyed	12.00

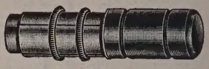
For Miniature Sockets and Microphone Connectors

Drill 3/8" pilot hole for 25-LD-3, 5 and 6 and 1/4" hole for 25-LD-4.

No.	Size of Hole	List
25-LD-3	13/16" round	$3.60
25-LD-4	5/8" round	3.60
25-LD-5	5/8" "D" hole	6.00
25-LD-6	1/2" "D" hole	6.00

Retainer Ring Hand Tools

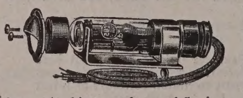

51-5


51-1

Convenient for assembling miniature sockets, plugs and tip jacks to panels or chassis. Designed for hand operation.

Number	Description	List
51-5	For No. 2-9 Rings	$1.20
51-6	For No. 2-11 Rings	1.20
51-7	For No. 2-10 Rings	1.20
51-1	For "S" type sockets and "CP" type plugs except 7C and 7L sizes. Required where socket spacing is very close.	6.66
51-2	For "S" type sockets 7-large and 7-combination	6.66
51-3	For "SS" steatite sockets and "60" and "61" receptacles. Of two-piece construction . . . somewhat easier but slower to use than 51-1 (above) for "S" sockets and "CP" plugs	6.66

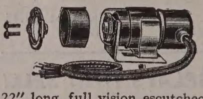
Magic Eye Assembly



For easily adapting or replacing a 6 prong magic eye tube in any radio having automatic volume control. Also for FM receivers, test instruments, signal tracers, and as volume level and modulation indicators. Includes 1 megohm target plate resistor wired into socket and 5 wire, color coded cable 22" long. Mounting bracket is slotted for tube adjustment. Complete as illustrated, with escutcheon and hardware for assembly. Tube not included.

No. 58-MEA6 Complete Magic Eye Assembly...........**List $1.51**

Octal Magic Eye Assembly

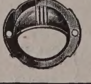


Similar to No. 58-MEA6 shown above, but for octal type magic eye tubes. New universal short bracket for the smaller tube sizes permits use of any of the octal magic eye tubes including the dual pattern and the new multi-pattern types. Complete with 8 wire, color coded cable, 22" long, full vision escutcheon and hardware for assembly. Tube not included.

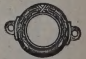
No. 58-MEA8 Complete Octal Magic Eye Assembly......**List $1.51**

Magic Eye Escutcheons

Hood type is of sturdy plastic with beautiful antique bronze finish. Full vision type for octal dual-pattern and new octal multi-pattern types is brass with antique bronze finish.



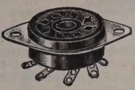
Number	Description	List
10-102	Hood Type. For 6 prong tubes.	$ .15
10-2	Full Vision Type. For octal tubes	.36



COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS. FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

AMPHENOL

MIP Molded-In-Plate Sockets

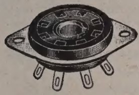


Molded of high dielectric black Bakelite, sturdy, steel mounting plate molded directly into the solid body, cannot come loose or vibrate. Contacts grip tube prongs firmly and retain their resiliency indefinitely. Mount in 1-5/32″ round hole. Two 5/32″ screw holes on 1-1/2″ centers.

Number	Contacts	List	Number	Contacts	List
77-MIP-4	4 Contacts	$ .12	77-MIP-8	8, Octal	$ .14
77-MIP-5	5 Contacts	.12	77-MIP-9	9, Octal style	.18
77-MIP-6	6 Contacts	.12	77-MIP-11	11,Octal style	.24
77-MIP-7L*	7 Large	.14	77-MIP-12	12,Octal style	.30
77-MIP-7S	7 Small	.12			

* 77-MIP-7L mounts in 1-9/32″ D. round hole.

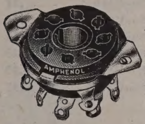
Compact MIP Sockets



Same as MIP series above but smaller in diameter. Mount in 1-1/8″ round hole. Two 5/32″ diameter mounting holes on 1-5/16″ centers. Black Bakelite dielectric.

Number	Contacts	List
88-8	8 Contacts	$ .14
88-8X	8, Loktal	.21

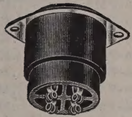
Saddle Type Octal Sockets



An economical socket for below chassis mounting. 74-8 mounts in a 1⅛″ hole with two 5/32″ diameter mounting holes on 1½″ centers. 168-150 mounts in 1″ hole with two .140″ diameter mounting holes on 1 5/16″ centers. Both with 4 grounding lugs, tuning fork contacts, black bakelite.

No. 74-8	List $ .14
No. 168-015	List .13

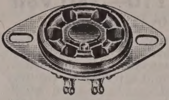
High Voltage Safety Sockets



For rectifier and other tubes with base diameter of 1.156″. Socket is set at the bottom of a deep molded Bakelite shell. Heavy steel mounting plate molded into shell has 5/32″ diam. mounting holes on 1-7/8″ centers. Socket mounts from above or below in 1-1/2″ round hole.

		List
77A-4T	4 Contacts. Mica-filled	$1.51

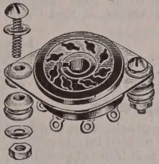
Replacement Sockets



Regular "S" sockets, assembled with No. 4 retainer ring to steel mounting plate with slotted holes to fit mounting centers from 1-1/2″ to 1-7/8″.

Black Bakelite	List	Contacts	Steatite	List
78-RS4	$ .14	4 Contacts	49-RSS4	$ .48
78-RS5	.14	5 Contacts	49-RSS5	.48
78-RS6	.14	6 Contacts	49-RSS6	.48
78-RS7C	.18	7 Comb.	....	....
78-RS7L	.14	7 Large	49-RSS7L	.61
78-RS7S	.14	7 Small	49-RSS7S	.48
78-RS8	.18	8 Octal	49-RSS8	.48
78-RS8L	.22	8 Loktal	....	....
78-RS9	.22	9 Octal style	....	....
78-RS11	.30	11 Octal style	....	....

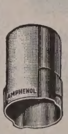
Floating Octal Sockets



Live rubber grommets fit into mounting holes to cushion this socket for vibration-free operation. Black bakelite dielectric. Mounts in 1-3/16″ round hole above or below chassis. Two 1/4″ screw holes on 1-1/2″ centers.

Number	Description	List
77-MIP-8FK	Octal. Complete with 4 rubber grommets, 2 mounting screws, nuts and washers	$ .39
11-3K	Kit for making floating connections using Amphenol MIP Sockets. 4 grommets, 2 mounting screws, nuts and washers only	.24

Tube Shield and Spring Assemblies



Number	Height	Description	List
5-401	1-3/8"	For 7 Pin Miniature Sockets	$ .14
5-402	1-3/4"	For 7 Pin Miniature Sockets	.14

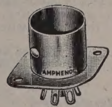
Tube Shields No. 5-401 and 5-402 are used with Sockets No. 59-367, 147-905, 147-913, 147-925, 147-955 and 147-963.

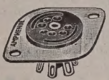
Number	Height	Description	List
5-405	1-1/2"	For Noval Sockets	.20
5-408	1-15/16"	For Noval Sockets	.24
5-409	2-3/8"	For Noval Sockets	.24

Tube Shields No. 5-405, 5-408 and 5-409 are used with Sockets No. 59-369, 59-406 and 59-407.

MINIATURE 7 AND 9 PIN SOCKETS

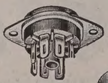
ZIP-IN, Ethylon-A



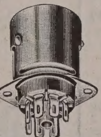


Molded of Ethylon-A with high "Q" factor. Mounting plate has .136″ diameter holes on 1-5/16″ centers. Round chassis holes are 27/32″ for 7 pin and 15/16″ for 9 pin.

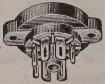
Number	Description	List
59-357	7 Pin. Without tube shield base	$ .21
59-367	7 Pin. With tube shield base	.27
59-359	9 Pin. Without tube shield base	.51
59-369	9 Pin. With tube shield base	.61



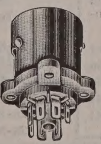
Above—Bottom Mounted



Right—Top Mounted with Tube Shield Base



Above—Rubber Mounted



Right—Rubber Mounted with Tube Shield Base

Bakelite and Steatite Sockets

Used for television, FM, auto radios, portables, etc. 147 Series mount in 5/8″ chassis hole; mounting centers 7/8″; screw holes 1/8″. 59 Series mount in 3/4″ chassis hole; mounting centers 1-1/8″; rivet holes .095″.

Number	Contacts	Dielectric	List
Bottom Mounting—No Tube Shield Base			
147-500	7	Black Bakelite	$ .24
147-501	7	Steatite	.51
59-409	9	Black Bakelite	.39
59-410	9	Mica-Filled Bakelite	.40
Top Mounting—With Tube Shield Base			
147-905	7	Black Bakelite	.39
147-913	7	Mica-Filled Bakelite	.40
147-925	7	Steatite	.63
59-406	9	Black Bakelite	.56
59-407	9	Mica-Filled Bakelite	.57
Rubber Mounted—No Tube Shield Base			
147-502	7	Black Bakelite	.25
Rubber Mounted—With Tube Shield Base			
147-955	7	Black Bakelite	.50
147-963	7	Mica-Filled Bakelite	.51

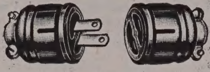
AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS

AMPHENOL **AMERICAN PHENOLIC CORPORATION**
1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

Shielded Cable Connectors, 110—250 Volt

End Cable Outlet—For cables up to ½" diameter



Fully shielded cable terminals with black Bakelite connector units encased in a tight cap that fits securely and is easily removed. Available with cable clamp that relieves soldered connections of strain, or with rubber grommets for protection against abrasion.

With Cable Clamp	List	Description	With Grommet	List
60-F11	$ .66	3 Pole Receptacle	60-F4	$ .60
60-M11	.66	3 Pole Polarized Plug	60-M4	.60
61-F11	.54	2 Pole Universal Receptacle	61-F4	.48
61-M11	.54	2 Pole Standard Plug	61-M4	.48
61-MP11	.54	2 Pole Polarized Plug	61-MP4	.48

Flush Motor Plug, 110–250 Volt

Neat, compact plug or receptacle set in type 61-61 steel shell for below surface mounting. Room for insertion of Amphenol End Cable Outlet Plugs.

Number	Description	List
61-F10	2 Pole Universal Receptacle	$ .48
61-M10	2 Pole Standard Plug	.48
61-MP10	2 Pole Polarized Plug	.48

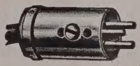
Molded-In-Plate Receptacle

Same as 61-F Receptacle with standard steel mounting plate molded into the Bakelite body. Mounts in 1-3/16″ chassis hole; two 5/32″ screw holes on 1-1/2″ centers.

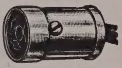
No. 61-MIP-61F 2 Pole Universal Receptacle......List..... $ .30

Miniature Cable Connectors

Short



Long



Flared

For shielded or unshielded cables having up to 6 conductors. Black Bakelite elements are housed in cadmium plated brass shells and are held in place by side set screws. Polarized contact spacing makes incorrect insertions impossible. Accommodates cable up to 1/4″ diameter.

Short Shell—13/16" Long

Male	List	Description	Female	List
91-MPM3S	$ .36	3 Contact	91-MPF3S	$ .36
91-MPM4S	.40	4 Contact	91-MPF4S	.40

Long Shell—1-3/16" Long

Also use with shielded chassis units shown below.

Male	List	Description	Female	List
91-MPM3L	$ .36	3 Contact	91-MPF3L	$ .36
91-MPM4L	.40	4 Contact	91-MPF4L	.40
91-MPM5L	.45			
91-MPM6L	.45			

Note: Use long shell type with shielded chassis units; use either long or short shells with unshielded types such as 78-S3S and 86-CP-3S.

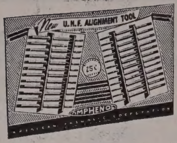
Flared Shell—1-3/16" Long

Description	Number	List
3 Contact	91-MPF3	$ .36
4 Contact	91-MPF4	.40

Shielded Chassis Units

Economical chassis receptacles for connecting shielded or unshielded cables having from 2 to 6 conductors (for 2 wire cable use 3 contact unit and leave 1 contact unwired). Black Bakelite element; steel mounting plate. Can be mounted on surface or behind chassis or panel in 7/8″ D. hole; 5/32″ screw holes on 1-1/4″ centers. Use with long shell cable connector above for a fully shielded connection.

Female	Description	List
78-PCG3	3 Contact	$ .36
78-PCG4	4 Contact	.36
78-PCG5	5 Contact	.41
78-PCG6	6 Contact	.41



Alignment Tool

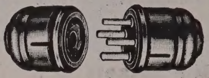
Made of Amphenol 912-A polystyrene. Has no capacity effect when aligning critical circuits. A necessary tool for anyone who must make adjustments on high frequency circuits.

No. 55 U.H.F. Alignment Tool (minimum order 24).....List $ .25

Illustrated above is the colorful sales card on which are mounted 24 Amphenol Alignment Tools.

No. 55-024 Sales Card with 24 Alignment Tools.........List $6.00

Shielded Multi-Wire Cable Connectors



Multi-wire cable connectors consist of Amphenol "S" type tube sockets and "CP" plugs. Metal cap shields connections and provides an unbreakable cover for cable termination. Cap may be removed with an ordinary screwdriver. Accommodates cable up to 7/16″ diameter. Female chassis receptacles or sockets 78-S, 78-RS and 77-MIP; male receptacles are listed below.

With Rubber Grommets

With Rubber Grommet Type Plug Cap 3-13.

Female	List	Contacts	Male	List
78-PF4	$ .31	4 Contact	86-PM4	$ .31
78-PF5	.31	5 Contact	86-PM5	.31
78-PF6	.31	6 Contact	86-PM6	.31
78-PF7L	.31	7 Large	86-PM7L	.31
78-PF7S	.31	7 Small	86-PM7S	.31
78-PF8	.35	8 Octal	86-PM8	.35
78-PF9	.39	9 Octal Style	86-PM9	.39
78-PF11	.47	11 Octal Style	86-PM11	.47

With Cable Clamps

With positive grip Cable Clamp Type Plug Cap 3-24.

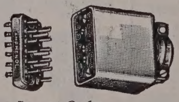
				List
78-PF4-11	$ .37	4 Contact	86-PM4-11	$ .37
78-PF5-11	.37	5 Contact	86-PM5-11	.37
78-PF6-11	.37	6 Contact	86-PM6-11	.37
78-PF7L-11	.37	7 Large	86-PM7L-11	.37
78-PF7S-11	.37	7 Small	86-PM7S-11	.37
78-PF8-11	.41	8 Octal	86-PM8-11	.41
78-PF9-11	.45	9 Octal Style	86-PM9-11	.45
78-PF11-11	.53	11 Octal Style	86-PM11-11	.53

155 Series Miniature 7-Contact Connector

For use in the interconnection of miniature electronic equipment. Over-all diameter including the retaining flange is only ⅝″. Bodies are threaded to mount without external shells. Contacts are for No. 20 wire.

No. 155-352	Male Connector	List $3.00
No. 155-353	Female Connector	List 4.50

26 Series Rack and Panel Connectors



Eyelets for added strength in mounting, male contacts molded into the inserts. Female contacts of beryllium copper. High quality mica-filled phenolic inserts. Aluminum housing has cable clamp. Voltage rating 500 volts RMS, 60 CPS at sea level.

Insert Only	List	Description	With Housing	List
26-804	$2.00	Male, 11 Contacts	26-809	$3.20
26-805	1.45	Female, 11 Contacts	26-808	2.65
26-151	2.30	Male, 15 Contacts	26-152	3.60
26-150	1.60	Female, 15 Contacts	26-153	2.90
26-806	2.75	Male, 20 Contacts	26-811	4.15
26-807	2.00	Female, 20 Contacts	26-810	3.40

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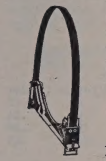
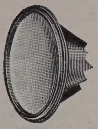
TV TUBE MOUNTING ACCESSORIES

For metal and glass tubes

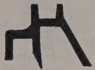


Tube mounting bracket for tube protection in shipping and vibration-free reception — live rubber cushions. Base is molded of polystyrene and holding straps are of fibre laminated phenolic. Easily attached to chassis or cabinet.

155-360 16″ Tube Mtg. Bracket List $7.30 ea.



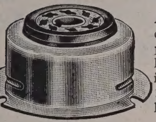
Molded Polyethylene Rim provides a superior mounting using conventional methods. Better protection for tubes and adequate insulation especially where the rim is joined. The unique overlapping provides long creepage paths. Outer groove provides for safety or masking glass.



Cross-section

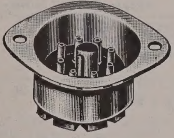
Number	Description	List
187-072	Rim for 16″ TV Tube	$3.65
187-079	Same less groove....	3.35
187-098	Rim for 19″ TV Tube	4.63
187-095	Same less groove....	4.08
187-108	Rim for 17″ Rectangular Tube, top break..	2.96
187-109	Same with side break	2.96

Receptacle Shells



ACS Shell extends "CP" or "S" type sockets or plugs 13/16″ above or below surface. 4 knockouts in sides. Mounts in 1-3/4″ hole; has 3 notched holes for No. 6 screws.

Number	Description	List
23-1S	For small "S" Sockets...........	$ .12
23-1L	For large "S" Sockets............	.12

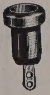


61-61 Shell. Nickel plated steel shell, lowers bottom of "CP" and "S" type plugs and sockets and 60 and 61 connectors 1-3/16″ below surface. Mounts in 1-7/16″ hole; two 5/32″ screw holes on 1-3/4″ centers.

No. 61-61 Shell only...............List $ .18

Tip Jacks

Molded of Bakelite in black or red. Mount in 3/8″ hole with retainer ring included. Use standard phone tips for 78-1P1, and 78-1 Contacts recessed 1/8″. The body may be used as a feed-thru.



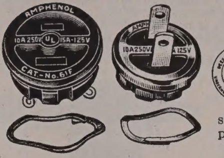
Number	Description	List
78-1S	For 3/32″ Plug.........	$ .09
78-1L	For 5/32″ Plug.........	.09
78-1M	For 1/8″ Plug..........	.09
78-1P	For .080 Phone Tip......	.09
78-1P1	High Voltage for .080 Phone Tip. Mounts in 1/2″ hole..................	.12

Single Prong Plugs

Bakelite Plugs, black or red, for use with Tip Jacks above.

Number	Description	List
71-1S	For 3/32″ Socket........	$ .06
71-1M	For 1/8″ Socket.........	.06
71-1L	For 5/32″ Socket........	.06

Inserts and Shells for Cable Plugs, Connectors and Receptacles. For Assembly into Type Required



For 110-250 Volt Plugs and Receptacles

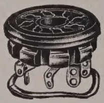
Compact in design, molded from high dielectric black Bakelite. Rated at 15 amp., 110 v. or 10 amp., 250 v. Two-pole type accepts any standard electric plug. Retainer ring type mounts in 1-11/64″ keyed hole as punched by Tools 25-LD-1 Mounting plate type requires 1-9/32″ D. chassis hole; has slotted screw holes on 1-1/2 to 1-7/8″ centers—Mounting plate type is similar to Type "RS" Replacement Sockets.

Receptacles

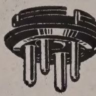
Retainer Ring Type			With Mounting Plate	
Number	List	Description	Number	List
61-F	**$ .30**	2 Pole, Universal	**61-F1**	**$ .34**
60-F	**.42**	3 Pole, Polarized	**60-F1**	**.46**

Plugs

Retainer Ring Type			With Mounting Plate	
Number	List	Description	Number	List
61-M	**$ .30**	2 Pole, Standard	**61-M1**	**$ .34**
61-MP	**.30**	2 Pole, Polarized	**61-MP1**	**.34**
60-M	**.42**	3 Pole, Polarized	**60-M1**	**.46**



"S" Socket (Listings on page 4).



"CP" Plug

For Multi-Wire Plugs and Receptacles

For quick, easy assembly to chassis or panels from 19 to 16 gage (.044 to .062″) using Amphenol retainer ring. Black Bakelite or steatite. Cadmium plated socket contacts for easy soldering; plug prongs are nickel plated brass; rotation feature for lining up contacts. Complete with retainer ring.

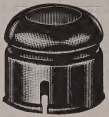
Can be assembled in any of the plug caps or receptacle shells below. For chassis mounting in 1-11/64″ keyed hole as punched by Tools 25-LD-1.

"CP" Plugs

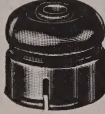
Black Bakelite	List	Contacts	Steatite	List
86-CP4	**$ .13**	4 Prong	**49-245-00**	**$ .49**
86-CP5	**.13**	5 Prong	**49-255-00**	**.49**
86-CP6	**.13**	6 Prong	**49-265-00**	**.49**
86-CP7L*	**.13**	7 Large	....	....
86-CP7S	**.13**	7 Small	....	....
86-CP8	**.17**	8 Prong, Octal	**49-285-00**	**.49**
86-CP9	**.21**	9 Prong, Octal Style	....	....
86-CP11	**.29**	11 Prong, Octal Style	....	....

* Mounts in 1-21/64″ keyed hole. Use 25-LD-2.

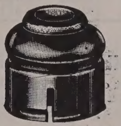
Plug Caps for Every Purpose



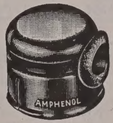
3-10



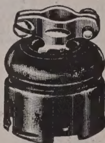
3-12



3-13



3-17

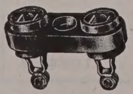


3-24

Cable terminals can be assembled with these plug caps, using retainer ring type plugs, sockets and 60 and 61 series shown above. Plug caps are designed to fit all but the 7-large and 7-combination sizes. For 7-large and 7-comb. use Plug Cap 3-13L shown below.

Number	Length	End Hole	Side Hole	Grommet	List
3-10	1″	None	None	None	**$ .18**
3-12	1″	5/16″	None	Metal	**.18**
3-13	1″	7/16″	None	Rubber	**.18**
3-17	1″	None	7/16″	Rubber	**.18**
3-24	Cap with Cable Clamp attached. Accommodates cables to 1/2″ diameter..				**.24**
79-CC4	Cable Clamp only. Same as used on Cap 3-24............................				**.12**
3-13L	Cap for large 7 Socket and Plugs, end rubber grommet 7/16″ ID...........				**.24**

Crystal Holder Socket



Molded of mica-filled Bakelite . . . for crystal holders having 2 prongs on 3/4″ centers. Easily mounted. May be used as dual tip jacks on test panels.

Number	Description	List
33-2T	For 1/8″ Prongs...$	.17
33-3T	For 5/32″ Prongs..	.17

AMPHENOL

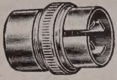
AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

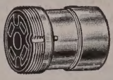
Heavy Duty Power Plugs

Male unit has four heavy brass blades; female has heavy phosphor bronze contacts. For use with current loads up to 15 amperes at 125 volts or 10 amperes at 250 volts. Molded black Bakelite unit is enclosed in tight, heavy brass shell . . . bright cadmium plated. Polarized with shell keys and keyways. Strain is taken up by concealed cable clamp. Grounding screw in body for safe wiring. Threaded locking ring keeps shells tight.

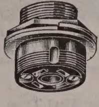
Chassis or panel receptacle mounts in 1¼" hole in any material up to ½" thick. Complete with lock washer, spacer washer and nut.



Plug



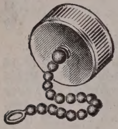
Jack



Receptacle

Mating parts are arranged in same horizontal line below.

Number	Contacts	List	Number	Contacts	List	Number	Contacts	List
92-M	Male......	**$3.01**	**92-F**	Female....	**$3.01**	**92-C**	Female....	**$3.01**
92-F1	Female....	**3.01**	**92-M1**	Male......	**3.01**	**92-C1**	Male......	**3.01**



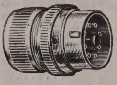
Cap and Chain

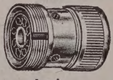
For sealing power plugs and radio connectors against dirt and moisture. Can be used with connectors listed above and below having male threads. Heavy brass cap, chrome plated. Nickel silver bead chain.

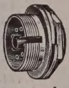
No. 79-CCC8 Cap and Chain.............................**List $ .61**

Heavy Duty Radio Connectors

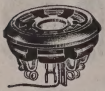
The plugs shown in bold face type mate with jacks and receptacles listed in bold type **in the same horizontal line.** For numbers in light faced type follow the same procedure . . . plugs mate with jacks and receptacles in the same horizontal line. Bold type also designates the most popular units.







Contacts	Plug		Jack		Receptacle		List
	Male	Female	Female	Male	Female	Male	
4	**79-04M**	79-04F1	**79-04F**	79-04M1	**79-P04F**	79-P04M	**$1.51**
5	**79-05M**	79-05F1	**79-05F**	79-05M1	**79-P05F**	79-P05M	**1.51**
6	**79-06M**	79-06F1	**79-06F**	79-06M1	**79-P06F**	79-P06M	**1.51**
8	**79-08M**	79-08F1	**79-08F**	79-08M1	**79-P08F**	79-P08M	**1.51**
12	**79-012M**	79-012F1	**79-012F**	79-012M1	**79-P012F**	79-P012M	**2.41**

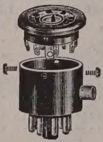


Bulb Tester and Tube Socket

Standard 7 contact combination socket for large and small 7 prong tubes. For testing miniature bulbs, either screw or bayonet types.

Number	Description	List
78-7CD	With retainer ring................................	**$ .53**

Adapters



A simple way to make adapter units which may be used for modernizing tube checkers and analyzers, adapting new tubes to old circuits and for connections to output meter, phonograph pickup, etc.

Socket Tops Only

Number	Contacts	List
44-8	8 Octal	**.24**

For testing new 9 pin miniature tubes.

Number	Contacts	List
44-9	9 Noval	**.45**

Bases Only

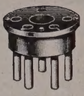
With side stud accommodating a metal tube grid cap clip. Both tops (left) and bases are drilled for self-tapping screws which are supplied with bases.

Number	Prongs	List
50-8SG	8 Octal	**.36**

Shell Only

Of metal tubing for snap-in connection on either end of Amphenol "S" type sockets or "CP" plugs. Combinations possible from 4 to 11 prongs or contacts.

No. 3-14D With side hole, rubber grommet...........................**List $ .24**

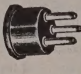


Molded Speaker Plugs

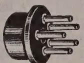
Prongs are securely molded into one-piece black bakelite body. Each prong is deeply set into individually molded pocket, eliminating the possibility of shorts in case of pull-back of wire insulation.

With Finger Grip	Prongs	List	With Straight Sides	Prongs	List
71-4	**4**	**$ .13**	**70-8**	**8**	**$ .17**
71-5	**5**	**.13**	**70-9**	**9**	**.21**
71-6	**6**	**.13**	**70-12**	**12**	**.30**
71-7	**7**	**.13**	**70-20**	**20**	**.61**

Miniature Plugs



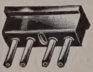
Cable Type used extensively for speaker connections in compact midgets. Ideal for all plug-in connections where space is limited. Brass prongs are deeply recessed in molded pockets preventing shorts due to insulation pulling back. With molded finger grip. Use with miniature sockets.



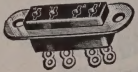
Chassis Type mounts in plain round 5/8" hole. No screws or rivets required. Held firmly by retainer ring included. Use with female miniature connectors (MPF type).

Cable Type	List Price	Description	Chassis Type	List
71-3S	**$ .15**	3 Prong	**86-CP-3S**	**$ .15**
71-4S	**.15**	4 Prong	**86-CP-4S**	**.15**
71-5S	**.21**	5 Prong		
71-6S	**.21**	6 Prong		

Rectangular Plugs and Sockets



Style B

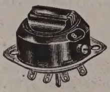


Style C

For compact apparatus. Plugs are often used as a supported type self-sustaining coil form.

Number	Style	Prongs or Contacts	List
		Plugs	
70-25	B	3	**.15**
70-26	B	4	**.18**
		Sockets	
77-26	C	4	**.30**

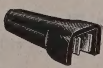
Tap Change Switch



An 8-position single pole continuous switch with white markings clearly visible in window cap. Side set screw locks switch arm in position preventing accidental tap changes.

Number	Description	List
36-1	With numerals 1 to 8..............	**$ .90**
36-2	With impedance markings 0—2—4—8—16—250—500.............	**.90**

Universal Grid Cap



A grid cap of improved design for universal use with tube grid caps from ¼ to ⅜" diameter including standard glass and metal tubes. Spring brass contacts in phenolic body.

63-1 Unwired Grid Cap......**List Price $ .18**

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

AMPHENOL

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS. FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

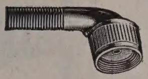
AMPHENOL

Series 75 Microphone Connectors—Single Contact

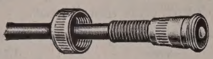
Fit almost every microphone. Standard with leading manufacturers for many years. Compact, rugged, neat. Chassis receptacles are integral parts of microphones using single conductor cable. Widely used in amplifiers, transmitters, phonoelectric devices, home recorders and similar equipment. They are also suitable for connecting various units such as PM speakers, headphones, and for theft alarms or wall type coin operated devices, etc.

In the 75 Series, plugs mate with all cable jacks and receptacles. Circuit closing contacts are the same except that they close the circuit when plug is disengaged, eliminating open circuit grid howls.

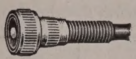
Locknut Receptacles mount in .385″ holes when grounding to chassis and ½″ holes for ungrounded 2 circuit applications.



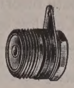
75-MC1FA



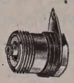
75-MC1F



75-MC1M



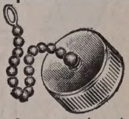
75-PC1M



75-CL-PC1M

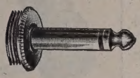
Angle Plug			Straight Plug			Cable Jack			Locknut Receptacles		
	Contact	List		Contact	List		Contact	List		Contact	List
75-MC1F-A	Flush	$1.00	75-MC1F	Flush	$.45	75-MC1M	Flush	$.35	75-PC1M	Flush	$.30
									75-CL-PC1M	Cl. Cr.	.45

Cap and Chain



Seals open chassis units against dirt and dust. Also used with 80 Series Connectors.
75-CCC1. . List $.55
Cl. Cr. Closed Circuit.

Phone Plug Adapter



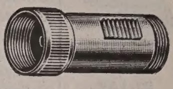
Screws into coupling ring of 75-MC1F and 75-MC1F-A plugs, permitting the cable to be plugged into any standard phone jack. No soldering or wiring.

75-MC1P. . . . . .List $.50

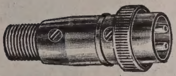
Microphone Switch

Threaded on one end, coupling ring on the other end. For 75 Series Connectors. May be connected directly to any mike equipped with 75-PC1M or simliar receptacle. Push-to-talk or slide button for permanent connection.

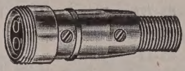
75-MC1S. . . . . .List $1.40



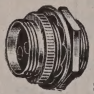
Series 80 Microphone Connectors—Single and Double Contacts



80-MC2M



80-MC2F



80-PC2F

Plugs			Cable Jacks			Locknut Receptacles		
	Contacts	List		Contacts	List		Contacts	List
SINGLE CONTACT								
80-M	M	**$.71**	**80-F**	F	**$.71**	**80-C**	F	**$.44**
80-F1	F	.71	80-M1	M	.71	80-C1	M	.44
TWO CONTACTS								
80-MC2M	M	**.88**	**80-MC2F**	F	**.88**	**80-PC2F**	F	**.49**
80-MC2F1	F	.88	80-MC2M1	M	.88	80-PC2M	M	.49

Series 80 Cable Connectors are designed for shielded cables; for single and two conductor coaxial cables, microphone cables; for twisted pairs, concentric lines, photo cell leads, patch cords and similar uses. Suitable for connecting model railroad equipment, pin ball games and other small electrical apparatus. Elements are high dielectric black Bakelite. Receptacles mount in 5/8″ chassis holes. Maximum chassis thickness for locknut type receptacles is 11/32″.

Mating families of connectors are listed in horizontal lines.

The most popular connectors are shown in bold face type.

Cap and Chain required is 75-CCC1.

M Male. F Female.

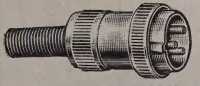
Series 91 Microphone Connectors—3 and 4 Contacts

Extensively used on all types of portable apparatus, these connectors were designed primarily to use with microphones. Some of the advantages of Amphenol Microphone Connectors . . .

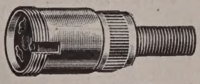
- Accidental disconnections are eliminated by a positive screw-type connection.
- Incorrect insertions are impossible because connectors are polarized.
- Pulling and twisting strain on soldered contacts is eliminated because a squeeze-type clamp grips cable securely after assembly.

Chassis receptacles mount in 27/32″ chassis holes. Maximum chassis thickness for chassis receptacle is 1/8″.

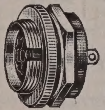
Mating families of connectors are listed in horizontal lines.



91-MC3M



91-MC3F

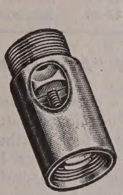


91-PC3F

Plugs			Cable Jacks			Chassis Receptacles		
	Contacts	List		Contacts	List		Contacts	List
THREE CONTACTS								
91-MC3M	M	**$1.10**	**91-MC3F**	F	**$1.10**	**91-PC3F**	F	**$ .55**
91-MC3F1	F	1.10	91-MC3M1	M	1.10	91-PC3M	M	.55
FOUR CONTACTS								
91-MC4M1	M	**1.20**	**91-MC4F**	F	**1.20**	**91-PC4F**	F	**.60**
91-MC4F1	F	1.20	91-MC4M1	M	1.20	91-PC4M	M	.60

M Male. F Female. The most popular connectors are shown in bold face type.

Side Cable Outlet



Provide an outlet for microphone cable where it is not practical to run the cable thru the stand. For use between microphones and stands having 5/8-27 threads.

91-SCO3. . . . . .List $. 82

Cap and Chain

For 91 Series Connectors. Same construction and material as No. 75-CCC1.

No. 91-CCC3. . . . . .List $ .55

AMERICAN PHENOLIC CORPORATION
1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS

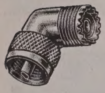
AMPHENOL

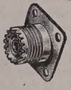
AMERICAN PHENOLIC CORPORATION
1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

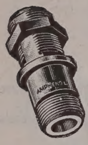
Amphenol Radio Frequency Connectors

Amphenol low-loss RF Connectors, Adapters and Terminations have been especially designed for use with RG/U type Coax and Twinax. There is an Amphenol connector for every RF application. This list does not represent the entire line of Amphenol RF Connectors. For complete information on additional types and sizes refer to Amphenol Cable and Connector Catalog or General Catalog No. 74 at your distributor.

83-1SP

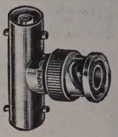

83-1AP


83-1R

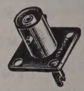

82-66

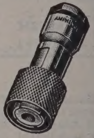
Army-Navy No.	Am-phenol No.	Description	Class	List Each
UG-21B/U	82-61	Plug	N	$3.00
UG-22B/U	82-62	Panel Jack	N	3.50
UG-23B/U	82-63	Jack	N	3.00
UG-27A/U	82-64	Angle Adapter	N	7.00
UG-29A/U	82-65	Str. Adapter	N	3.25
UG-30/U	82-66	Press. Feed-Through	N	4.00
UG-58/U	82-24	Receptacle	N	2.25
UG-59A/U	82-38	Plug	HN	5.50
UG-60A/U	82-39	Jack	HN	3.75
UG-61A/U	82-40	Jack M. P.	HN	4.25
UG-88/U	31-002	Plug	BNC	3.25
UG-89/U	31-005	Jack	BNC	3.00
UG-102/U	83-22SP	Plug Sm. Twin	UHF	1.50
UG-103/U	83-22R	Recep. Sm. Twin	UHF	1.50
UG-104/U	83-22AP	Angle Adapter Sm. Twin	UHF	3.00
UG-105/U	83-22J	Junction Sm. Twin	UHF	2.50
UG-106/U	83-1H	Hood Sm. Coax	UHF	.25
UG-107A/U	82-36	Tee	N	7.50
UG-154/U	82-59	Plug	LC	15.00
UG-160A/U	82-67	Jack—Bulkhead	N	3.25
UG-175/U	83-185	Reducing Adapter	UHF	.25
UG-176/U	83-168	Reducing Adapter	UHF	.25
UG-177/U	83-765	Hood Sm. Coax	UHF	.40
UG-196/U	83-22T	Tee Sm. Twin	UHF	3.25
UG-203/U	83-776	Plug Sm. Coax	UHF	1.75
UG-274/U	31-008	Tee	BNC	7.50
UG-290/U	31-003	Receptacle	BNC	3.00
UG-291/U	31-001	Jack M. P.	BNC	3.50
UG-306/U	31-009	Angle Adapter	BNC	7.25
UG-333/U	82-56	Adapter	H.V.	8.50
UG-334/U	82-57	Adapter M. P.	H.V.	9.75
UG-352/U	82-80	Receptacle	LC	12.00

Army-Navy No.	Am-phenol No.	Description	Class Class	List Eacn
CW-123/U	31-006	Cap & Chain	BNC	1.15
MX-103/U	103-301	Tapering Tool	HN	16.50
MX-564/U	82-48	Armor Clamp	N	.75
Navy No.				
49190	83-1SP	Plug Sm. Coax	UHF	1.00
49191	83-1J	Junction Sm. Coax	UHF	1.50
49192	83-1AP	Angle Adapter Sm. Coax	UHF	2.00
49193	83-1H	Hood Sm. Coax	UHF	.25
49194	83-1R	Receptacle Sm. Coax	UHF	1.10
49195	83-1SPN	Plug Sm. Coax	UHF	1.50
49199	83-1T	Tee Sm. Coax	UHF	2.70
49482	83-776	Plug Sm. Coax	UHF	1.75
Signal Corps No.				
PL-258	83-1J	Junction Sm. Coax	UHF	1.50
PL-259	83-1SP	Plug Sm. Coax	UHF	1.00
PL-259A	83-1SPN	Plug Sm. Coax	WHF	1.50
PL-274	83-1F	Feed-Thru Sm. Coax	UHF	2.50
PL-275	83-22F	Feed-Thru Sm. Twin	UHF	3.50
PL-284	83-22SP	Plug Sm. Twin	UHF	1.50
PL-285	83-22J	Junction Sm. Twin	UHF	2.50
PL-293	83-22AP	Angle Adapter Sm. Twin	UHF	3.00
SO-239	83-1R	Receptacle Sm. Coax	UHF	1.10
SO-264	83-22R	Receptacle Sm. Twin	UHF	1.50
M-358	83-1T	Tee Adapter Sm. Coax	UHF	2.70
M-359	83-1AP	Angle Adapter Sm. Coax	UHF	2.00
M-360	83-1H	Hood Sm. Coax	UHF	.25


31-008

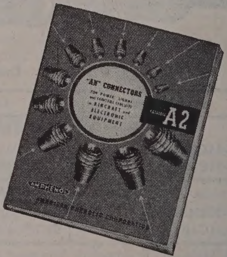
82-61


31-003


82-38

NEW "AN" CONNECTOR CATALOG

Amphenol also makes a complete range of AN approved connectors for power, signal and control circuits in aircraft and electronic equipment. The new A-2 Catalog is designed as a tool for the use of purchasing agents, engineers and executives in the field of electronics. It can be used effectively by manufacturers of aircraft and accessories, marine craft, instrument manufacturers and designers, laboratories and government procurement agencies. The A-2 catalog will be sent upon receipt of a request on company or government agency letterhead, or may be requested directly from the nearest Amphenol Representative.



COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

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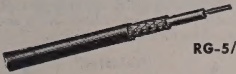
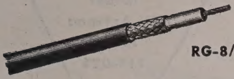
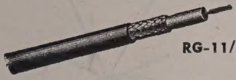
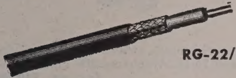
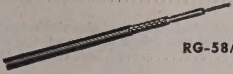
AMPHENOL

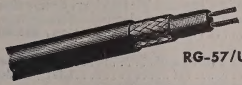

RG-5/U


RG-8/U


RG-11/U


RG-22/U


RG-58/U


RG-57/U

Amphenol Coax and Twinax RG Cables

Amphenol Coaxial and Twinax RG Cables are produced to standards surpassing military specifications for electrical performance and mechanical excellence. Conductors are centered 20% closer for Coax and 50% closer for Twinax Cables than required by "AN" specifications.

Most cables utilize the exceptional dielectric properties of polyethylene—low loss, flexibility, mechanical stability. The outer jacket in the majority of approved types is a tough, highly resistant vinyl jacket which is non-hygroscopic and impervious to most acids, alkalies, oils and gasoline. Other types are armored for still greater mechanical protection.

Amphenol has cables that are designed to operate efficiently at temperatures as high as 500° Fahrenheit. Teflon is used as the dielectric because of its low loss, high voltage breakdown and its ability to withstand heat.

Characteristics

	Polyethylene	Teflon
Specific Gravity	.92	2.2
Water Absorption	.005%	0.00%
Cold-Brittleness	-94°F.	-100°F.
Dielectric Constant 60 cycles to 100 mc	2.29	2.0
Power Factor 60 cycles to 100 mc	.0004	.0002
Volume Resistivity, ohm-cm	1013	1016
Softening Temperature	220°F.	500°F.

Write Your Distributor For Prices Which Are Based On Reel Lengths

STANDARD JACKET		LOW TEMP. BLACK JACKET		NOM. IMP. OHMS	NOM. CAP. MMF/FT	INNER CONDUCTOR	DIELECTRIC NOM. O. D.	DIELECTRIC MATERIAL	INNER SHIELD	OUTER SHIELD	STANDARD VINYL	NOM. O. D.
A-N NUMBER RG-/U	AMPHENOL NUMBER	A-N NUMBER RG-/U	AMPHENOL NUMBER									
5	21-001			52.5	28.5	16	.185	Poly	C	C	Black	.332
5A	21-271	5B	21-294	50	29	16S	.181	Poly	S	S	Grey	.328
6	21-002	6A	21-330	76	20	21CW	.185	Poly	S	C	Grey	.332
7	21-003			97	12.5	19	.250	Poly	C	—	Black	.370
8	21-004	8A	21-290	52	29.5	7/21	.285	Poly	C	—	Black	.405
9	21-005			51	30	7/21S	.280	Poly	S	C	Grey	.420
9A	21-231	9B	21-332	51	30	7/21S	.280	Poly	S	S	Grey	.420
10	21-006	10A	21-338	52	29.5	7/21	.285	Poly	C	—	Grey	.475
11	21-007	11A	21-296	75	20.5	7/26T	.285	Poly	C	—	Black	.405
12	21-008	12A	21-340	75	20.5	7/26T	.285	Poly	C	—	Grey	.475
13	21-009	13A	21-334	74	20.5	7/26T	.280	Poly	C	C	Black	.420
14	21-010	14A	21-336	52	29.5	10	.370	Poly	C	C	Grey	.545
15	21-011			76	20	15CW	.370	Poly	C	C	Black	.545
17	21-013	17A	21-298	52	29.5	.188	.680	Poly	C	—	Grey	.870
18	21-014	18A	21-300	52	29.5	.188	.680	Poly	C	—	Grey	.945
19	21-015	19A	21-303	52	29.5	.250	.910	Poly	C	—	Grey	1.120
20	21-016	20A	21-305	52	29.5	.250	.910	Poly	C	—	Grey	1.195
21	21-017	21A	21-308	53	29	16N	.185	Poly	S	S	Grey	.332
22	21-038			95	16	Two 7/.0152	.285	Poly	T	—	Black	.405
22A	21-148	22B	21-310	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.420
29	21-018			53.5	28.5	20	.116	Poly	T	—	Poly	.184
34	21-019	34A	21-429	71	21.5	7/21	.455	Poly	C	—	Black	.625
35	21-020	35A	21-311	71	21.5	9	.680	Poly	C	—	Grey	.945
42	21-021			78	20	21N	.196	Poly	S	S	Grey	.342
54A	21-022			58	26.5	7/.0152	.178	Poly	T	—	Poly	.250
55	21-023			53.5	28.5	20	.116	Poly	T	T	Poly	.206
57	21-039	57A	21-313	95	17	Two 7/21	.472	Poly	T	—	Black	.625
58	21-024			53.5	28.5	20	.116	Poly	T	—	Black	.195
58A	21-199	58C	21-316	50	29	19/.0068	.116	Poly	T	—	Black	.195
59	21-025	59A	21-291	73	21	22CW	.146	Poly	C	—	Black	.242
62	21-026	62A	21-318	93	13.5	22CW	.146	SS Poly	C	—	Black	.242
63	21-027	63B	21-320	125	10	22CW	.285	SS Poly	C	—	Black	.405
71	21-029			93	13.5	22CW	.146	SS Poly	T	T	Poly	.250
74	21-041	74A	21-321	52	29.5	10	.370	Poly	C	C	Grey	.615
79	21-070	79B	21-325	125	10	22CW	.285	SS Poly	C	—	Black	.475
83	21-180			35	44	10	.240	Poly	C	—	Black	.405
87A	21-250			50	29.5	7/20S	.280	Teflon	S	S	Fiberglas	.425
89	21-253			125	10	22CW	.285	SS Poly	C	—	Black	.632
108	21-261	108A	21-327	76		Two 7/28	.073 Ea.	Poly	T	—	Black	.230
111	21-255	111A	21-329	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.490
116	21-378			50	30	7/20S	.280	Teflon	S	S	Fiberglas	.475
117	21-377			50	29	.188	.620	Teflon	C	—	Fiberglas	.730
118	21-374			50	29	.188	.620	Teflon	C	—	Fiberglas	.780
119	21-398			50	29	10	.328	Teflon	C	C	Fiberglas	.465
120	21-399			50	29	10	.328	Teflon	C	C	Fiberglas	.515
	21-125			71	21.5	9	.680	Poly	C	—	Grey	.870
	21-388			50	29	15S	.185	Teflon	S	S	Fiberglas	.332
	21-391			72	21	7/25S	.280	Teflon	S	—	Fiberglas	.405
	21-385			50	29	19S	.116	Teflon	S	S	Fiberglas	.206
	21-382			50	29	19S	.116	Teflon	S	—	Fiberglas	.195
	21-379			73	21	21S	.146	Teflon	S	—	Fiberglas	.241

Legend

CW—Copperweld
S—Silvered Copper
T—Tinned Copper
C—Copper
Poly—Polyethylene
SS Poly—Semi-solid Polyethylene
Armor—Armored Cable

Velocity of Propagation

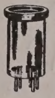
Dielectric Material	
Solid Polyethylene	65.9%
Semi-Solid Polyethylene	84.0%
Teflon	69.5%

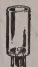
LOW LOSS PLASTICS

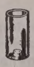
POLYWELD "912"
COIL DOPE

Amphenol Polyweld "912" is pure polystyrene in solution. Use as coil dope or to weld polystyrene pieces together. Will not disturb circuit constants.

No. 53-912-2	2-oz. bottle	**List $**	**.50**
No. 53-912-4	4-oz. bottle	**List**	**.65**
No. 53-916-2T	2-oz. bottle Thinner	**List**	**.25**
No. 53-916-4T	4-oz. bottle Thinner	**List**	**.35**


24-5P


24-6H


24

Coil Forms for receivers and low powered transmitters in the RF and UHF range.

No.	Description	List
24-4P	1¼″ OD, 2¼″ long, fits standard tube sockets, 4 prong	$ .40
24-5P	Same except 5 prong	.40
24-6P	Same except 6 prong	.40
24-6H	Use with 78S6S socket, ¾″ OD, 6 prong	.40
24-5H	Same except 5 prong	.40
24	Miniature, ¾″ OD, 1⁹⁄₁₆″ long, raised hole in center of base for self-tapping screw	.15

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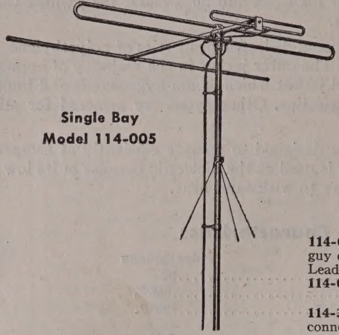
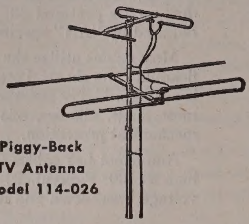
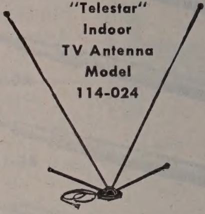
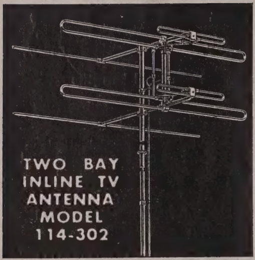
Television Antennas

Engineered and perfected in the Amphenol Antenna Development Laboratories, the antennas illustrated and described on this page will provide unsurpassed reception of FM and TV signals. Top-quality materials, rugged construction and the latest in design are incorporated into each Amphenol antenna to provide perfect performance. Each antenna packaged complete with instructions for easy installation.


Single Bay Model 114-005


Piggy-Back TV Antenna Model 114-026


"Telestar" Indoor TV Antenna Model 114-024


TWO BAY INLINE TV ANTENNA MODEL 114-302

114-005 TELEVISION ANTENNA ARRAY, complete with mast, swivel mounting plate, guy clamp, necessary hardware, stand-off insulators and 75 ft. Amphenol 300 ohm Twin-Lead..**List ea. $19.50**
114-009 Same less transmission line..............................**List ea. 17.00**

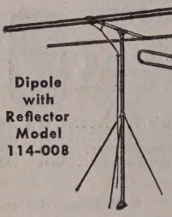
114-301 ADAPTOR KIT for building 114-005 into a Stacked Array includes single bay, connecting rods for symmetrical feed, two box brackets, two 5-foot lengths of 1-1/4" Mast, guy ring and stand-off insulators...............................**List ea. $20.50**

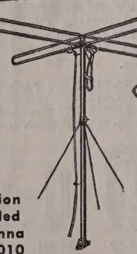
114-302 TWO BAY TV STACKED ARRAY consists of a top and bottom bay, connecting rods, two box brackets, two 5-foot lengths of 1-1/4" mast, guy ring and stand-off insulators. Twin-Lead transmission line is not included..............................**List ea. $35.00**

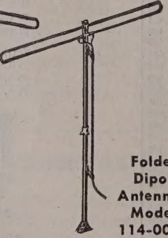
14-322 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead...........**List $38.50**
114-314 Same as 114-302 except has no mast..............................**List 29.00**
114-324 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead and has no mast...**List 32.50**

114-026 PIGGY-BACK TV ANTENNA consists of one folded dipole and reflector for each band which may be oriented individually, phasing leads, guy clamp, stand-off insulators and 75 ft. Amphenol Twin-Lead..............................**List ea. $19.50**
114-029 Same less transmission line..............................**List ea. 17.00**

114-024 INDOOR TV ANTENNA "TELESTAR" has low-loss polystyrene base with rubber feet to protect furniture. Light weight aluminum rods are pre-tuned for receiving all channels. Five-foot natural color polyethylene 300 ohm Twin-Lead is included. **List ea. $4.95**


Dipole with Reflector Model 114-008


All-Direction Double Folded Dipole Antenna Model 114-010


Folded Dipole Antenna Model 114-001

FM Antennas

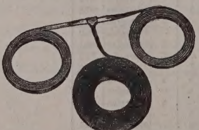
114-008 DELUXE FM FOLDED DIPOLE WITH REFLECTOR, complete with mast, mounting plate, insulators, guy clamp, hardware and 75 ft. Amphenol 300 ohm Twin-Lead..............................**List ea. $16.25**

114-010 DELUXE FM ALL-DIRECTION DOUBLE FOLDED DIPOLE ANTENNA, complete with quarter-wave phasing stub, mast, mounting plate, guy clamp, hardware, insulators, and 75 ft. Amphenol 300 ohm Twin-Lead..............................**List ea. $16.25**

114-001 FM FOLDED DIPOLE ANTENNA, complete with mast, swivel mounting plate, insulators, guy clamp, necessary hardware and 75 ft. Amphenol 300 ohm Twin-Lead..............................**List ea. $12.25**

Twin-lead Folded

Ready-cut to the four most popular bands. Broadband characteristics. Use as a transmitting, auxiliary or portable antenna. Flat top portion is Amphenol 14-022 with copper clad steel conductors, 75 foot lead-in is Amphenol 14-056 joined to top with molded "T" junction.



Temporarily Withdrawn From Production

Number	Frequency	Band	Length
139-813	28 mc	10 Meters	18 feet
139-815	14 mc	20 Meters	35 feet
139-816	7 mc	40 Meters	70 feet
139-817	3.5 mc	80 Meters	135 feet

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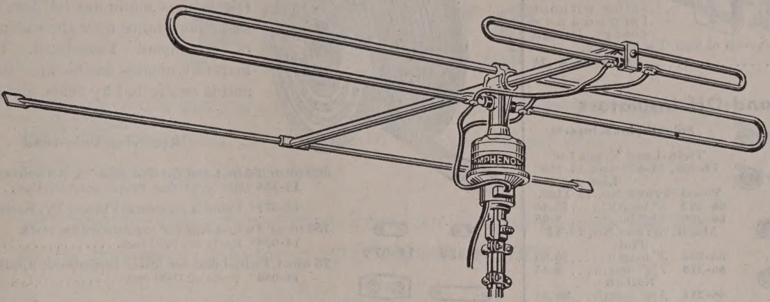
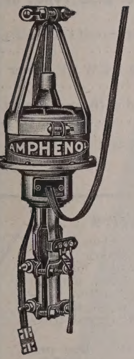
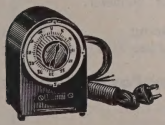
AMPHENOL

THE NEW AMPHENOL "AUTO-DIAL" ROTATOR





- **Mast support included for two bay stacked array!**
- **Heavy-duty motor!**
- **In-line mast mounting!**
- **Cone adapter included—accommodates mast sizes from ¾" to 2"!**
- **Lifetime lubricated!**
- **Neoprene sealed against dirt and moisture!**



- **Attractive "Walnut" finish plastic housing!**
- **Two 2.5 volt pilot lamps!**
- **Rubber feet on the base protect furniture!**
- **White plastic card insert for logging stations!**

MODEL No. 509

Designed to rotate in one direction only, the Amphenol "Auto-Dial TV Antenna Rotator utilizes a single directional motor, permitting greater power and higher torque than usually available in reversible motors. The antenna rotates rapidly—only 22 seconds required for a complete revolution. Positive braking action prevents coasting or backlash.

The "Auto-Dial" permits axis or "in-line" mounting of antenna and supporting mast, allowing equal weight distribution on the steel bearings and gears of the rotator. There are no fiber or laminated gears to fail—all gears are steel.

The attractive control unit houses the relay, automatic step gears with nylon insulation, contact breakers, and sturdy transformer that reduces 115 volt A.C. to 24 volt A.C. required by the rotator motor.

The new "Auto-Dial" Rotator for the first time permits accurate antenna field strength measurements because it can always be brought back to exactly the same direction. This is possible because rotation is in steps of 6 degrees, accurately calibrated on the direction indicator. With "Auto-Dial," servicemen are now able to determine whether the antenna is functioning properly, has the best front-to-back ratio and if it is located properly for the best possible picture.

Operating the rotator is as simple as ABC. (A) Turn switch under dial to "On" position; (B) if necessary, refer to log card for dial number indicating desired antenna direction; (C) turn knob until pointer lies over proper number. Then, automatically, the inside knob, which rotates in synchronism with the antenna and which has an arrow—turns to line up with the pointer. This indicates that the antenna is rotating. When the desired direction is reached, rotation stops automatically.

MODEL No. 509 "AUTO-DIAL" TV ANTENNA ROTATOR, including 100 ft. conductor cable, Auto-Dial Control Unit, Complete Rotator with mast support for stacked array and cone adaptor..List **$59^{75}**

AMERICAN PHENOLIC CORPORATION

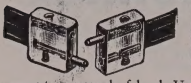
1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS

AMPHENOL

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

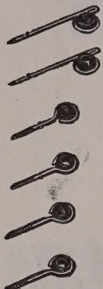
Twin-Lead Connector

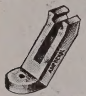


Solderless, low-loss twin-lead splice without impedance change. Design prevents reversal of lead. Use in pairs.

80-850.................... **List Each $ .25**

Stand-Off Insulators





Polyethylene Inserts

Twin-Lead Types for 14-358, 14-079 and 14-080

List per 100

Wood Screws No. 14 Thd.

66-202 3″ length.....**$5.40**
66-209 7½″ length... **8.05**

Mach. Screws No. 10-32 Thd.

66-204 3″ length.....**$6.95**
66-210 7½″ length... **8.35**

Nail-in

66-211 3½″ length...**$6.25**

Coax Types, ½″ Max. Cable O. D.

Wood Screws No. 14 Thd.

66-201 3″ length.....**$6.25**
66-208 7½″ length... **9.15**

Mach. Screws No. 10-32 Thd.

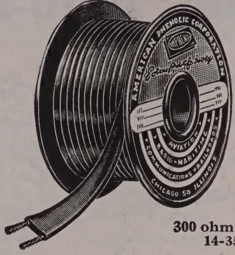
66-203 3″ length.....**$7.35**

Nail-in

66-212 3½″ length...**$7.11**

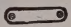
Polystyrene Stand-off Insulator for 14-358 Twin-Lead

66-909 1⁵⁄₁₆″ length............... **List Each $.0835**

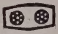


14-358

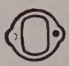
14-079



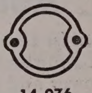
14-056



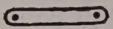
14-023



14-271



14-076



14-022

Twin-Lead Transmission Lines

The use of brown pigmented polyethylene dielectric assures minimum RF loss and a more constant impedance over the exceptionally long life of Amphenol Twin-Lead. This remarkable material remains flexible at — 70°C., repels water and is unaffected by acids, alkalies and oils.

Receiving Twin-Lead

List Per 1000 ft.

300 ohm Twin-Lead for FM and TV Antennas
14-358 (500) & (1000) Brown polyethylene..............**$32.00**

14-271* Tubular for deluxe FM and TV. Reels of 1000 feet..

150 ohm Twin-Lead for experimental work
14-079* Reels of 1000 feet..............................

75 ohm Twin-Lead for lower impedance applications
14-080* Reels of 1000 feet..............................

Amateur Transmitting and Copper Clad Types of Twin-Lead

75 ohm Twin-Lead for transmitting, rated 1 KW RF power
14-023* Reels of 1000 feet.............................

300 ohm Tubular Twin-Lead rated 1 KW RF power
14-076* Reels of 1000 feet.............................

300 ohm Extra-Strength Twin-Lead with copper clad conductors
14-022* Reels of 1000 feet.............................

*Temporarily Withdrawn from Production

Universal Mast Clamp

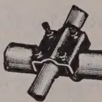
Wrap-around mast clamp for Stand-off Insulator. Will fit any mast with O.D. from .900″ to 1.660″. Complete with 66-204 Screw-Eye Insulator for Twin-Lead Transmission Lines.

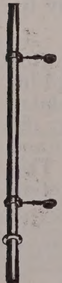
No. 114-490.......................... **List $ .30**
No. 114-492 Same less insulator........ **List .20**

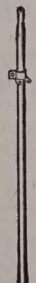
Universal Mounting Clamp

Will accommodate mast sizes of 1″ to 1½″ O.D. which includes 1″ water pipe as well as ¾″ to 1¼″ electrical conduit. Two U bolts and channeled plate establish and maintain perfect right angle alignment. Stress to horizontal member is spread over entire length of clamp, thus preventing distortion and buckling.

No. 114-500....................... **List $ .55**







Antenna Mast Extensions

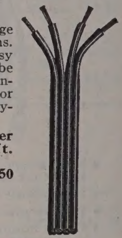
Television Mast Extension for 114-302 two bay television antenna and other 1-1/4″ diameter antenna masts. Consists of 5 foot length of 1-1/4″ diameter alloy steel tubing, guy ring and two clamp type stand-off insulators.

114-291................ **List ea. $3.00**

FM and Television Mast Extension for all Amphenol FM and Television antennas except the two bay antenna which requires the mast extension listed above. Consists of 5 foot length 3/4″ steel conduit and guy wire clamp.

114-300.................. **List ea. $3.00**

Remote Control Wire



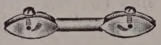
For wiring antenna rotators and other low voltage remote controls such as miniature electric trains. Recommended for circuits up to 28 volts. For easy wiring, each conductor with its insulation may be ripped apart without exposing the conductor. Conductors are 7/28 copper wire with one conductor tinned to facilitate tracing. High dielectric polyethylene insulation is weatherproof.

List per 1000 ft.

14-316
3 conductor Reels of 1000 feet..........**$44.50**
14-298*
4 conductor Reels of 1000 feet..........
14-317*
5 conductor Reels of 1000 feet..........

*Temporarily Withdrawn from Production

Polystyrene Line Spreaders



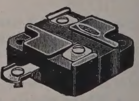
For separating feeder lines and construction of folded dipole antenna from wire. Wire holes .085″ diameter.

2″ spacing	4″ spacing	6″ spacing
66-205..**List ea. $.15**	**66-206**.**List ea. $.20**	**66-207**.**List ea. $.25**

Lightning Arrestor For Antennas

Attaches to 14-056 300 ohm Twin-Lead without cutting the conductors. Designed to meet the requirements of the Underwriters' Laboratories. Molded of high grade electrical phenolic with conducting plate and gap molded in. Precise gap spacing is maintained. Self contained also is a high resistance shunt permanently sealed aginst moisture. Overall dimension 1-7/8″x2″x3/4″.

155-338.................. **List ea. $1.70**



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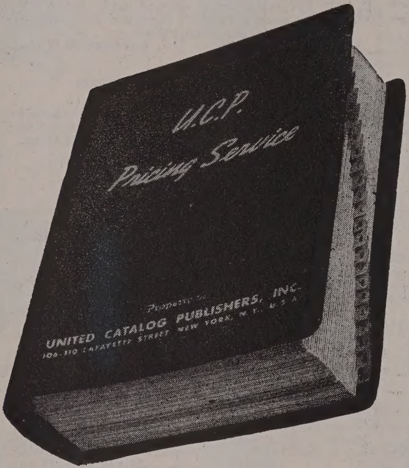
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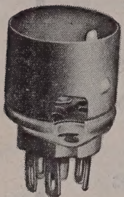
SOCKETS

MINIATURE SHOCK SHIELD TYPE

7 Prongs, ⅞" Mounting Centers



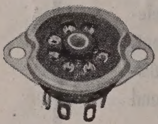
Cat. No.		List Price each
9715	Ceramic, beryllium copper contacts, JAN TSE7T102	$1.15
9736	Mica-filled bakelite, beryllium copper contacts, JAN TSE7T101	0.70
8322	Black bakelite, phosphor bronze contacts	0.32
8328	Ceramic, phosphor bronze cont.	0.55
8329	Mica-filled bakelite, phosphor bronze contacts	0.35

9 Prongs, 1⅛" Mounting Centers

Cat. No.		List Price each
9723	Black bakelite, phosphor bronze contacts	0.45
9714	Mica-filled bakelite, phosphor bronze contacts	0.50
9716	Ceramic, phosphor bronze cont.	1.00
9717	Ceramic, beryllium copper contacts, JAN TSE9T102	1.50
9718	Mica-filled bakelite, beryllium copper contacts, JAN TSE9T101	1.00

MINIATURE SADDLE TYPE

7 Prongs, ⅞" Mounting Centers



Cat. No.		List Price each
8323	Black bakelite, phosphor bronze contacts	$0.17
8326	Ceramic, phosphor bronze cont.	0.45
8327	Mica-filled bakelite, phosphor bronze contacts	0.20

SHIELDS FOR MINIATURE SHOCK SHIELD TYPE SOCKETS

Brass, Nickel Plated, Inner Spring

Cat. No.		List Price each
9700	Height 1⅜", 7 pin, TSF0T101	$0.31
9701	Height 1¾", 7 pin, TSF0T102	0.32
9702	Height 2¼", 7 pin, TSF0T103	0.33
9703	Height 1½", 9 pin, TSF0T104	0.37
9704	Height $1\frac{15}{16}$", 9 pin, TSF0T105	0.40

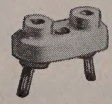
FOR MINIATURE SADDLE TYPE SOCKET

Cat. No.		List Price each
8757	Height 1¾", steel, cadmium pl.	$0.10
8758	Shield holder	0.05

LAMINATED MINIATURE SOCKETS

Cat. No.		List Price each
49-1	7 pin, laminated bakelite spring brass contacts	$0.10
49-2	7 pin, laminated bakelite center shield and ground strap	0.11
49-23	9 pin, laminated bakelite, with center shield	0.13

CRYSTAL SOCKET



Cat. No.		List Price each
CR-7	For crystals having .050 diameter pins and .486 spacing between pins. Steatite, grade L-5 JAN-1-10. Contacts: Phosphor bronze, cadmium plated, or beryllium copper, silver plated with tabs tinned.	
8879	Phosphor Bronze Contacts	$0.40
9006	Beryllium Copper Contacts	0.60

TYPE 12 SOCKETS

Phosphor bronze contacts, 1-11/16" mounting centers

Cat. No.	No. of Contacts	List Price each
12-4	4	$0.47
12-5	5	0.50
12-6	6	0.53
12-8	8 Octal	0.60

OCTAL SADDLE TYPE:

Cat. No.

9067 Black bakelite, steel saddle, cadmium plated with 4 ground lugs. Mounting centers, 1-5/16". Brass contacts, cadmium plated……**List Price $0.14 ea.**

9751 Mica-filled bakelite, beryllium copper silver plated contacts, 1½" M.C. JAN TSB8T101……**List Price $1.50**

9753 As above in Ceramic, JAN TSB8T102. **List Price $2.50**

LOCTAL SADDLE TYPE:

Cat. No.

8451 Black bakelite, steel saddle, cadmium plated with 4 ground lugs. Mounting centers 1-5/16". Phosphor bronze contacts, cadmium plated. **List Price $0.17 ea.**

OCTAL ALL-MOLDED TYPE:

Cat. No.

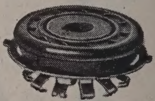
8490 Black bakelite, mounting centers 1-5/16". Brass contacts, cadmium plated……**List Price $0.13 ea.**

LOCTAL ALL-MOLDED TYPE:

Cat. No.

8191 Black bakelite, mounting centers 1-5/16". Phosphor bronze contacts, cadmium plated……**List Price $0.16 ea.**

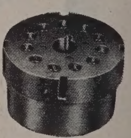
MAGNAL TYPE TELEVISION SOCKET:



Cat. No.

S-20-11 Black bakelite, phosphor bronze contacts, cadmium plated. 11 contacts. Supplied with press-on permanent mounting ring……**List Price $0.95 ea.**

DUO DECAL TYPE TELEVISION SOCKET:



Cat. No.

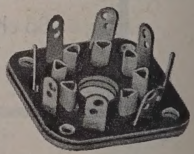
9700 Accommodates up to 12 pins. Top diameter is 1-23/32"; overall depth is 63/64". Contacts recessed to avoid shorting……**List Price $1.10 ea.**

DI HEPTAL TYPE TELEVISION SOCKET:

Cat. No.

9709-6 Heavy-duty type, accommodates up to 14 pins. Top diameter is 2-7/32"; overall depth is 63/64". Contacts recessed to avoid shorting. **List Price $1.20 ea.**

LAMINATED SOCKETS OCTAL TYPE:



Cat. No. **46-5-E** 8 prong:
Dimensions:

Mounting Centers	1-5/16"
Overall Width	1-13/32"
Overall Length	1-5/8"

List Price $0.10 ea.

Cat. No. **46-1-E** 8 prong:
Dimensions:

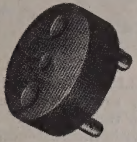
Mounting Centers	1-1/2"
Overall Width	1-13/32"
Overall Length	1-27/32"

List Price $0.10 ea.

GLASS TUBE TYPE:

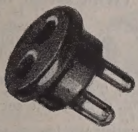
Cat. No.		Mounting Centers	Width	Length	List Price each
34-1AA	4 prong	1½"	1⅜"	1⅞"	$0.12
34-1-B	5 prong	1½"	1½"	1⅞"	0.13
34-1-C	6 prong	1½"	1½"	1⅞"	0.14
34-1-DX	7 prong	1½"	1½"	1⅞"	0.13

PLUGS

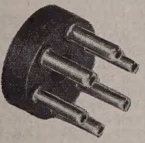


MOLDED BATTERY PLUGS

Cat. No.	Number of Prongs	Volts	Batt.	List Price each
30-2	2	3	A	**$0.10**
30-3B	3	45	B	**0.11**
30-3C	3	4½	C	**0.11**
30-4L	4		A & B	**0.11**
30-5	5	22½	C	**0.13**
30-7½	5	7½	C	**0.13**

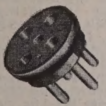


Cat. No.	Number of Prongs	Volts	Batt.	List Price each
30-2M	2	1½	A	**$0.09**
30-2M3	2	6	A	**0.10**
30-3M	3	45	Midget B	**0.10**



MOLDED SPEAKER PLUGS

Cat. No.	No. of Prongs		List Price ea.
29-4	4		**$0.12**
29-5	5		**0.13**
29-6	6		**0.13**
29-7	7	.750 layout	**0.16**



Cat. No.	No. of Prongs	List Price ea.
28-4	4	**$0.20**
28-5	5	**0.21**

LAMINATED BATTERY PLUGS

Cat. No.	Number of Prongs	Volts	Batt.	List Price each
66-2	2	3	A	**$0.06**
66-2M	2	1½	A	**0.05**
66-2M3	2	6	A	**0.05**
66-3B	3	45	B	**0.07**
66-3C	3	4½	C	**0.08**
66-3M	3	45	Midget B	**0.06**
66-4M	4		A & B	**0.07**
66-4	4		A & B	**0.10**
66-4½	2	4½	A	**0.05**
66-8	9		A & B	**0.14**

BINDING POSTS

Cat. No. 37. ENSIGN: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: ½" diam. x 7/16" high.
Base: ½" diam. x ¼" thick.
Solid Stem: 6/32 x 9/16" long.
Drilled Neck Diameter: 3/16".
Width of contact flanges: ⅜".
List Price $0.38 ea.

Cat. No. 38. ENSIGN: Same as No. 37 except that it has a molded insulating boss on base. **List Price $0.40 ea.**

Cat. No. 39. ENSIGN: Same as No. 37 except that it has molded dowel pin on base. base. **List Price $0.40 ea.**

Cat. No. 40. COMMANDER: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: 9/16" diam. x ½" high.
Base: ⅝" diam. x ¼" thick.
Solid Stem: 8/32" x ⅞" long.
Drilled Neck Diameter: 13/64".
Width of contact flanges: 7/16".
List Price $0.53 ea.

Cat. No. 41. COMMANDER: Same as No. 40 except that it has a molded insulating boss on base. **List Price $0.56 ea.**

Cat. No. 42. COMMANDER: Same as No. 40 except that it has a metal aowel pin on base **List Price $0.58 ea.**

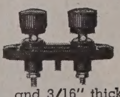
Cat. No. 43. ADMIRAL: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: ⅝" diam. x 17/32" high.
Base: 23/32" diam. x ¼" thick.
Solid Stem: 8/32" x ¾" long.
Plain Neck: 13/64" diameter.
Width of contact flanges: 7/16".
List Price $0.69 ea.

Cat. No. 44. ADMIRAL: Same as No. 43 except that it has molded insulating boss on base. **List Price $0.59 ea.**

Cat. No. 45. ADMIRAL: Same as No. 43 except that it has a molded dowel pin on base. **List Price $0.58 ea.**

Cat. No. 43-S. ADMIRAL: Same as No. 43 except that it has a elongated slot in neck. **List Price $0.80**



Cat. No. 21-R. All-molded Bakelite, non-removable tops. Both posts completely insulated. Center mounting screw 6/32" x ¼" long. Base is 2" long, 11/16" wide and 3/16" thick. Center distance between posts is ⅞" **List Price $0.85 ea.**

Cat. No. 21-S. All-molded Bakelite, non-removable tops. One post is completely insulated. One mounting screw 6/32" x ¼" long. Ground post is second mounting screw. Base is 2" long, 11/16" wide and 3/16" thick. **List Price $0.98 ea.**

TIP JACKS

Cat. No. 49. Top diameter ½" x 5/32" thick. Threaded brass body 5/16"-32 x ¾" long. One hexagon nut and two insulating washers furnished. Hole for washers is 19/64". Red or Black Bakelite top.

List Price: Red ....**$0.20 ea.**
Black...... **0.18 ea.**

Cat. No. 52. Top diameter ½" x ⅛" thick. Body is 5/16" x ¾" long. Special steel assembly washers, cadmium plated, are furnished. Red or black Bakelite.

List Price: Red ....**$0.12 ea.**
Black...... **0.10 ea.**

Cat. No. 76. Top diameter ⅝" x 5/32" thick. Body is .495" x ⅝" long. Special steel assembly washers, cadmium plated, are furnished. Red or black Bakelite. **List Price:** Red **$0.20**
Black...... **0.16**

Cat. No. 17. This twin jack with molded Bakelite base, is provided with two terminals 1⅜" apart and has a 6/32" x ¼" mounting screw at center.
List Price $0.78 ea.

Cat. No. 18. Twin jack, is provided with two terminals ⅞" apart and has two .140" diameter holes, 1-11/16" centers. Bottom plate is 1/16" thick, top plate 1/32" thick. ⅝" wide x 2-1/16" long.
List Price $0.15 ea.

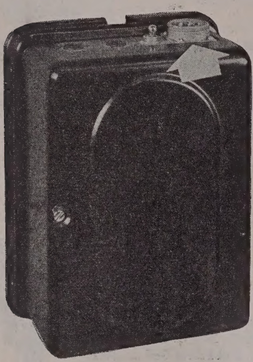
Cat. No. 18-T. Triple jack is provided with three terminals 9/16" apart and has two .140" diameter mounting holes, 1-15/16" centers. Bottom plate is 1/16" thick, top plate 3/64" thick. ⅝" wide x 2⅜" long.

List Price $0.22 ea.

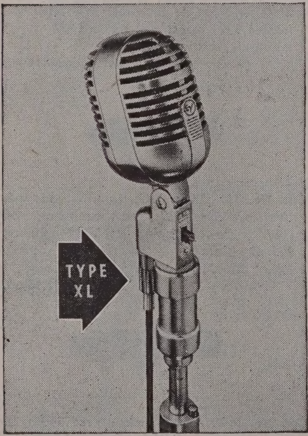
CANNON ELECTRIC DEVELOPMENT COMPANY

CANNON PLUGS

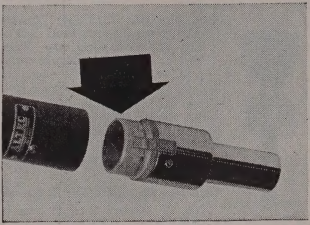
APPLICATIONS



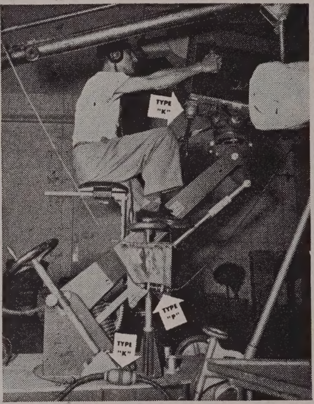
Type "K" Receptacle on Automatic Electric's Recorder Connector



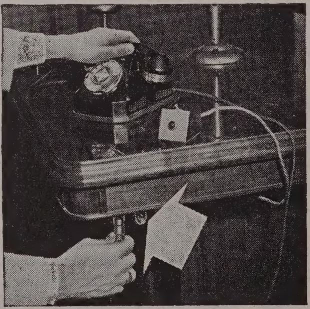
Type "XL" Plug on Electro-Voice's #731 Microphone



Type "P" insert and barrel assembly on Altec-Lansing mike



Types "K" and "P" Plugs on television camera

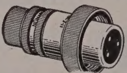


Type "X" Plug and Receptacle on intercom telephone

TYPE XK FITTINGS

CANNON "TYPE XK" PLUGS AND RECEPTACLES — A quality line of Connectors, same inserts and similar in design to the "Type X" Series, but equipped with the fast-acting, sturdy Acme Threaded Coupling Ring and therefore, ideal for use on equipment which is subjected to considerable vibration and tension on cables, such as on sound trucks and other portable units. XK-1 500v; XK-3 200v; XK-4, 133v Service.

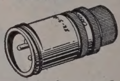
TYPE "XK-11" STRAIGHT CORD PLUG (With Socket Insert)



Shell is of die-cast zinc, cad. plated finish. Equipped with quick-acting coupling ring. Solder pot connections are easily accessible. Takes $\frac{3}{16}$″ to $\frac{9}{32}$″ cable. Built for long, dependable service. Mates with -12, -14.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-11	$5.50
3	15-amp.	0.083	XK-3-11	5.50
4	3-10-amp. 1-15-amp.	0.085	XK-4-11	7.80

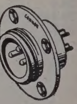
TYPE "XK-12" STRAIGHT CORD PLUG (With Pin Insert)



For use in conjunction with Straight Cord Plug (Socket Insert) or Wall Receptacle (Socket Insert) with coupling nut. Shell is made of die-cast zinc, cad. plated finish. Takes $\frac{3}{16}$″ to $\frac{9}{32}$″ cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-12	$3.15
3	15-amp.	0.083	XK-3-12	3.15
4	3-10-amp. 1-15-amp.	0.085	XK-4-12	4.75

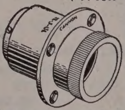
TYPE "XK-14" WALL RECEPTACLE (With Pin Insert)



Body fits in a ¾″ hole and extends $\frac{13}{32}$″ behind a $\frac{1}{16}$″ flange. Flange is 1½″ in diameter, drilled for four #4-40 oval-head mounting screws on a ⅝″ radius, 90° apart. Shell is made of brass, nickel finish. Solder pots extend $\frac{9}{32}$″ beyond body. Has external acme thread on shell and mates with straight cord plug XK-11.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.045	XK-1-14	$3.15
3	15-amp.	0.047	XK-3-14	3.15
4	3-10-amp. 1-15-amp.	0.049	XK-4-14	4.75

TYPE "XK-13L" WALL RECEPTACLE (With Socket Insert)

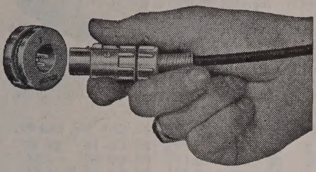


Body fits in $1\frac{1}{64}$″ hole and extends $1\frac{1}{16}$″ behind flange. Flange is 1½″ in diameter and drilled for four #4-40 oval-head mounting screws on a ⅝″ radius, 90° apart. Shell is made of brass, nickel finish. Solder pots on contacts extend ⅛″ beyond body. Mates with a straight cord plug (Pin Insert) XK-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.144	XK-1-13L	$5.90
3	15-amp.	0.146	XK-3-13L	6.05
4	3-10-amp. 1-15-amp.	0.148	XK-4-13L	7.60

CANNON ELECTRIC DEVELOPMENT COMPANY

TYPE XL FITTINGS

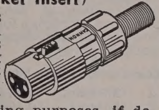


"XL-3-14N" Receptacle and "XL-3-11" Plug in engaging position. Compare small size of plug with hand.

The Cannon Electric Type "XL" Connector combines various features found in other Cannon types into a small fitting comparable only in size to the Type "X" for low level sound transmission circuits. Among the leading features are the following: (1) convenient latchlock device to hold connector tight. (2) lightweight. (3) polarizing means (4) compression gland with relief spring or integral clamp, if desired. (5) streamlined design. (6) tapped metal for insert retaining screw. (7) provision for special grounding contact and grounding to shell. Contacts are 15-amp. for No. 14 B&S stranded wire in 3 contact insert; 10-amp. in 4 contact insert. Shell is zinc or steel, with various finishes available, bright nickle being standard. Satin-chrome finish available on steel shells. Flashover Voltage 1400-1600v.

ZINC SHELL TYPES

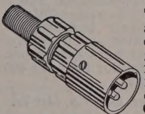
TYPE "XL-11" STRAIGHT CORD PLUG (Socket Insert)



Type XL-3-11 is equipped with latch lock device and has raised polarizing boss. No. 1 contact engages before Nos. 2 and 3, and may be used for grounding purposes, if desired. $\frac{9}{32}$ cable accommodation. Overall dimensions: length, 2 $\frac{3}{32}$, with relief spring, 2 $\frac{27}{32}$ approx.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0992	XL-3-11	1.55
4	10-amp.	.0992	XL-4-11	2.15

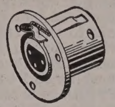
TYPE "XL-12" STRAIGHT CORD PLUG (Pin Insert)



Type XL-12 plug has alignment rib in addition to polarizing groove. Cable accommodation is $\frac{9}{32}$. Insert is removable for soldering or inspection. Overall dimensions: length, 1⅞, with cable relief spring, 2⅝; max. diameter ¾. Insert dia. ⅝″.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0792	XL-3-12	1.50
4	10-amp.	.0792	XL-4-12	2.00

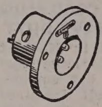
TYPE "XL-13" RECEPTACLE (Socket Insert)



A wall mounting receptacle similar to XL-14 except that it has socket insert assembly and latch locking device. Overall Dimensions: flange diameter, 1$\frac{7}{16}$; flange thickness $\frac{3}{32}$; rear of flange to solder pot extension 1 $\frac{9}{16}$; dia. barrel, $\frac{15}{16}$; three mounting holes drilled .136

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.132	XL-3-13	1.55
4	10-amp.	.132	XL-4-13	2.15

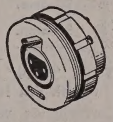
TYPE "XL-14" RECEPTACLE (Pin Insert)



This wall mounting receptacle has three mounting holes having .136 diameter. Overall dimensions: flange diameter, 1 $\frac{7}{16}$; width flange, $\frac{3}{32}$; length behind flange to solder pot extension, 1 $\frac{1}{64}$; barrel diameter, ¾. Material zinc, bright nickel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0592	XL-3-14	1.20
4	10-amp.	.0592	XL-4-14	1.70

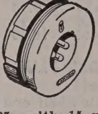
TYPE "XL-13N" RECEPTACLE (Socket Insert)



Similar to XL-14N except has socket insert assembly, with latch-lock device, and polarizing boss on insert barrel. No. 1 contact engages before Nos. 2 and 3 and may be used for grounding circuit, if desired. Overall dimensions: flange and barrel and nut are identical to XL-14N, length from face of flange including solder pot extension, 1 $\frac{17}{64}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2112	XL-3-13N	1.55
4	10-amp.	.2112	XL-4-13N	2.15

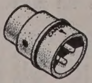
TYPE "XL-14N" RECEPTACLE (Pin Insert)



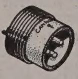
Designed to be mounted in a panel and has lock nut, accommodating up to $\frac{5}{16}$ inch panel. Two fittings may be mounted on a single gang plate. Overall Dimensions: flange diameter, 1 $\frac{7}{16}$; barrel diameter, 1; width flange to barrel, $\frac{27}{32}$, with $\frac{15}{64}$ max. solder pot extension; flange thickness, $\frac{5}{32}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2048	XL-3-14N	1.45
4	10-amp.	.2048	XL-4-14N	1.95

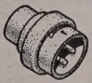
TYPE "XL" ADAPTER RECEPTACLES



XL-3-50
1.75 List Pr.
XL-4 2.40

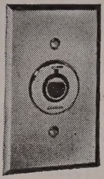


XL-3-50T
1.90 List Pr.
XL-4 2.60



XL-3-50N
2.15
XL-4 3.15

SINGLE GANG WALL RECEPTACLES

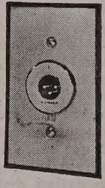


Type XL-3-35
(Socket Insert)

Face plate similar to type used in P-35. Takes an XL-3-13N Receptacle. Wt. 0.3479.

Cat. No.	List Price
XL-3-35	4.40
XL-4-35	4.85

TWO-GANG TYPES ALSO AVAILABLE



Type XL-3-36
(Pin Insert)

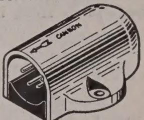
Takes an XL-3-14N Receptacle. Bright nickel finish.

Cat. No.	List Price
XL-3-36	4.45
XL-4-36	4.95

TWO GANG WALL RECEPTACLES

	List
XL-3-35-2G (2 socket inserts)	9.35
XL-4-35-2G (2 socket inserts)	10.55
XL-3-36-2G (2 pin inserts)	9.30
XL-4-36-2G (2 pin inserts)	10.25

TYPE XL-42 RECEPTACLE (Pin Insert)

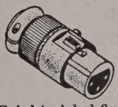


The -42 Receptacle is similar to the X-42 shown under "X" Fittings, except that it has the XL type insert. For special mounting purposes.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	XL-3-42	1.50
4	10-amp.	0.063	XL-4-42	1.65

STEEL SHELL PLUGS INTEGRAL CLAMP TYPES

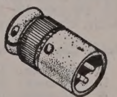
TYPE XL-3-11SC PLUG (Socket Insert)



The steel shell type is built for rugged service and has cable entry of ¼″ min., 5/16″ max. 6/32″ shorter overall shell than zinc type. Otherwise same construction, mating with regular XL receptacle. Bright nickel finish standard.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1333	XL-3-11SC	3.40
4	10-amp.	.1333	XL-4-11SC	4.00

TYPE XL-3-12SC PLUG (Pin Insert)



Corresponds to XL-3-12 except that shell is steel with integral clamp. For 5/16″ max. entry. Shell is 7/32″ shorter in overall length than corresponding zinc shell.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1250	XL-3-12SC	3.35
4	10-amp.	.1250	XL-4-12SC	3.85

CANNON ELECTRIC DEVELOPMENT COMPANY

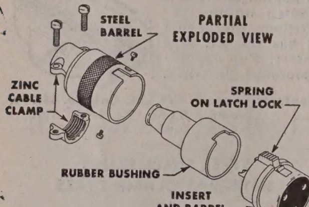
TYPE P FITTINGS

REVISED PRICES

OCTOBER 23, 1950

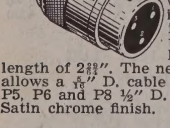
CANNON "TYPE P" FITTINGS. Universally used in sound and allied applications. "Type P" Fittings include a size and type for every requirement, with a high standard of quality. All 90° Plugs have split-shell construction for quick, easy access for wiring or inspection. Splash-proof but not weather-proof. Plug and receptacle dust caps are available. Laboratory tests show an average voltage-drop of not more than 10 millivolts, with current flowing at the rated capacity. Insulating material is black phenolic which has a 0.7% absorption in 24 hours of immersion in water and a dielectric strength of 550 volts per mil at 60 cycles. Two to 6 contact inserts accommodate No. 10 B&S stranded wire; 8 contact insert No. 14 wire.

New shell designs of the P-CG-11S and P-CG-12S, cord plugs, replace both old type shells of zinc and steel, and such improvements as shorter length, new rubber bushing, improved latch and spring, integral clamp. Shell material is steel, integral clamp zinc.



NEW TYPES WILL MATE WITH CORRESPONDING FITTINGS, SAME AS OLD DESIGN

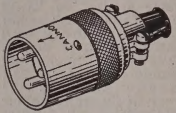
TYPE P-CG-11S CORD PLUG
COMBINATION STEEL & ZINC
(With Socket Insert)



This new type plug with steel shell and integral zinc clamp is $\frac{11}{64}$" shorter than the old type and has an overall length of 2$\frac{29}{64}$". The new rubber bushing allows a $\frac{5}{16}$" D. cable entry, and on P4, P5, P6 and P8 ½" D. max. cable entry. Satin chrome finish.

Poles	Capacity	Wt. Lbs.	Cat. No.	List Price
2	30-amp.	0.202	P2-CG-11S	$6.15
3	30-amp.	0.202	P3-CG-11S	6.30
4	30-amp.	0.202	P4-CG-11S	6.65
5	30-amp.	0.206	P5-CG-11S	7.00
6	30-amp.	0.208	P6-CG-11S	7.20
8	15-amp.	0.208	P8-CG-11S	7.70

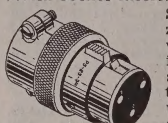
TYPE P-CG-12S CORD PLUG
COMBINATION STEEL & ZINC
(With Pin Insert)



Similar construction and materials to the -11S, except for pin insert. New rubber bushing on P4 to P8 fittings is contained within the shell and lines the solder pot cavity. Same cable entry sizes as -11S. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.163	P2-CG-12S	$5.00
3	30-amp.	0.159	P3-CG-12S	5.15
4	30-amp.	0.159	P4-CG-12S	5.30
5	30-amp.	0.163	P5-CG-12S	5.40
6	30-amp.	0.167	P6-CG-12S	5.65
8	15-amp.	0.163	P8-CG-12S	6.00

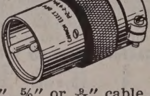
TYPE "P-23" STRAIGHT CORD PLUG (With Socket Insert), HEAVY DUTY



Shell is die-cast zinc for severe service, but employing all features such as the latch type locking device which is standard on "Type P." It has integral clamp for ¾" cable. Also made for $\frac{9}{16}$" & ⅝" cable if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.166	P2-23	$8.90
3	30-amp.	0.170	P3-23	9.20
4	30-amp.	0.174	P4-23	9.65
5	30-amp.	0.178	P5-23	10.10
6	30-amp.	0.182	P6-23	10.40
8	15-amp.	0.178	P8-23	11.05

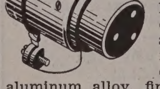
TYPE "P-24" STRAIGHT CORD PLUG (With Pin Insert), HEAVY DUTY



Corresponds with "Type P-23" Plug (Socket insert). Built for hard service. The skirt is of steel, body diecast zinc. Has Integral Clamp, for ¾", ⅝" or $\frac{9}{16}$" cable, if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.170	P2-24	$9.00
3	30-amp.	0.173	P3-24	9.20
4	30-amp.	0.176	P4-24	9.35
5	30-amp.	0.179	P5-24	9.55
6	30-amp.	0.182	P6-24	9.95
8	15-amp.	0.179	P8-24	10.40

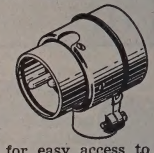
TYPE "P-CG-15" 90° CORD PLUG
(With Socket Insert)



Has Split Shell and all other "Type P" features found in "Type P-15, 90° Plug" except cable connection, which is an Integral Clamp for ½" or smaller cable. Made of cast aluminum alloy, finished in tin plate. New, heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.220	P2-CG-15	$6.90
3	30-amp.	0.224	P3-CG-15	7.15
4	30-amp.	0.228	P4-CG-12	7.50
5	30-amp.	0.232	P5-CG-15	7.80
6	30-amp.	0.236	P6-CG-15	8.00
8	15-amp.	0.232	P8-CG-15	8.50

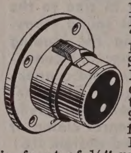
TYPE "P-CG-16" 90° CORD PLUG
(With Pin Insert)



Corresponds with Type P-CG-15 90° Plug. (Socket insert), having Integral Clamp for ½" or smaller cable. Barrel is of steel and shell of cast aluminum alloy, tin plate finish. Removable cap for easy access to contacts for wiring or inspection. New heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.195	P2-CG-16	$6.45
3	30-amp.	0.198	P3-CG-16	6.55
4	30-amp.	0.201	P4-CG-16	6.65
5	30-amp.	0.204	P5-CG-16	6.80
6	30-amp.	0.207	P6-CG-16	7.10
8	15-amp.	0.204	P8-CG-16	7.40

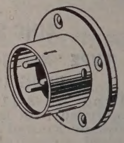
TYPE "P-17" PANEL RECEPTACLE
(With Socket Insert)
Surface Mounting



P-17 has Latch Locking Device and all other "Type P" features. Made of die-cast zinc. Satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points 90° apart on $\frac{13}{16}$ radius for four #4-40 oval head M.S. Body extends 1" in front of ⅛" mounting flange.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.125	P2-17	$7.70
3	30-amp.	0.129	P3-17	8.00
4	30-amp.	0.133	P4-17	8.40
5	30-amp.	0.137	P5-17	8.90
6	30-amp.	0.141	P6-17	9.20
8	15-amp.	0.137	P8-17	9.85

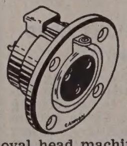
TYPE "P-18" PANEL RECEPTACLE
(with Pin Insert) Surface Mounting



Corresponds to "Type P-17", Panel Receptacle. Shell is made of brass, satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points on $\frac{13}{16}$ radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.156	P2-18	$4.15
3	30-amp.	0.159	P3-18	4.35
4	30-amp.	0.162	P4-18	4.50
5	30-amp.	0.165	P5-18	4.70
6	30-amp.	0.168	P6-18	5.05
8	15-amp.	0.165	P8-18	5.55

TYPE "P-13" PANEL RECEPTACLE
(with Socket Insert) Flush Mounting



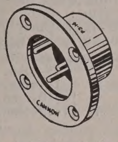
Has Latch Locking Device which operates from front of panel. Made of die-cast zinc, satin chrome finish. Flange is 2" in diameter and drilled and countersunk at four points on $\frac{13}{16}$ radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.202	P2-13	$5.15
3	30-amp.	0.206	P3-13	5.35
4	30-amp.	0.210	P4-13	5.65
5	30-amp.	0.214	P5-13	6.00
6	30-amp.	0.218	P6-13	6.20
8	15-amp.	0.214	P8-13	6.65

CANNON ELECTRIC DEVELOPMENT COMPANY

TYPE P FITTINGS

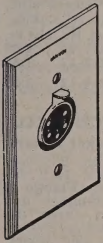
TYPE "P-14" RECEPTACLE (Pin Insert), FLUSH MOUNTING



Flange is 2" in diameter, drilled with four .120" diameter holes to take four #4-40 oval-head mounting screws, arranged 90° apart on a radius of $\frac{13}{16}$". Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.104	P2-14	$2.70
3	30-amp.	0.107	P3-14	2.80
4	30-amp.	0.110	P4-14	3.00
5	30-amp.	0.113	P5-14	3.10
6	30-amp.	0.116	P6-14	3.35
8	15-amp.	0.113	P8-14	3.70

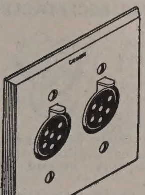
TYPE "P-35" SINGLE GANG WALL RECEPTACLE (With Socket Insert)



Furnished with brackets for standard switch box. Shell is die-cast zinc, satin chrome finish. Plate is 4½" high and 2¾" wide. Latch Locking Device operates from front of panel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.341	P2-35	$8.95
3	30-amp.	0.345	P3-35	9.15
4	30-amp.	0.349	P4-35	9.45
5	30-amp.	0.353	P5-35	9.80
6	30-amp.	0.357	P6-35	10.00
8	15-amp.	0.353	P8-35	10.45

TYPE "P-35-2G" TWO-GANG WALL RECEPTACLE (With Socket Inserts)



Furnished with brackets for standard switch box. Plate is 4½" high and 4$\frac{9}{16}$" wide. Both receptables have Latch Locking Device, operated from front of panel. Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.448	P2-35-2G	$18.00
3	30-amp.	0.456	P3-35-2G	18.55
4	30-amp.	0.464	P4-35-2G	19.50
5	30-amp.	0.472	P5-35-2G	20.40
6	30-amp.	0.480	P6-35-2G	20.95
8	15-amp.	0.472	P8-35-2G	22.25

MINIMUM FLASHOVER VOLTAGES ON P INSERTS

P-8 1300V—P-2 1600V—P-3 1600V

(All others more than 1600 volts.)

TYPE "P-36" SINGLE GANG WALL RECEPTACLE (With Pin Insert)

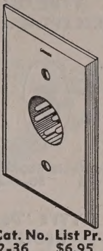


Plate is 4½" high and 2¾" wide. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.277	P2-36	$6.95
3	30-amp.	0.280	P3-36	7.10
4	30-amp.	0.283	P4-36	7.20
5	30-amp.	0.286	P5-36	7.40
6	30-amp.	0.289	P6-36	7.60
8	15-amp.	0.286	P8-36	7.90

TYPE "P-36-2G" TWO-GANG WALL RECEPTACLE (With Pin Insert)

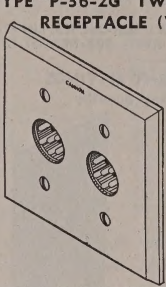
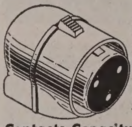


Plate is 4½" high and 4$\frac{9}{16}$" wide. Drilled to take four #6-32 oval-head mounting screws. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.554	P2-36-2G	$14.25
3	30-amp.	0.563	P3-36-2G	14.65
4	30-amp.	0.572	P4-36-2G	14.95
5	30-amp.	0.579	P5-36-2G	15.35
6	30-amp.	0.588	P6-36-2G	16.10
8	15-amp.	0.579	P8-36-2G	17.05

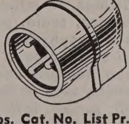
TYPE "P-41" 90° MICROPHONE OR PANEL RECEPTACLE (With Socket Insert)



Can be mounted in equipment or instrument panel. Equipped with Latch Locking Device. Cap is removable for easy wiring. Shell is die-cast zinc, finished in black wrinkle enamel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.249	P2-41	$11.55
3	30-amp.	0.253	P3-41	11.80
4	30-amp.	0.257	P4-41	12.25
5	30-amp.	0.261	P5-41	12.75
6	30-amp.	0.265	P6-41	13.05
8	15-amp.	0.261	P8-41	13.70

TYPE "P-42" 90° MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)

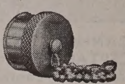


For mounting on equipment or instrument panel. Cap is removable for easy wiring. Shell is made of die-cast zinc with black wrinkle enamel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.176	P2-42	$8.40
3	30-amp.	0.179	P3-42	8.65
4	30-amp.	0.182	P4-42	8.80
5	30-amp.	0.185	P5-42	9.00
6	30-amp.	0.188	P6-42	9.35
8	15-amp.	0.185	P8-42	9.85

ACCESSORY ITEMS

DUST CAPS

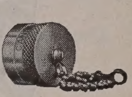

ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with pin inserts. Made of brass, cadmium plated, with nickel silver bead chain.

Lbs.	Cat. No	List
0.081	PPC	$2.80
0.082	PCI*	3.30

*Type PCI is insulated inside for application where contacts are "hot."

TYPE PRC DUST CAP


ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with socket inserts. Made of brass, cadmium plated with nickel silver bead chain.

Lbs.	Cat. No	List
0.095	PRC	$2.37

REPLACEMENT ITEMS

A number of Type P and Type O Connectors formerly catalogued have been omitted from the list. These include various Special Items. It is the policy of the company at the present time to list such items as obsolete or replacement fittings, which are available only upon special request. If, however, they are required for replacement purposes, write for Type P & O Replacement Page for listing and catalog number.

Net List

TYPE "PCG" CLAMP GLAND NUT

ONE-THIRD ACTUAL SIZE

Made of die-cast zinc, cadmium plated. Complete with gasket.

Wt. Lbs	Cat. No.	List Price
0.037	PCG	$1.45

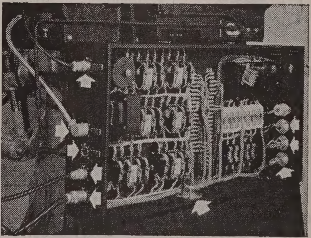
TYPE "P" GLAND GASKET

ONE-THIRD ACTUAL SIZE

As used in Straight Glands and Clamp Glands. Made of soft white rubber.

Cat. No.	List Price
P Gasket	$ .22

APPLICATION



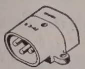
Type "P" CONNECTORS on Mitchell Camera Background Projector

CANNON ELECTRIC DEVELOPMENT COMPANY

TYPE O FITTINGS

CANNON "TYPE O" PLUGS AND RECEPTACLES. This series consists of a line of 3-contact oval-shaped plugs and receptacles, equiped with Latch Locking Device. Contacts are silver-plated, full-floating, non-twisting, carry 30-amp. capacity. Solder terminals are tinned for ease of wiring. 30-amp. contacts accommodate No. 30-amp. contacts accommodate No. 10 B&S stranded wire. 2400v flashover.

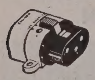
TYPE "03-42" MICROPHONE OR PANEL RECEPTACLE
(With Pin Insert)



Has flat base, with two lugs for mounting with #4-40 oval-head screws. Made of die-cast zinc, and cadmium plated.

Contact	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.271	03-42	$8.65

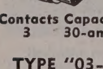
TYPE "03-41" 90° MICROPHONE OR PANEL RECEPTACLE (Socket Insert)



Flat base is flanged and is attached to microphone or panel by means of two #4-40 oval-head mounting screws. Made of die-cast zinc, cad. plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.274	03-41	$8.65

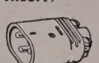
TYPE "03-11" STRAIGHT CORD PLUG (With Socket Insert)



Has Integral Clamp for 9/32" or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.113	03-11	$6.10

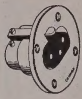
TYPE "03-12" STRAIGHT CORD PLUG (With Pin Insert)



Corresponds with No. 03-11 "Type O" Straight Cord Plug (Socket Insert). Has integral cable clamp, for 9/32" or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.104	03-12	$6.10

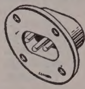
TYPE "03-13" FLUSH WALL RECEPTACLE (With Socket Insert)



Flange is 2" in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart on a radius of 13/16". Made of die-cast zinc, cadmium plated. Latch Locking Device is operated from panel front.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.148	03-13	$7.15

TYPE "03-14" FLUSH WALL RECEPTACLE
(With Pin Insert)



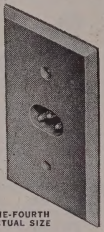
The flange is 2" in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart, on a radius of 13/16". Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.107	03-14	$7.15

REPLACEMENT FITTINGS
List — Any Quantity

ONE-FOURTH ACTUAL SIZE

03-35
$8.75 List

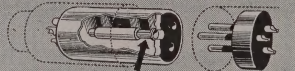


ONE-FOURTH ACTUAL SIZE

03-36
$8.75 List

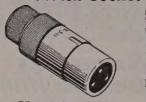
TYPE X FITTINGS

The arrow shows spring clip on full-floating socket contact which gives a positive pressure fit connection.



CANNON "TYPE X" PLUGS AND RECEPTACLES—The "Type X" Series of small connectors offers inexpensive fittings of reliable quality for sound service, radio, public address systems and geophysical research. In addition to compactness, many exclusive Cannon features are embodied in this series, such as full floating contacts in all socket inserts. Solder pot cable connections are easily accessible. Cable glands are removable. Contacts are so positive that no latching device is needed for ordinary uses. Operating voltage X-4, 500V, X-2, X-3, 100V.

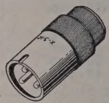
TYPE "X-11" CORD PLUG
(With Socket Insert)



Sturdily built for dependable service. Light in weight. Shell is diecast zinc, nickel finish. Will take 3/16" to 9/32" cable. Used in conjunction with the following: X-14 Wall Receptacle, X-12 Straight Cord Plug, and X-42 Microphone Receptacle X-44L Receptacle.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-11	2.30
3	15-amp.	0.083	X-3-11	2.30
4	3-10-amp.	0.085	X-4-11	4.25
4	1-15-amp.			

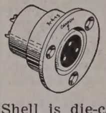
TYPE "X-12" CORD PLUG
(With Pin Insert)



For use in conjunction with X-11 Straight Cord Plug (Socket Insert) or X-13 Wall Receptacle (Socket Insert). Shell is die-cast zinc, nickel finish. Will take 3/16" to 9/32" cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.061	X-1-12	2.05
3	15-amp.	0.063	X-3-12	1.65
4	3-10-amp.	0.065	X-4-12	3.00
4	1-15-amp.			

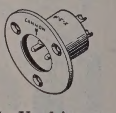
TYPE "X-13" WALL RECEPTACLE
(With Socket Insert)



Body fits in 7/8" hole and extends 1 3/16" behind flange. Flange is 1⅜" in diameter and drilled for three #4-40 oval-head screws on 17/32" radius 120° apart. Shell is die-cast zinc, nickel finish. To be used in conjunction with the following X-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-13	2.30
3	15-amp.	0.083	X-3-13	2.30
4	3-10-amp.	0.085	X-4-13	4.25
4	1-15-amp.			

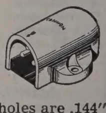
TYPE "X-14" WALL RECEPTACLE
(With Pin Insert)



Body fits in ¾" hole and extends 23/32" behind the flange, which is 1⅜" in diameter and drilled for three #4-40 oval-head screws on 17/32 radius, 120° apart. Shell is zinc, nickel plated finish. Used in conjunction with straight cord plug (Socket Insert) X-11. Solder pots extend ¼" beyond rear of body.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.040	X-1-14	1.65
3	15-amp.	0.042	X-3-14	1.65
4	3-10-amp.	0.044	X-4-14	3.00
4	1-15-amp.			

TYPE "X-42" MICROPHONE RECEPTACLE (With Pin Insert)



Has all the features of "Type X" Straight Cord Plugs and Wall Receptacles but it is mounted on a flat base. Shell is die-cast zinc, nickel finish. Use with X-11 straight Cord Plug (Socket Insert) Mounting holes are .144" in diameter and 1" apart.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	X-3-42	1.65
4	15-amp.	0.063	X-4-42	3.65

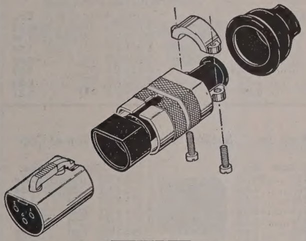
CANNON ELECTRIC DEVELOPMENT COMPANY

UA FITTINGS

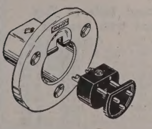
The UA Series of audio connectors designed in cooperation with the RMA Committee has all the features of Type P, O and XL and, in addition, the following: (1) gold-plated contacts for long life and "no noise" (2) double protection rubber relief collar and rubber bushings (3) flat-top polarization for finger-touch action (4) stronger and better latch lock (5) steel plug shells and insert barrel (6) spring-action insert removal — no screws.

Insulators are high dielectric, molded general-purpose Durez. 15-amp. contacts with 2400 v. minimum flash-over; for No. 14 B&S stranded wire. Max. cable entry is ½". Write for special UA Bulletin for complete details.

SEMI-EXPLODED VIEW UA-11

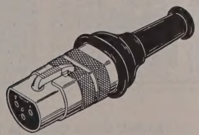


SEMI-EXPLODED VIEW UA-14



showing rubber cushion that fits over pin contacts to avoid shocks, provide protection from moisture, improve insulation factors.

TYPE UA-3-11 PLUG
(Socket Insert)

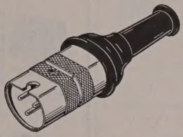


The UA-11 plug is approximately 3½" long, including rubber bushing; 1 3/16" maximum width and 1 1/32" thickness. Steel shell and barrel. Mates with UA-12, UA-32 and UA-42.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.15	UA-3-11	5.35

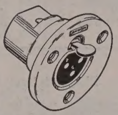
TYPE UA-3-12 PLUG
(Pin Insert)

The UA-12 plug is approximately 3¼" long, including rubber relief collar. Steel shell. Mates with UA-3-11, UA-3-13, UA-3-31.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.11	UA-3-12	4.40

TYPE UA-3-13 RECEPTACLE
(Socket Insert)

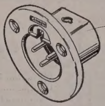


The UA-13 Receptacle has a round flange compared to the rectangular flange of the UA-31. Three mounting holes are provided, .120 dia. countersunk for #4 flat head machine screws. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.14	UA-3-13	4.10

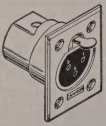
TYPE UA-3-14 RECEPTACLE
(Pin Insert)

The UA-14 Receptacle has a similar flange construction as the UA-13. Barrel extends 23/32" behind flange with 15/64" solder pot extension. A 63/64" dia. (1") hole is required to mount. Mates with UA-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-14	2.50

TYPE UA-3-31 RECEPTACLE
(Socket Insert)

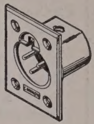


The UA-31 Receptacle has a rectangular flange construction, and extends 1 3/32" behind flange plus 3/16" max. solder pot extension and requires a 1" hole for 63/64" dia., barrel. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.13	UA-3-31	4.10

TYPE UA-3-32 RECEPTACLE
(Pin Insert)

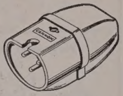
The UA-3-32 Receptacle is similar to UA-31. Barrel extends 25/32" plus 15/64" max. solder pot extension behind flange, and requires a 1" hole for 63/64" dia. barrel. Mates with XL-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.07	UA-3-32	2.50

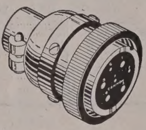
TYPE UA-3-42 RECEPTACLE
(Pin Insert)

The UA-42 is a special mounting receptacle adaptable to microphones and other applications where it is advisable to mount receptacle parallel to the equipment, etc. Similar to XL-42 and X-42 types.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-42	4.95

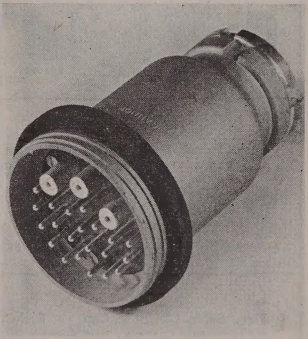
MISCELLANEOUS



Used on telephone recorder connectors made by Western Electric, Automatic Electric, etc.

BP-M7-21C-½ Plug (CA16881)	**$4.86 List**
BP-M7-32S Receptacle (CA4128)	**$1.97 List**

TELEVISION CAMERA PLUG



Used on Dumont, G.E. and other television cameras.

TV-R24C-22-⅞ Plug (CA17898)	**$24.96 List**

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

"300" SERIES PLUGS AND SOCKETS

General Specifications

2 Contacts to 33 Contacts. All plugs and sockets are polarized.

2 Contact Plugs and Sockets are round, others rectangular.

Plugs of one size cannot fit into sockets of another size.

Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area.

Molded Bakelite insulation.

Formed metal caps. Formed fibre linings in caps.

Small size, with good separation between contacts.

Plug or socket for panel mounting.

Plug or socket with cap

Simple, fool-proof assembly.

Finish on caps—Black Crystal.

Plug prongs—$\frac{5}{32}$" wide by $\frac{3}{64}$" thick.

We suggest using the 300 series in circuits not exceeding 45 Volts and 5 Amps., although circuit characteristics may permit higher ratings.

Plug with Angle Brackets

P304AB

No.	Contacts	Ea.
P-302-AB	(2)	$ .25
P-303-AB	(3)	.31
P-304-AB	(4)	.35
P-306-AB	(6)	.43
P-308-AB	(8)	.50
P-310-AB	(10)	.57
P-312-AB	(12)	.64

Socket with Angle Brackets

S304AB

No.	Contacts	Ea.
S-302-AB	(2)	$ .28
S-303-AB	(3)	.33
S-304-AB	(4)	.37
S-306-AB	(6)	.46
S-308-AB	(8)	.57
S-310-AB	(10)	.68
S-312-AB	(12)	.79

Plug with Flush Plate

P304FP

No.	Contacts	Ea.
P-302-FP	(2)	$ .44
P-303-FP	(3)	.48
P-304-FP	(4)	.53
P-306-FP	(6)	.59
P-308-FP	(8)	.67
P-310-FP	(10)	.74
P-312-FP	(12)	.81

Socket with Flush Plate

S304FP

No.	Contacts	Ea.
S-302-FP	(2)	$ .45
S-303-FP	(3)	.50
S-304-FP	(4)	.55
S-306-FP	(6)	.63
S-308-FP	(8)	.74
S-310-FP	(10)	.85
S-312-FP	(12)	.96

Plug with Recessed Plate

P304RP

No.	Contacts	Ea.
P-302-RP	(2)	$ .51
P-303-RP	(3)	.56
P-304-RP	(4)	.61
P-306-RP	(6)	.69
P-308-RP	(8)	.80
P-310-RP	(10)	.91
P-312-RP	(12)	1.01

Socket with Recessed Plate

S304RP

No.	Contacts	Ea.
S-302-RP	(2)	$ .53
S-303-RP	(3)	.58
S-304-RP	(4)	.63
S-306-RP	(6)	.75
S-308-RP	(8)	.88
S-310-RP	(10)	1.01
S-312-RP	(12)	1.16

Plug, Flared Hole in Cap

P304FHT

No.	Contacts	Ea.
P-302-FHT	(2)	$ .43
P-303-FHT	(3)	.47
P-304-FHT	(4)	.52
P-306-FHT	(6)	.59
P-308-FHT	(8)	.67
P-310-FHT	(10)	.76
P-312-FHT	(12)	.86

Socket, Flared Hole in Cap

S304FHT

No.	Contacts	Ea.
S-302-FHT	(2)	$ .44
S-303-FHT	(3)	.48
S-304-FHT	(4)	.53
S-306-FHT	(6)	.63
S-308-FHT	(8)	.75
S-310-FHT	(10)	.87
S-312-FHT	(12)	.99

Plug, Flared Hole in Cap and with Latches

P304FHT-L

No.	Contacts	Ea.
P-302-FHT-L	(2)	$ .58
P-303-FHT-L	(3)	.63
P-304-FHT-L	(4)	.68
P-306-FHT-L	(6)	.75
P-308-FHT-L	(8)	.83
P-310-FHT-L	(10)	.92
P-312-FHT-L	(12)	1.01

Socket, Flared Hole in Cap and with Keepers

S304FHT-K

No.	Contacts	Ea.
S-302-FHT-K	(2)	$ .59
S-303-FHT-K	(3)	.64
S-304-FHT-K	(4)	.69
S-306-FHT-K	(6)	.79
S-308-FHT-K	(8)	.91
S-310-FHT-K	(10)	1.03
S-312-FHT-K	(12)	1.16

Plug, Cable Clamp in Cap

P304CCT

No.	Contacts	Ea.
P-302-CCT	(2)	$ .58
P-303-CCT	(3)	.63
P-304-CCT	(4)	.68
P-306-CCT	(6)	.75
P-308-CCT	(8)	.83
P-310-CCT	(10)	.92
P-312-CCT	(12)	1.01

Socket, Cable Clamp in Cap

S304CCT

No.	Contacts	Ea.
S-302-CCT	(2)	$ .59
S-303-CCT	(3)	.64
S-304-CCT	(4)	.69
S-306-CCT	(6)	.79
S-308-CCT	(8)	.91
S-310-CCT	(10)	1.03
S-312-CCT	(12)	1.16

Plug, Cable Clamp in Cap and with Latches

P304CCT-L

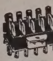
No.	Contacts	Ea.
P-302-CCT-L	(2)	$ .74
P-303-CCT-L	(3)	.78
P-304-CCT-L	(4)	.84
P-306-CCT-L	(6)	.91
P-308-CCT-L	(8)	.98
P-310-CCT-L	(10)	1.08
P-312-CCT-L	(12)	1.18

Socket, Cable Clamp in Cap and with Keepers

S304CCT-K

No.	Contacts	Ea.
S-302-CCT-K	(2)	$ .75
S-303-CCT-K	(3)	.80
S-304-CCT-K	(4)	.85
S-306-CCT-K	(6)	.95
S-308-CCT-K	(8)	1.07
S-310-CCT-K	(10)	1.19
S-312-CCT-K	(12)	1.31

Plug with Angle Brackets


P315AB

No.	Contacts	Ea.
P-315-AB	(15)	$ .84
P-318-AB	(18)	1.05
P-321-AB	(21)	1.32
P-324-AB	(24)	1.60
P-327-AB	(27)	1.88
P-330-AB	(30)	2.16
P-333-AB	(33)	2.43

Socket with Angle Brackets

S315AB

No.	Contacts	Ea.
S-315-AB	(15)	$ .98
S-318-AB	(18)	1.18
S-321-AB	(21)	1.46
S-324-AB	(24)	1.74
S-327-AB	(27)	2.02
S-330-AB	(30)	2.30
S-333-AB	(33)	2.57

Plug with End Brackets

P315EB

No.	Contacts	Ea.
P-315-EB	(15)	$ .84
P-318-EB	(18)	1.05
P-321-EB	(21)	1.32
P-324-EB	(24)	1.60
P-327-EB	(27)	1.88
P-330-EB	(30)	2.16
P-333-EB	(33)	2.43

Sockets with End Brackets

S315EB

No.	Contacts	Ea.
S-315-EB	(15)	$ .98
S-318-EB	(18)	1.18
S-321-EB	(21)	1.46
S-324-EB	(24)	1.74
S-327-EB	(27)	2.02
S-330-EB.	(30)	2.30
S-333-EB	(33)	2.57

Plug with Shallow Brackets

P315SB

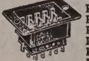
No.	Contacts	Ea.
P-315-SB	(15)	$1.25
P-318-SB	(18)	1.54
P-321-SB	(21)	1.82
P-324-SB	(24)	2.16
P-327-SB	(27)	2.43
P-330-SB	(30)	2.78
P-333-SB	(33)	3.06

Sockets with Shallow Brackets

S315SB

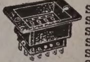
No.	Contacts	Ea.
S-315-SB	(15)	$1.41
S-318-SB	(18)	1.68
S-321-SB	(21)	1.96
S-324-SB	(24)	2.30
S-327-SB	(27)	2.57
S-330-SB	(30)	2.93
S-333-SB	(33)	3.21

Plug with Deep Bracket


P315DB

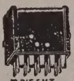
No.	Contacts	Ea.
P-315-DB	(15)	$1.25
P-318-DB	(18)	1.54
P-321-DB	(21)	1.82
P-324-DB	(24)	2.16
P-327-DB	(27)	2.43
P-330-DB	(30)	2.78
P-333-DB	(33)	3.06

Socket with Deep Bracket


S315DB

No.	Contacts	Ea.
S-315-DB	(15)	$1.41
S-318-DB	(18)	1.68
S-321-DB	(21)	1.96
S-324-DB	(24)	2.30
S-327-DB	(27)	2.57
S-330-DB	(30)	2.93
S-333-DB	(33)	3.21

Plug with Flared Hole in Top of Cap


P315FHT

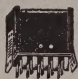
No.	Contacts	Ea.
P-315-FHT	(15)	$1.11
P-318-FHT	(18)	1.40
P-321-FHT	(21)	1.67
P-324-FHT	(24)	2.02
P-327-FHT	(27)	2.30
P-330-FHT	(30)	2.65
P-333-FHT	(33)	2.93

Socket, Flared Hole in Top of Cap

S315FHT

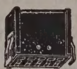
No.	Contacts	Ea.
S-315-FHT	(15)	$1.25
S-318-FHT	(18)	1.54
S-321-FHT	(21)	1.82
S-324-FHT	(24)	2.17
S-327-FHT	(27)	2.44
S-330-FHT	(30)	2.79
S-333-FHT	(33)	3.07

Plug, Flared Hole in Top of Cap and with Latches


P315FHT-L

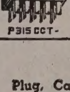
No.	Contacts	Ea.
P-315-FHT-L	(15)	$1.25
P-318-FHT-L	(18)	1.54
P-321-FHT-L	(21)	1.82
P-324-FHT-L	(24)	2.17
P-327-FHT-L	(27)	2.44
P-330-FHT-L	(30)	2.79
P-333-FHT-L	(33)	3.07

Socket, Flared Hole in Top of Cap and with Keepers


S315FHT-K

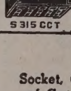
No.	Contacts	Ea.
S-315-FHT-K	(15)	$1.41
S-318-FHT-K	(18)	1.68
S-321-FHT-K	(21)	1.96
S-324-FHT-K	(24)	2.31
S-327-FHT-K	(27)	2.59
S-330-FHT-K	(30)	2.94
S-333-FHT-K	(33)	3.22

Plug, Cable Clamp in Top of Cap


P315CCT-

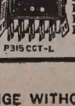
No.	Contacts	Ea.
P-315-CCT	(15)	$1.32
P-318-CCT	(18)	1.60
P-321-CCT	(21)	1.88
P-324-CCT	(24)	2.22
P-327-CCT	(27)	2.51
P-330-CCT	(30)	2.93
P-333-CCT	(33)	3.14

Socket, Cable Clamp in Top of Cap


S315CCT

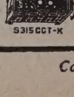
No.	Contacts	Ea.
S-315-CCT	(15)	$1.46
S-318-CCT	(18)	1.74
S-321-CCT	(21)	2.02
S-324-CCT	(24)	2.38
S-327-CCT	(27)	2.65
S-330-CCT	(30)	3.07
S-333-CCT	(33)	3.28

Plug, Cable Clamp in Top of Cap and with Latches


P315CCT-L

No.	Contacts	Ea.
P-315-CCT-L	(15)	$1.46
P-318-CCT-L	(18)	1.74
P-321-CCT-L	(21)	2.02
P-324-CCT-L	(24)	2.38
P-327-CCT-L	(27)	2.65
P-330-CCT-L	(30)	3.07
P-333-CCT-L	(33)	3.28

Socket, Cable Clamp in Top of Cap and with Keepers


S315CCT-K

No.	Contacts	Ea.
S-315-CCT-K	(15)	$1.61
S-318-CCT-K	(18)	1.89
S-321-CCT-K	(21)	2.17
S-324-CCT-K	(24)	2.52
S-327-CCT-K	(27)	2.79
S-330-CCT-K	(30)	3.22
S-333-CCT-K	(33)	3.42

"400" SERIES PLUGS AND SOCKETS (Formerly "Heavy Duty")

General Specifications

2, 4, 6, 8, 10 and 12 Contacts.
All plugs and sockets are polarized.
Phosphor bronze "knife switch" type socket contacts engage both sides of flat plug contacts—double contact area.
Molded Bakelite insulation.
Fibre linings in caps.
Plug or socket for panel mounting.
Plug or socket with caps.
Finish on caps—Black Crystal.
Plug prong cross section ¼" x $\frac{1}{16}$".
Locking fittings available for panel types or extension cables as shown.
We recommend using the 400 series in circuits not exceeding 110 Volts and 10 Amperes, although circuit characteristics may permit higher ratings.

PLUG—Less Angle Brackets not Drilled or Tapped Unless Specified

P-404-LAB

No.	Contacts	Ea.
P-402-LAB	(2)	$ .35
P-404-LAB	(4)	.48
P-406-LAB	(6)	.63
P-408-LAB	(8)	.76
P-410-LAB	(10)	.91
P-412-LAB	(12)	1.05

SOCKET—Less Angle Brackets. Not Drilled or Tapped Unless Specified

S-404-LAB

No.	Contacts	Ea.
S-402-LAB	(2)	$ .43
S-404-LAB	(4)	.63
S-406-LAB	(6)	.84
S-408-LAB	(8)	1.05
S-410-LAB	(10)	1.25
S-412-LAB	(12)	1.46

PLUG—with Angle Brackets for 1/16" Panel

P-404-AB $\frac{1}{16}$"

No.		Contacts	Ea.
P-402-AB	$\frac{1}{16}$"	(2)	$ .63
P-404-AB	$\frac{1}{16}$"	(4)	.76
P-406-AB	$\frac{1}{16}$"	(6)	.91
P-408-AB	$\frac{1}{16}$"	(8)	1.05
P-410-AB	$\frac{1}{16}$"	(10)	1.19
P-412-AB	$\frac{1}{16}$"	(12)	1.32

SOCKET—with Angle Brackets

S-404-AB

No	Contacts	Ea.
S-402-AB	(2)	$ .70
S-404-AB	(4)	.91
S-406-AB	(6)	1.11
S-408-AB	(8)	1.32
S-410-AB	(10)	1.54
S-412-AB	(12)	1.74

PLUG—with Shallow Brackets

P 404 SB

No.	Contacts	Ea.
P-402-SB	(2)	$ .76
P-404-SB	(4)	.98
P-406-SB	(6)	1.19
P-408-SB	(8)	1.40
P-410-SB	(10)	1.61
P-412-SB	(12)	1.82

SOCKET—with Shallow Brackets

S 404 SB

No.	Contacts	Ea.
S-402-SB	(2)	$ .84
S-404-SB	(4)	1.11
S-406-SB	(6)	1.40
S-408-SB	(8)	1.67
S-410-SB	(10)	1.95
S-412-SB	(12)	2.22

PLUG—with Deep Bracket

P-404-DB

No.	Contacts	Ea.
P-402-DB	(2)	$ .76
P-404-DB	(4)	.98
P-406-DB	(6)	1.19
P-408-DB	(8)	1.40
P-410-DB	(10)	1.61
P-412-DB	(12)	1.82

SOCKET—with Deep Brackets

S 404 DB

No.	Contacts	Ea.
S-402-DB	(2)	$ .84
S-404-DB	(4)	1.11
S-406-DB	(6)	1.40
S-408-DB	(8)	1.67
S-410-DB	(10)	1.95
S-412-DB	(12)	2.22

PLUGS

P-404-FHT

PLUG—Flared Hole in Top

No.	Contacts	Ea.
P-402-FHT	(2)	$ .70
P-404-FHT	(4)	.91
P-406-FHT	(6)	1.11
P-408-FHT	(8)	1.32
P-410-FHT	(10)	1.53
P-412-FHT	(12)	1.73

PLUG—Flared Hole in End

No.	Contacts	Ea.
P-402-FHE	(2)	$ .70
P-404-FHE	(4)	.91
P-406-FHE	(6)	1.11
P-408-FHE	(8)	1.32
P-410-FHE	(10)	1.53
P-412-FHE	(12)	1.73

SOCKETS

SOCKET—Flared Hole in Top

No.	Contacts	Ea.
S-402-FHT	(2)	$ .77
S-404-FHT	(4)	1.06
S-406-FHT	(6)	1.33
S-408-FHT	(8)	1.61
S-410-FHT	(10)	1.89
S-412-FHT	(12)	2.17

SOCKET — Flared Hole in End

No.	Contacts	Ea.
S-402-FHE	(2)	$ .77
S-404-FHE	(4)	1.06
S-406-FHE	(6)	1.33
S-408-FHE	(8)	1.61
S-410-FHE	(10)	1.89
S-412-FHE	(12)	2.17

PLUGS

P-404-CCT

PLUG—Cable Clamp in Top

No.	Contacts	Ea.
P-402-CCT	(2)	$ .98
P-404-CCT	(4)	1.19
P-406-CCT	(6)	1.40
P-408-CCT	(8)	1.60
P-410-CCT	(10)	1.80
P-412-CCT	(12)	2.01

PLUG—Cable Clamp in End

No.	Contacts	Ea.
P-402-CCE	(2)	$ .98
P-404-CCE	(4)	1.19
P-406-CCE	(6)	1.40
P-408-CCE	(8)	1.60
P-410-CCE	(10)	1.80
P-412-CCE	(12)	2.01

SOCKETS

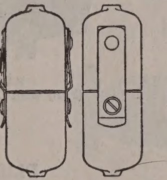
SOCKET—Cable Clamp in Top

No.	Contacts	Ea.
S-402-CCT	(2)	$1.06
S-404-CCT	(4)	1.33
S-406-CCT	(6)	1.61
S-408-CCT	(8)	1.89
S-410-CCT	(10)	2.17
S-412-CCT	(12)	2.44

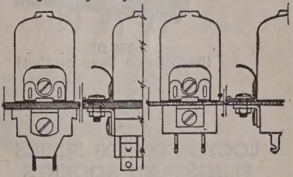
SOCKET—Cable Clamp in End

No.	Contacts	Ea.
S-402-CCE	(2)	$1.06
S-404-CCE	(4)	1.33
S-406-CCE	(6)	1.61
S-408-CCE	(8)	1.89
S-410-CCE	(10)	2.17
S-412-CCE	(12)	2.44

LOCKS FOR 400 SERIES PLUGS AND SOCKETS
(Formerly Heavy Duty)

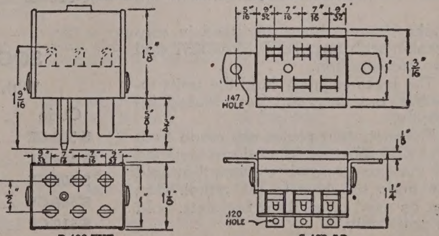

ILLUSTRATING No. 93 LOCK. May be attached to any 400 Series plug for extension cables. If plugs are ordered with this lock, specify "with No. 93 Locks."

	Ea.
No. 93 Lock when attached to plug, add to list per pair	$ .43
No. 93 Locks ONLY per pair	.43


ILLUSTRATING No. 63 LOCK. May be used on all panel mount 400 Series plugs and sockets when surface is flush with top of panel. Cannot be used on type DB plugs.

	Ea.
No. 63 Locks ONLY, per pair	$ .43

Dimensions of 400 Series Plugs and Sockets



"500" SERIES PLUGS AND SOCKETS

For Complete Listing of 500 SERIES, Write for No. 500 Catalog

Designed for 5,000 volts and 25 amperes per contact. Circuit characteristics, however, may alter this rating one way or the other.

Long leakage path from terminal to terminal, and terminal to ground. Contacts are brass and phosphor bronze, silver plated. Metal parts of caps and brackets are steel, parkerized (rust-proofed). Plug and socket blocks are interchangeable in caps and brackets.

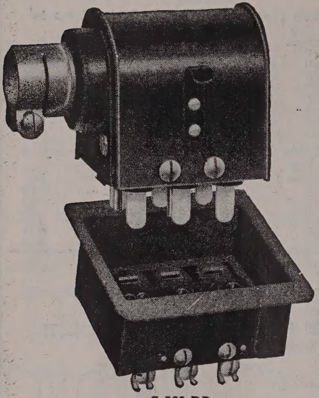
All sizes are polarized in a manner to prevent a smaller plug being inserted in a larger socket. Thus different sizes may be used on one installation without danger of making wrong connections.

Extreme care has been taken to make terminal connections under cap very accessible both for original wiring and subsequent inspection. The cap is insulated with canvas bakelite. Plug prong cross section $\frac{5}{16}''$ x $\frac{3}{32}''$.

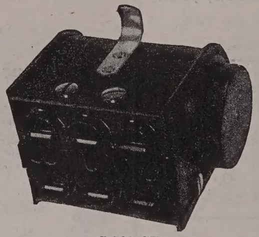
IMPORTANT: For safety with high voltages DEEP BRACKETS should always be used on one plug or socket, when the other plug or socket has a CAP. SHALLOW BRACKETS are for use only in connecting two units, each unit having plug or socket with SHALLOW BRACKET.

Cable entrance: Because of the great variation in type and size of cables, we have considered it best not to supply cable clamps of any kind. The cap end is made to accommodate standard BX clamps which may be obtained at any electrical jobbing house. The cap end will be furnished with round hole from ½" diameter and 1¼" diameter in steps of ⅛", if the size required is given on order. If no size is given, plain cap end with center punch locating center will be shipped.

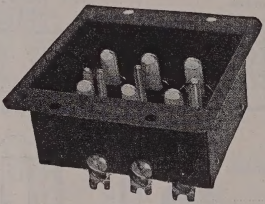
P-506-CE
(Plug with Cap)
(BX Clamp shown but not furnished)



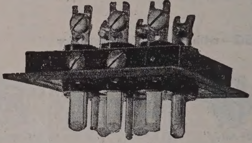
S-506-DB
(Socket with Deep Bracket)



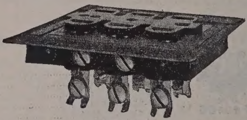
S-506-CE
(Socket with Cap)



P-506-DB
(Plug with Deep Bracket)

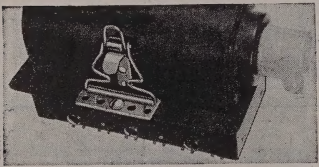


P-506-SB
(Plug with Shallow Bracket)



S-506-SB
(Socket with Shallow Bracket)

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



Locks shown above are used in connection with any DEEP BRACKET and cap combination.

The locks securely hold the units together, but they can be released instantly.

The mounting plates are made to fit all DEEP BRACKETS, and are fastened by the same screws or rivets that hold the deep brackets to the panel. Can not be used on shallow brackets. Sold in pairs only.

No. 500-L Locks..............................Per pair $0.99

PLUG

With Cap

Code	Price Ea.
P-502-CE	**$3.03**
P-504-CE	**4.36**
P-506-CE	**5.69**
P-508-CE	**7.02**
P-510-CE	**8.35**
P-512-CE	**9.68**

PLUG

With Deep Bracket

Code	Price Ea.
P-502-DB	**$2.66**
P-504-DB	**3.82**
P-506-DB	**4.96**
P-508-DB	**6.12**
P-510-DB	**7.26**
P-512-DB	**8.42**

PLUG

With Shallow Bracket

Code	Price Ea.
P-502-SB	**$2.66**
P-504-SB	**3.82**
P-506-SB	**4.96**
P-508-SB	**6.12**
P-510-SB	**7.26**
P-512-SB	**8.42**

SOCKET

With Cap

Code	Price Ea.
S-502-CE	**$3.03**
S-504-CE	**4.36**
S-506-CE	**5.69**
S-508-CE	**7.02**
S-510-CE	**8.35**
S-512-CE	**9.68**

SOCKET

With Deep Bracket

Code	Price Ea.
S-502-DB	**$2.66**
S-504-DB	**3.82**
S-506-DB	**4.96**
S-508-DB	**6.12**
S-510-DB	**7.26**
S-512-DB	**8.42**

SOCKET

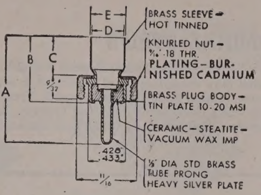
With Shallow Bracket

Code	Price Ea.
S-502-SB	**$2.66**
S-504-SB	**3.82**
S-506-SB	**4.96**
S-508-SB	**6.12**
S-510-SB	**7.26**
S-512-SB	**8.42**

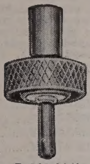
CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

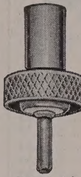
SERIES 101 PLUGS

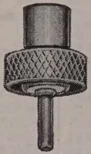
The entire No. 101 Series of Plugs are identical with the exception of the cable ferrule which is furnished in four sizes as listed below. All metal parts are of brass. These Plugs fit all of the No. 101 Series Sockets. Assembly meets Navy Specifications. A low loss Plug and Socket ideal for high frequency connections.

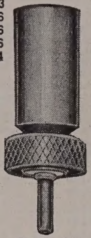

E
D
A
B
C
9/32"
.428"
.433"
11/16
BRASS SLEEVE - HOT TINNED
KNURLED NUT - 9/16"-18 THR.
PLATING - BURNISHED CADMIUM
BRASS PLUG BODY - TIN PLATE 10-20 MSI
CERAMIC - STEATITE - VACUUM WAX IMP
1/8" DIA STD BRASS TUBE PRONG HEAVY SILVER PLATE

Code No.	A	B	C	D	E	Ea.
P-101-1/4"	1-1/4"	3/4"	7/16"	1/4"	9/32"	**$0.63**
P-101-.290	1-1/4"	3/4"	7/16"	.290	.319	**.76**
P-101-5/16"	1-3/8"	7/8"	9/16"	5/16"	11/32"	**.76**
P-101-3/8"	1-3/16"	11/16"	3/8"	3/8"	13/32"	**.76**
P-101-1/2"	1-7/8"	1-3/8"	1-1/16"	1/2"	9/16"	**.84**


P-101-¼"

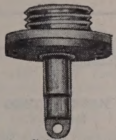

P-101-$\frac{5}{16}$"


P-101-⅜"

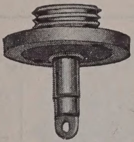

P-101-½"

SERIES 101 SOCKETS

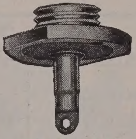
The No. 101 Series Sockets are furnished in three types as shown below. Base is of Brass, Nickel Plated with Chrome Flash. Brass contact is Silver Plated. Insulation of low loss natural color XXX Bakelite. Meets Navy Specifications. The S-101-D is similar to the S-101 except that the Bakelite is recessed in the base. S-101-D Mod. is the same as S-101-D except that two sides of the base are milled as shown. Mounting Holes No. 101—No. 41 drill on $\frac{11}{16}$'' centers. Mounting holes No. 101-D and 101-D Mod. No. 30 drill on $\frac{13}{16}$'' centers.


S-101

Price Each—$0.56


S-101-D

Price Each—$0.84


S-101-D Mod

Price Each—$0.84

SERIES 201

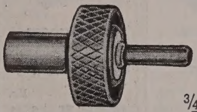
PLUGS

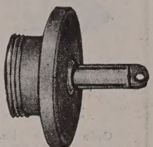
The No. 201 Series Plugs are of the same design as the No. 101 but are of heavier stock and larger. Made in one size only with ⅜'' ferrule. All metal parts are of Brass, same finish as No. 101 Series and Wax Impregnated Ceramic insulation. Overall length $1\frac{9}{16}$''. Prong diameter $\frac{5}{32}$''. Fits only the 201 Socket.

SOCKETS

The 201 Socket is similar to the S-101-D except larger. Brass base is nickel plated with Chrome Flash. Brass contact is Silver Plated. Insulation is of low loss natural color XXX Bakelite. Both Plug and Socket meet Navy Specifications.

Mounting holes — No. 30 drill on 1'' centers.





¾''—27 thread.

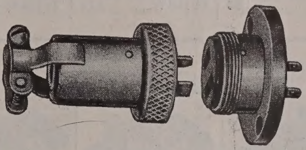
Code	Ea.	Code	Ea.
P-201-⅜	**$0.98**	**S-201**	**$1.05**

SERIES 202

PLUGS SOCKETS

The 202 Series Plugs and Sockets are made in two contacts only. Metal parts are of Brass with burnished Cadmium Plate. Insulation is of Molded Bakelite. Phosphor Bronze ''Knife Switch'' type Socket Contacts engage both sides of flat Plug Contacts—double contact area. Formed Fibre linings in caps. Polarized. Knurled nut has ¾''—27 thread.

Socket Mounting Holes. No. 30 drill on 1'' centers.



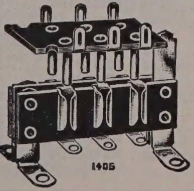
P-202-CCT—$0.77	**P-202-FHT—$0.63**	**S-202-B—$0.91**
(as shown above)	(without Cable Clamps)	
S-202-CCT—$0.79	**S-202-FHT—$0.64**	**P-202-B—$0.89**

1400 SERIES PLUGS AND SOCKETS

This series of ''disconnect'' plugs and sockets has the distinct advantage of low cost for a separate unit handling many circuits. Due to exposed metal parts, it is recommended for use when the complete unit is within a housing.

Reduces costs of servicing units. Advantageous in shipping when it is desirable to pack units separately. Polarized—assures correct coupling. Spring temper brass sockets assure perfect contact. Standard units are listed below from 5 to 16 contacts. However we can supply units having as many as 30 or more contacts.

On No. 1420 or larger we recommend the plug be divided into two or more units, as a single long plug is not mechanically strong. The socket will be made in one assembly.



No. 1405	(5 Contacts)	**Ea. $0.39**	**No. 1411**	(11 Contacts)	**Ea. $0.75**
No. 1406	(6 Contacts)	**Ea. .45**	**No. 1412**	(12 Contacts)	**Ea. .81**
No. 1407	(7 Contacts)	**Ea. .51**	**No. 1413**	(13 Contacts)	**Ea. .87**
No. 1408	(8 Contacts)	**Ea. .57**	**No. 1414**	(14 Contacts)	**Ea. .94**
No. 1409	(9 Contacts)	**Ea. .63**	**No. 1415**	(15 Contacts)	**Ea. .99**
No. 1410	(10 Contacts)	**Ea. .69**	**No. 1416**	(16 Contacts)	**Ea. 1.06**

For units with more than 16 contacts, add 7c to the No. 1416 price for each additional contact.

BARRIER TYPE TERMINAL STRIPS

Increased insulation is provided by having Barriers placed between each Terminal. These Barriers follow around the edge of the Strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at the terminals. Mounting holes are at the ends as illustrated. The base is molded Bakelite.

The Terminals and Binder Screws are of brass, nickel plated. **Marker Strips** may be ordered and imprinted to supply terminal designations. These Marker Strips mount beneath Terminal Strips and also afford insulation from metal mounting surface. **See page 21 for imprinting charges.** See pages 24 and 25 for dimensions.

No. 140 TERMINAL STRIPS

5-40 x 3/16 Binder Head Screws

Metal to Metal Spacing over Bakelite ¼″

No. 2-140

No. 2-140-W

No. 2-140-¾ W

No. 2-140-Y

MARKER STRIPS for 140, 140-W and 140-¾ W

The standard Marker Strips are of black fibre 1/32″ thick and character designations are imprinted in white.
Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.

MARKER STRIPS for 140-Y

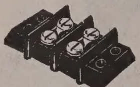
The standard Marker Strips are of black fibre 1/32″ thick and character designations are imprinted in white.
Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.

No. 140		No. 140-W		No. 140-¾ W		Marker Strips for 140, 140-W and 140-¾ W		No. 140-Y		Marker Strips for 140-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-140	$ .15	1-140-W	$ .19	1-140-¾ W	$ .19	MS-1-140	$ 2.48	1-140-Y	$ .19	MS-1-140-Y	$ 5.78
2-140	.24	2-140-W	.32	2-140-¾ W	.32	MS-2-140	3.30	2-140-Y	.32	MS-2-140-Y	6.60
3-140	.33	3-140-W	.44	3-140-¾ W	.44	MS-3-140	4.13	3-140-Y	.44	MS-3-140-Y	7.43
4-140	.42	4-140-W	.57	4-140-¾ W	.57	MS-4-140	4.95	4-140-Y	.57	MS-4-140-Y	8.25
5-140	.51	5-140-W	.69	5-140-¾ W	.69	MS-5-140	5.78	5-140-Y	.69	MS-5-140-Y	9.08
6-140	.59	6-140-W	.83	6-140-¾ W	.83	MS-6-140	6.60	6-140-Y	.83	MS-6-140-Y	9.90
7-140	.68	7-140-W	.95	7-140-¾ W	.95	MS-7-140	7.43	7-140-Y	.95	MS-7-140-Y	10.73
8-140	.77	8-140-W	1.08	8-140-¾ W	1.08	MS-8-140	8.25	8-140-Y	1.08	MS-8-140-Y	11.55
9-140	.86	9-140-W	1.21	9-140-¾ W	1.21	MS-9-140	9.08	9-140-Y	1.21	MS-9-140-Y	12.38
10-140	.95	10-140-W	1.33	10-140-¾ W	1.33	MS-10-140	9.90	10-140-Y	1.33	MS-10-140-Y	13.20
11-140	1.03	11-140-W	1.45	11-140-¾ W	1.45	MS-11-140	10.73	11-140-Y	1.45	MS-11-140-Y	14.03
12-140	1.12	12-140-W	1.58	12-140-¾ W	1.58	MS-12-140	11.55	12-140-Y	1.58	MS-12-140-Y	14.85
13-140	1.21	13-140-W	1.71	13-140-¾ W	1.71	MS-13-140	12.38	13-140-Y	1.71	MS-13-140-Y	15.68
14-140	1.31	14-140-W	1.84	14-140-¾ W	1.84	MS-14-140	13.20	14-140-Y	1.84	MS-14-140-Y	16.50
15-140	1.40	15-140-W	1.96	15-140-¾ W	1.96	MS-15-140	14.03	15-140-Y	1.96	MS-15-140-Y	17.33
16-140	1.49	16-140-W	2.09	16-140-¾ W	2.09	MS-16-140	14.85	16-140-Y	2.09	MS-16-140-Y	18.15
17-140	1.57	17-140-W	2.21	17-140-¾ W	2.21	MS-17-140	15.68	17-140-Y	2.21	MS-17-140-Y	18.98
18-140	1.66	18-140-W	2.34	18-140-¾ W	2.34	MS-18-140	16.50	18-140-Y	2.34	MS-18-140-Y	19.80
19-140	1.75	19-140-W	2.46	19-140-¾ W	2.46	MS-19-140	17.33	19-140-Y	2.46	MS-19-140-Y	20.63
20-140	1.84	20-140-W	2.60	20-140-¾ W	2.60	MS-20-140	18.15	20-140-Y	2.60	MS-20-140-Y	21.45
21-140	1.93	21-140-W	2.72	21-140-¾ W	2.72	MS-21-140	18.98	21-140-Y	2.72	MS-21-140-Y	22.28

No. 141 TERMINAL STRIPS

6-32 x ¼ Binder Head Screws

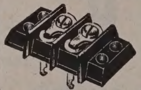
Metal to Metal Spacing over Bakelite ⅜″



No. 2-141

No. 2-141-W

No. 2-141-¾-W



No. 2-141-Y

MARKER STRIPS for 141, 141-W and 141-¾ W

Standard Marker Strips are of black fibre 1/32″ thick. See column above for designation for Bakelite Marker Strips.

MARKER STRIPS for 141-Y

Standard Marker Strips are of black fibre 1/32″ thick. See column above for designation for Bakelite Marker Strips.

No. 141		No. 141-W		No. 141-¾ W		Marker Strips for 141, 141-W and 141-¾ W		No. 141-Y		Marker Strips for 141-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-141	$ .20	1-141-W	$ .24	1-141-¾ W	$ .24	MS-1-141	$ 2.75	1-141-Y	$ .24	MS-1-141-Y	$ 6.05
2-141	.31	2-141-W	.41	2-141-¾ W	.41	MS-2-141	3.85	2-141-Y	.41	MS-2-141-Y	7.15
3-141	.42	3-141-W	.57	3-141-¾ W	.57	MS-3-141	4.95	3-141-Y	.57	MS-3-141-Y	8.25
4-141	.54	4-141-W	.74	4-141-¾ W	.74	MS-4-141	6.05	4-141-Y	.74	MS-4-141-Y	9.35
5-141	.65	5-141-W	.90	5-141-¾ W	.90	MS-5-141	7.15	5-141-Y	.90	MS-5-141-Y	10.45
6-141	.75	6-141-W	1.07	6-141-¾ W	1.07	MS-6-141	8.25	6-141-Y	1.07	MS-6-141-Y	11.55
7-141	.88	7-141-W	1.23	7-141-¾ W	1.23	MS-7-141	9.35	7-141-Y	1.23	MS-7-141-Y	12.65
8-141	.99	8-141-W	1.40	8-141-¾ W	1.40	MS-8-141	10.45	8-141-Y	1.40	MS-8-141-Y	13.75
9-141	1.10	9-141-W	1.56	9-141-¾ W	1.56	MS-9-141	11.55	9-141-Y	1.56	MS-9-141-Y	14.85
10-141	1.22	10-141-W	1.73	10-141-¾ W	1.73	MS-10-141	12.65	10-141-Y	1.73	MS-10-141-Y	15.95
11-141	1.33	11-141-W	1.89	11-141-¾ W	1.89	MS-11-141	13.75	11-141-Y	1.89	MS-11-141-Y	17.05
12-141	1.44	12-141-W	2.06	12-141-¾ W	2.06	MS-12-141	14.85	12-141-Y	2.06	MS-12-141-Y	18.15
13-141	1.56	13-141-W	2.22	13-141-¾ W	2.22	MS-13-141	15.95	13-141-Y	2.22	MS-13-141-Y	19.25
14-141	1.67	14-141-W	2.39	14-141-¾ W	2.39	MS-14-141	17.05	14-141-Y	2.39	MS-14-141-Y	20.35
15-141	1.78	15-141-W	2.55	15-141-¾ W	2.55	MS-15-141	18.15	15-141-Y	2.55	MS-15-141-Y	21.45
16-141	1.90	16-141-W	2.72	16-141-¾ W	2.72	MS-16-141	19.25	16-141-Y	2.72	MS-16-141-Y	22.55
17-141	2.01	17-141-W	2.88	17-141-¾ W	2.88	MS-17-141	20.35	17-141-Y	2.88	MS-17-141-Y	23.65
18-141	2.12	18-141-W	3.05	18-141-¾ W	3.05	MS-18-141	21.45	18-141-Y	3.05	MS-18-141-Y	24.75
19-141	2.24	19-141-W	3.21	19-141-¾ W	3.21	MS-19-141	22.55	19-141-Y	3.21	MS-19-141-Y	25.85
20-141	2.35	20-141-W	3.38	20-141-¾ W	3.38	MS-20-141	23.65	20-141-Y	3.38	MS-20-141-Y	26.95

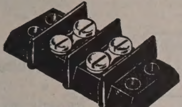
CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

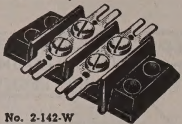
BARRIER TYPE TERMINAL STRIPS

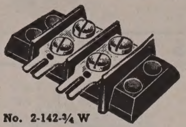
8-32 x 5/16″ Binder Head Screws

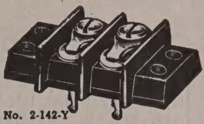
No. 142 TERMINAL STRIPS

Metal to Metal Spacing over Bakelite 9/16″


No. 2-142


No. 2-142-W

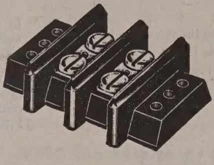

No. 2-142-¾ W


No. 2-142-Y

No. 142		No. 142-W		No. 142-¾ W		MARKER STRIPS for 142, 142-W, 142-¾ W		No. 142-Y		MARKER STRIPS for 142-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-142	$ .23	1-142-W	$ .30	1-142-¾ W	$ .30	MS-1-142	$ 3.03	1-142-Y	$ .30	MS-1-142-Y	$ 6.33
2-142	.36	2-142-W	.50	2-142-¾ W	.50	MS-2-142	4.40	2-142-Y	.50	MS-2-142-Y	7.70
3-142	.51	3-142-W	.70	3-142-¾ W	.70	MS-3-142	5.78	3-142-Y	.70	MS-3-142-Y	9.08
4-142	.65	4-142-W	.90	4-142-¾ W	.90	MS-4-142	7.15	4-142-Y	.90	MS-4-142-Y	10.45
5-142	.78	5-142-W	1.11	5-142-¾ W	1.11	MS-5-142	8.53	5-142-Y	1.11	MS-5-142-Y	11.83
6-142	.92	6-142-W	1.31	6-142-¾ W	1.31	MS-6-142	9.90	6-142-Y	1.31	MS-6-142-Y	13.20
7-142	1.07	7-142-W	1.52	7-142-¾ W	1.52	MS-7-142	11.28	7-142-Y	1.52	MS-7-142-Y	14.58
8-142	1.20	8-142-W	1.72	8-142-¾ W	1.72	MS-8-142	12.65	8-142-Y	1.72	MS-8-142-Y	15.95
9-142	1.34	9-142-W	1.93	9-142-¾ W	1.93	MS-9-142	14.03	9-142-Y	1.93	MS-9-142-Y	17.33
10-142	1.49	10-142-W	2.12	10-142-¾ W	2.12	MS-10-142	15.40	10-142-Y	2.12	MS-10-142-Y	18.70
11-142	1.62	11-142-W	2.33	11-142-¾ W	2.33	MS-11-142	16.78	11-142-Y	2.33	MS-11-142-Y	20.08
12-142	1.76	12-142-W	2.53	12-142-¾ W	2.53	MS-12-142	18.15	12-142-Y	2.53	MS-12-142-Y	21.45
13-142	1.90	13-142-W	2.74	13-142-¾ W	2.74	MS-13-142	19.53	13-142-Y	2.74	MS-13-142-Y	22.83
14-142	2.04	14-142-W	2.94	14-142-¾ W	2.94	MS-14-142	20.90	14-142-Y	2.94	MS-14-142-Y	24.20
15-142	2.18	15-142-W	3.15	15-142-¾ W	3.15	MS-15-142	22.28	15-142-Y	3.15	MS-15-142-Y	25.58
16-142	2.32	16-142-W	3.34	16-142-¾ W	3.34	MS-16-142	23.65	16-142-Y	3.34	MS-16-142-Y	26.95
17-142	2.45	17-142-W	3.54	17-142-¾ W	3.54	MS-17-142	25.03	17-142-Y	3.54	MS-17-142-Y	28.33

No. 150 TERMINAL STRIPS

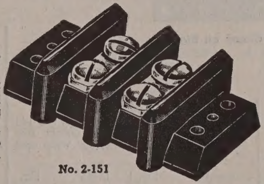
1 13/16″ wide by 25/32″ high. Terminals are mounted on 11/16″ centers. Screws: 10-32 x 5/16″ brass, burnished nickel plate. Fits standard 50 Amp. solder lug for 6 Ga. stranded wire. Metal to metal spacing over bakelite ⅝″



No. 150		No. 150-W		No. 150-¾ W		MARKER STRIPS For 150 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-150	$ .55	1-150-W	$ .66	1-150-¾ W	$ .66	MS-1-150	$ 6.60
2-150	.94	2-150-W	1.13	2-150-¾ W	1.13	MS-2-150	8.14
3-150	1.32	3-150-W	1.60	3-150-¾ W	1.60	MS-3-150	9.68
4-150	1.71	4-150-W	2.07	4-150-¾W	2.07	MS-4-150	11.22
5-150	2.09	5-150-W	2.53	5-150-¾ W	2.53	MS-5-150	12.76
6-150	2.48	6-150-W	3.00	6-150-¾ W	3.00	MS-6-150	14.30
7-150	2.86	7-150-W	3.46	7-150-¾ W	3.46	MS-7-150	15.84
8-150	3.25	8-150-W	3.92	8-150-¾W	3.92	MS-8-150	17.38
9-150	3.63	9-150-W	4.40	9-150-¾ W	4.40	MS-9-150	18.92
10-150	4.02	10-150-W	4.87	10-150-¾ W	4.87	MS-10-150	20.46

No. 151
TERMINAL STRIPS

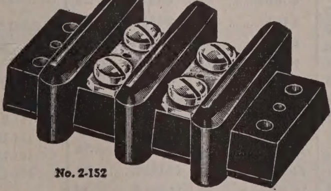
2″ wide by 15/16″ high. Terminals are mounted on ⅞″ centers. Screws: 12-32 x ⅜″ brass, burnished nickel plate. Fits standard 70 Amp. solder lug for 4 Ga. stranded wire. Metal to metal spacing over bakelite ¾″.


No. 2-151

No. 151		No. 151-W		No. 151-¾ W		MARKER STRIPS for 151 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-151	$ .94	1-151-W	$1.10	1-151-¾ W	$1.10	MS-1-151	$ 6.68
2-151	1.71	2-151-W	2.04	2-151-¾ W	2.04	MS-2-151	10.18
3-151	2.48	3-151-W	2.97	3-151-¾ W	2.97	MS-3-151	13.48
4-151	3.25	4-151-W	3.91	4-151-¾ W	3.91	MS-4-151	16.78
5-151	4.02	5-151-W	4.84	5-151-¾ W	4.84	MS-5-151	20.08
6-151	4.79	6-151-W	5.78	6-151-¾ W	5.78	MS-6-151	23.38
7-151	5.56	7-151-W	6.71	7-151-¾ W	6.71	MS-7-151	26.68
8-151	6.33	8-151-W	7.65	8-151-¾ W	7.65	MS-8-151	29.98

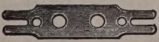
No. 152 TERMINAL STRIPS

2½″ wide by 1⅛″ high. Terminals are mounted on 1⅛″ centers. Screws: ¼″-28 x ½″ brass, burnished nickel plate. Fits standard 90 Amp. solder lug for 2 Ga. stranded wire. Metal to metal spacing over bakelite 1″.

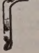

No. 2-152

No. 152		No. 152-W		No. 152¾ W		MARKER STRIPS for 152 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-152	$1.27	1-152-W	$1.49	1-152-¾ W	$1.49	MS-1-152	$ 7.15
2-152	2.42	2-152-W	2.86	2-152-¾ W	2.86	MS-2-152	12.65
3-152	3.58	3-152-W	4.24	3-152-¾ W	4.24	MS-3-152	18.15
4-152	4.73	4-152-W	5.61	4-152-¾ W	5.61	MS-4-152	23.65
5-152	5.89	5-152-W	6.99	5-152-¾ W	6.99	MS-5-152	29.15
6-152	7.04	6-152-W	8.36	6-152-¾ W	8.36	MS-6-152	34.65

"W" Solder Terminal for Barrier Strips



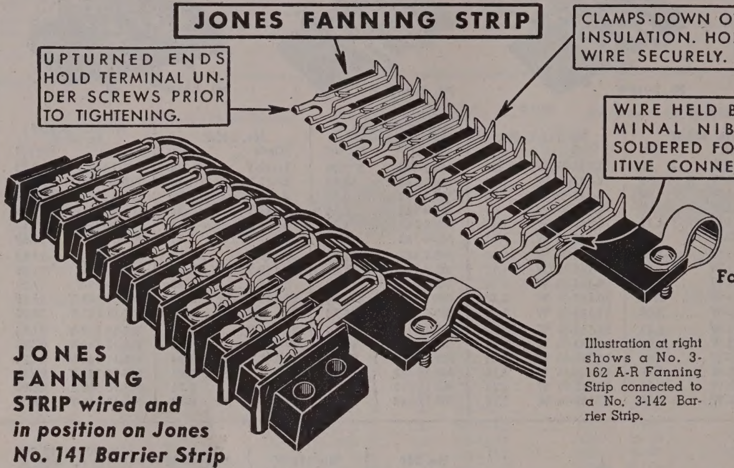
Code	For use with Barrier Strip	Per 100	Code	For use with Barrier Strip	Per 100
No. W-140	No. 140	$3.80	No. W-150	No. 150	$8.86
No. W-141	No. 141	5.06	No. W-151	No. 151	15.18
No. W-142	No. 142	6.33	No. W-152	No .152	22.77



"Y" Solder Terminal

Code	For use with Barrier Strip	Per 100
No. Y-140	No. 140	$3.80
No. Y-141	No. 141	5.06
No. Y-142	No. 142	6.33

FANNING STRIPS FOR CONNECTING TO BARRIER TERMINAL STRIPS


JONES FANNING STRIP
UPTURNED ENDS HOLD TERMINAL UNDER SCREWS PRIOR TO TIGHTENING.
CLAMPS DOWN OVER INSULATION. HOLDS WIRE SECURELY.
WIRE HELD BY TERMINAL NIB AND SOLDERED FOR POSITIVE CONNECTION.

JONES FANNING STRIP wired and in position on Jones No. 141 Barrier Strip

Eliminates Color Coding
•
Speeds up Assembly
•
Improves Appearance
•
Insures Correct Connections
•
For Right Angle Mounting

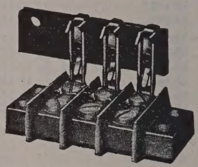


Illustration at right shows a No. 3-162 A-R Fanning Strip connected to a No. 3-142 Barrier Strip.

Jones Fanning Strip Terminals are of .032" Brass, Cadmium Plated. The Bakelite strips are furnished with a hole in either the right or left end for fastening the cable with a cable clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Makes replacement of units an easy matter and assures correct connections after servicing.

In many instances where there is not sufficient room for the standard Fanning Strips we can supply those listed formed for right angle mounting permitting use when Barrier mounts flush with the side of the chassis. Specify Series 160A, 161A and 162A instead of 160, 161 and 162. Prices slightly higher.

6-161-L (Cable Clamp on Left)

6-161-R (Cable Clamp on Right)

THE 160 SERIES

The following Fanning Strips fit the 140 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ½" wide and on ⅜" centers.

Code	Ea.	Code	Ea.
2-160-L	$ .13	2-160-R	$ .13
3-160-L	.20	3-160-R	.20
4-160-L	.25	4-160-R	.25
5-160-L	.32	5-160-R	.32
6-160-L	.39	6-160-R	.39
7-160-L	.45	7-160-R	.45
8-160-L	.51	8-160-R	.51
9-160-L	.57	9-160-R	.57
10-160-L	.64	10-160-R	.64
11-160-L	.70	11-160-R	.70
12-160-L	.76	12-160-R	.76
13-160-L	.83	13-160-R	.83
14-160-L	.89	14-160-R	.89
15-160-L	.96	15-160-R	.96
16-160-L	1.01	16-160-R	1.01
17-160-L	1.08	17-160-R	1.08
18-160-L	1.16	18-160-R	1.16
19-160-L	1.21	19-160-R	1.21
20-160-L	1.28	20-160-R	1.28
21-160-L	1.33	21-160-R	1.33

THE 161 SERIES

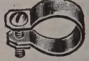
The following Fanning Strips fit the 141 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ⅝" wide and on $\frac{7}{16}$" centers.

Code	Ea.	Code	Ea.
2-161-L	$ .14	2-161-R	$ .14
3-161-L	.21	3-161-R	.21
4-161-L	.26	4-161-R	.26
5-161-L	.33	5-161-R	.33
6-161L-	.40	6-161-R	.40
7-161-L	.46	7-161-R	.46
8-161-L	.52	8-161-R	.52
9-161-L	.58	9-161-R	.58
10-161-L	.65	10-161-R	.65
11-161-L	.72	11-161-R	.72
12-161-L	.77	12-161-R	.77
13-161-L	.84	13-161-R	.84
14-161-L	.91	14-161-R	.91
15-161-L	.97	15-161-R	.97
16-161-L	1.03	16-161-R	1.03
17-161-L	1.09	17-161-R	1.09
18-161-L	1.17	18-161-R	1.17
19-161-L	1.22	19-161-R	1.22
20-161-L	1.29	20-161-R	1.29

THE 162 SERIES

The following Fanning Strips fit the 142 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ⅝" wide and on $\frac{9}{16}$" centers.

Code	Ea.	Code	Ea.
2-162-L	$ .17	2-162-R	$ .17
3-162-L	.23	3-162-R	.23
4-162-L	.29	4-162-R	.29
5-162-L	.35	5-162-R	.35
6-162-L	.43	6-162-R	.43
7-162-L	.48	7-162-R	.48
8-162-L	.55	8-162-R	.55
9-162-L	.61	9-162-R	.61
10-162-L	.68	10-162-R	.68
11-162-L	.74	11-162-R	.74
12-162-L	.80	12-162-R	.80
13-162-L	.86	13-162-R	.86
14-162-L	.94	14-162-R	.94
15-162-L	.99	15-162-R	.99
16-162-L	1.06	16-162-R	1.06
17-162-L	1.11	17-162-R	1.11



CABLE CLAMPS

Cable Clamps are available for the Fanning Strips listed at the left and are furnished in 6 different sizes as listed below. Cable Clamp is of Brass Nickle Plated, with 6-32 round head Nickle Plated Brass Screws. For convenience the Cable Clamps are furnished unassembled.

CABLE CLAMP SIZES AVAILABLE

No.	I. D.
CC-161-4	¼"
CC-161-6	⅜"
CC-161-8	½"
CC-161-10	⅝"
CC-161-12	¾"
CC-161-14	⅞"

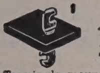
List price 12 c each.

Be sure to give code number when ordering.

On small sizes Lacing Twine can be used for anchoring cable to the Fanning Strip instead of Cable Clamp.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES


1

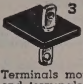
NO. 1 TERMINAL STRIPS

Terminal ⅛" Round Copper, Flattened at Ends, Tin Plated

A convenient and compact strip where solder connections are desired.

Insulation: Canvas Base Bakelite, ½" wide, 3/32" thick. Terminals mounted on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-1	(2 Terminals)	$ .13	No. 6-1	(6 Terminals)	$ .19
No. 3-1	(3 Terminals)	.14	No. 7-1	(7 Terminals)	.20
No. 4-1	(4 Terminals)	.15	No. 8-1	(8 Terminals)	.21
No. 5-1	(5 Terminals)	.17	No. 9-1	(9 Terminals)	.22


3

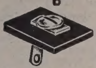
NO. 3 TERMINAL STRIPS

Terminal ⅛" Round Copper, Flattened at Each End, Tin Plated

Similar to No. 1, except closer spacing and furnished with holes instead of hooks.

Insulation: Canvas base Bakelite, ½" wide, 3/32" thick. Terminals mounted on ⅜" centers. Mounting holes ⅜" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-3	(2 Terminals)	$ .15	No. 6-3	(6 Terminals)	$ .21
No. 3-3	(3 Terminals)	.17	No. 7-3	(7 Terminals)	.22
No. 4-3	(4 Terminals)	.19	No. 8-3	(8 Terminals)	.23
No. 5-3	(5 Terminals)	.20	No. 9-3	(9 Terminals)	.24


6

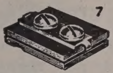
NO. 6 TERMINAL STRIPS

Terminal .046" Brass, Cadmium Plated

Screw and solder terminal. Substantial and reasonably priced.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ¾" wide, 3/32" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-6	(2 Terminals)	$ .17	No. 6-6	(6 Terminals)	$ .36
No. 3-6	(3 Terminals)	.22	No. 7-6	(7 Terminals)	.41
No. 4-6	(4 Terminals)	.26	No. 8-6	(8 Terminals)	.46
No. 5-6	(5 Terminals)	.32	No. 9-6	(9 Terminals)	.51


7

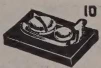
NO. 7 TERMINAL STRIPS

Terminal .046" Brass, Burnished Nickel Plate

A two screw insulated terminal strip that can be mounted directly on metal surface.

Screws: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, 3/16" thick (total). Terminals mounted on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-7	(2 Terminals)	$ .24	No. 6-7	(6 Terminals)	$ .68
No. 3-7	(3 Terminals)	.35	No. 7-7	(7 Terminals)	.79
No. 4-7	(4 Terminals)	.46	No. 8-7	(8 Terminals)	.89
No. 5-7	(5 Terminals)	.57	No. 9-7	(9 Terminals)	1.00


10

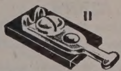
NO. 10 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Sturdy screw and solder terminal with both screw and solder connections on top of bakelite panel. Solder terminal turned up.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅝" wide, 3/32" thick. Terminals spaced on ⅝" centers. Mounting holes ⅝" from center of end terminals. Will take up to No. 15 B & S gauge wire (.057").

Code		Ea.	Code		Ea.
No. 2-10	(2 Terminals)	$ .25	No. 6-10	(6 Terminals)	$ .74
No. 3-10	(3 Terminals)	.37	No. 7-10	(7 Terminals)	.86
No. 4-10	(4 Terminals)	.50	No. 8-10	(8 Terminals)	.98
No. 5-10	(5 Terminals)	.62	No. 9-10	(9 Terminals)	1.10


11

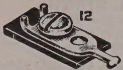
NO. 11 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 10, except larger in size and the solder tab is flat, but will be bent up, if specified.

Screws: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, ⅛" thick. Terminals mounted on ¾" centers. Mounting holes ¾" from center of end terminals. Will take up to No. 12 B & S gauge wire (.080").

Code		Ea.	Code		Ea.
No. 2-11	(2 Terminals)	$ .34	No. 6-11	(6 Terminals)	$ .87
No. 3-11	(3 Terminals)	.47	No. 7-11	(7 Terminals)	1.00
No. 4-11	(4 Terminals)	.61	No. 8-11	(8 Terminals)	1.13
No. 5-11	(5 Terminals)	.74	No. 9-11	(9 Terminals)	1.28


12

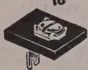
NO. 12 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 11, except larger. Solder tab is flat; but will be bent up, if specified.

Screw: 10-32 x ⅜" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/16" thick. Terminals mounted on ⅞" centers. Mounting holes ⅞" from center of end terminals. Will take up to No. 9 B & S gauge wire (.114").

Code		Ea.	Code		Ea.
No. 2-12	(2 Terminals)	$ .48	No. 6-12	(6 Terminals)	$1.25
No. 3-12	(3 Terminals)	.67	No. 7-12	(7 Terminals)	1.45
No. 4-12	(4 Terminals)	.87	No. 8-12	(8 Terminals)	1.65
No. 5-12	(5 Terminals)	1.07	No. 9-12	(9 Terminals)	1.84


16

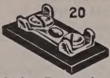
NO. 16 TERMINAL STRIPS

Terminal .028" Brass; Cadmium Plated

A popular priced screw and solder terminal with many desirable features.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ¾" wide, 3/16" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-16	(2 Terminals)	$ .14	No. 6-16	(6 Terminals)	$ .34
No. 3-16	(3 Terminals)	.20	No. 7-16	(7 Terminals)	.39
No. 4-16	(4 Terminals)	.24	No. 8-16	(8 Terminals)	.44
No. 5-16	(5 Terminals)	.29	No. 9-16	(9 Terminals)	.48


20

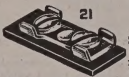
NO. 20 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Strong two screw terminal with ears to hold wire securely under screw.

Screws: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, 3/16" thick. Terminals mounted on ⅝" centers. Mounting holes ⅝" from center of end terminals. Will take up to No. 13 B & S gauge wire (.071").

Code		Ea.	Code		Ea.
No. 2-20	(2 Terminals)	$ .34	No. 6-20	(6 Terminals	$1.01
No. 3-20	(3 Terminals)	.51	No. 7-20	(7 Terminals)	1.20
No. 4-20	(4 Terminals)	.68	No. 8-20	(8 Terminals)	1.35
No. 5-20	(5 Terminals)	.85	No. 9-20	(9 Terminals)	1.53


21

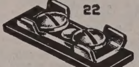
NO. 21 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Similar to No. 20, except larger.

Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1⅛" wide, ⅛" thick. Terminals mounted on ¾" centers. Mounting holes ¾" from center of end terminals. Will take up to No. 11 B & S gauge wire (.090").

Code		Ea.	Code		Ea.
No. 2-21	(2 Terminals)	$ .48	No. 6-21	(6 Terminals)	$1.25
No. 3-21	(3 Terminals)	.68	No. 7-21	(7 Terminals)	1.45
No. 4-21	(4 Terminals)	.87	No. 8-21	(8 Terminals)	1.65
No. 5-21	(5 Terminals)	1.07	No. 9-21	(9 Terminals)	1.84


22

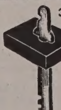
NO. 22 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Similar to No. 21, except larger.

Screws: 10-32 x ⅜" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1¼" wide, 3/16" thick. Terminals mounted on ⅞" centers. Mounting holes ⅞" from center of end terminals. Will take up to No. 8 B & S gauge wire (.128").

Code		Ea.	Code		Ea.
No. 2-22	(2 Terminals)	$ .64	No. 6-22	(6 Terminals)	$1.61
No. 3-22	(3 Terminals)	.88	No. 7-22	(7 Terminals)	1.85
No. 4-22	(4 Terminals)	1.12	No. 8-22	(8 Terminals)	2.09
No. 5-22	(5 Terminals)	1.36	No. 9-22	(9 Terminals)	2.22


32

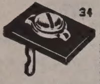
No. 32 TERMINAL STRIPS

Terminal .050" Brass, Tin Plated

An ideal terminal strip (solder type) for medium heavy wiring. One or more wires may be connected to this terminal.

Insulation: XX Bakelite, ⅝" wide, ¼" thick. Terminals mounted on 5/16" centers. Mounting holes 5/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-32	(2 Terminals)	$ .24	No. 6-32	(6 Terminals)	$ .68
No. 3-32	(3 Terminals)	.35	No. 7-32	(7 Terminals)	.79
No. 4-32	(4 Terminals)	.46	No. 8-32	(8 Terminals)	.89
No. 5-32	(5 Terminals)	.57	No. 9-32	(9 Terminals)	1.00

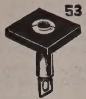

34

NO. 34 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

Very substantial and neat appearing terminal. Ample length solder terminal below panel, with screw connection above.
Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-34	**(2 Terminals)**	**$ .24**	**No. 6-34**	**(6 Terminals)**	**$ .48**
No. 3-34	**(3 Terminals)**	**.31**	**No. 7-34**	**(7 Terminals)**	**.55**
No. 4-34	**(4 Terminals)**	**.36**	**No. 8-34**	**(8 Terminals)**	**.61**
No. 5-34	**(5 Terminals)**	**.43**	**No. 9-34**	**(9 Terminals)**	**.67**

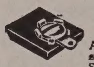

53

NO. 53 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

A reliable socket type contact for many uses. Takes 3/32" prongs. May be used with No. 98 terminal strips (same terminal spacing).
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-53	**(2 Terminals)**	**$ .21**	**No. 6-53**	**(6 Terminals)**	**$ .35**
No. 3-53	**(3 Terminals)**	**.24**	**No. 7-53**	**(7 Terminals)**	**.39**
No. 4-53	**(4 Terminals)**	**.28**	**No. 8-53**	**(8 Terminals)**	**.43**
No. 5-53	**(5 Terminals)**	**.32**	**No. 9-53**	**(9 Terminals)**	**.46**

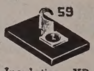


NO. 36A TERMINAL STRIPS

Terminal .031" Brass, Cadmium Plated

A popular priced screw and solder terminal with both screw and solder tab on same side of bakelite panel. Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 5/8" wide, 1/16" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-36A	**(2 Terminals)**	**$ .14**	**No. 6-36A**	**(6 Terminals)**	**$ .34**
No. 3-36A	**(3 Terminals)**	**.20**	**No. 7-36A**	**(7 Terminals)**	**.39**
No. 4-36A	**(4 Terminals)**	**.24**	**No. 8-36A**	**(8 Terminals)**	**.44**
No. 5-36A	**(5 Terminals)**	**.29**	**No. 9-36A**	**(9 Terminals)**	**.48**

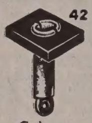

59

NO. 59 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

An inexpensive solder terminal. One wire may be brought up through hole and soldered, leaving vertical tab for other connection.
Insulation: XP Bakelite, 3/8" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-59	**(2 Terminals)**	**$ .09**	**No. 6-59**	**(6 Terminals)**	**$ .23**
No. 3-59	**(3 Terminals)**	**.12**	**No. 7-59**	**(7 Terminals)**	**.26**
No. 4-59	**(4 Terminals)**	**.15**	**No. 8-59**	**(8 Terminals)**	**.31**
No. 5-59	**(5 Terminals)**	**.20**	**No. 9-59**	**(9 Terminals)**	**.34**


42

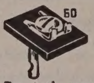
NO. 42 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Similar in construction to No. 53. Takes 1/8" prong. May be used with No. 99 terminal strips (same terminal spacing).

Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-42	**(2 Terminals**	**$ .24**	**No. 6-42**	**(6 Terminals)**	**$ .44**
No. 3-42	**(3 Terminals)**	**.29**	**No. 7-42**	**(7 Terminals)**	**.48**
No. 4-42	**(4 Terminals)**	**.34**	**No. 8-42**	**(8 Terminals)**	**.53**
No. 5-42	**(5 Terminals)**	**.39**	**No. 9-42**	**(9 Terminals)**	**.58**

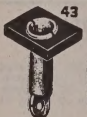

60

NO. 60 TERMINAL STRIPS

Terminal .050" Brass, Cadmium Plated

Screw terminal above panel—solder terminal below. Solder tab is notched.
Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-60	**(2 Terminals)**	**$ .20**	**No. 6-60**	**(6 Terminals)**	**$ .45**
No. 3-60	**(3 Terminals)**	**.26**	**No. 7-60**	**(7 Terminals)**	**.51**
No. 4-60	**(4 Terminals)**	**.33**	**No. 8-60**	**(8 Terminals)**	**.57**
No. 5-60	**(5 Terminals)**	**.39**	**No. 9-60**	**(9 Terminals)**	**.63**

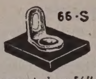

43

NO. 43 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Same as No. 42, except that it takes 3/32" prongs. May be used with No. 100 terminal strips.
Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-43	**(2 Terminals)**	**$ .31**	**No. 6-43**	**(6 Terminals)**	**$ .55**
No. 3-43	**(3 Terminals)**	**.36**	**No. 7-43**	**(7 Terminals)**	**.61**
No. 4-43	**(4 Terminals)**	**.43**	**No. 8-43**	**(8 Terminals)**	**.67**
No. 5-43	**(5 Terminals)**	**.48**	**No. 9-43**	**(9 Terminals)**	**.73**

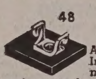

66-S

NO. 66-S TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

A heavy solder terminal with large oval hole for several wires.
Insulation: XP Bakelite, 3/4" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-S	**(2 Terminals)**	**$ .10**	**No. 6-66-S**	**(6 Terminals)**	**$ .24**
No. 3-66-S	**(3 Terminals)**	**.13**	**No. 7-66-S**	**(7 Terminals)**	**.28**
No. 4-66-S	**(4 Terminals)**	**.17**	**No. 8-66-S**	**(8 Terminals)**	**.32**
No. 5-66-S	**(5 Terminals)**	**.21**	**No. 9-66-S**	**(9 Terminals)**	**.35**

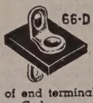

48

NO. 48 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

A low priced double solder terminal.
Insulation: XP Bakelite, 1/2" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-48	**(2 Terminals)**	**$ .09**	**No. 6-48**	**(6 Terminals)**	**$ .23**
No. 3-48	**(3 Terminals)**	**.12**	**No. 7-48**	**(7 Terminals)**	**.26**
No. 4-48	**(4 Terminals)**	**.15**	**No. 8-48**	**(8 Terminals)**	**.31**
No. 5-48	**(5 Terminals)**	**.20**	**No. 9-48**	**(9 Terminals)**	**.34**

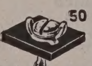

66-D

NO. 66-D TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

Two No. 66 terminals mounted on opposite sides of panel and riveted together by solid rivet. Ideal strip for heavy work.
Insulation: XP Bakelite, 3/4" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-D	**(2 Terminals)**	**$ .12**	**No. 6-66-D**	**(6 Terminals)**	**$ .32**
No. 3-66-D	**(3 Terminals)**	**.17**	**No. 7-66-D**	**(7 Terminals)**	**.36**
No. 4-66-D	**(4 Terminals)**	**.22**	**No. 8-66-D**	**(8 Terminals)**	**.41**
No. 5-66-D	**(5 Terminals)**	**.26**	**No. 9-66-D**	**(9 Terminals)**	**.46**

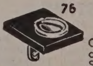

50

NO. 50 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

One of the most popular screw and solder terminals. Made of heavy stock with ears to firmly hold wires under screw.
Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite 7/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-50	**(2 Terminals)**	**$ .23**	**No. 6-50**	**(6 Terminals)**	**$ .47**
No 3-50	**(3 Terminals)**	**.29**	**No. 7-50**	**(7 Terminals)**	**.53**
No. 4-50	**(4 Terminals)**	**.35**	**No. 8-50**	**(8 Terminals)**	**.59**
No. 5-50	**(5 Terminals)**	**.41**	**No. 9-50**	**(9 Terminals)**	**.65**

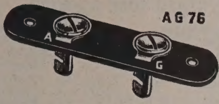

76

NO. 76 TERMINAL STRIPS

Terminal .028" Brass, Cadmium Plated

Cup shaped top holds wire securely under screw. A compact and good appearing terminal.
Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/4" wide, 1/16" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-76	**(2 Terminals)**	**$ .17**	**No. 6-76**	**(6 Terminals)**	**$ .36**
No. 3-76	**(3 Terminals)**	**.22**	**No. 7-76**	**(7 Terminals)**	**.41**
No. 4-76	**(4 Terminals)**	**.26**	**No. 8-76**	**(8 Terminals)**	**.46**
No. 5-76	**(5 Terminals)**	**.32**	**No. 9-76**	**(9 Terminals)**	**.51**

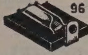


AG 76

AG-76

Standard Antenna-Ground strip using No. 76 terminals. Insulation: 3/16" Bakelite, 11/16" wide. Mounting centers 1 11/16". Ends rounded. Letters A and G are filled in white.

No. AG-76........................Ea. $ .14



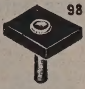
96

NO. 96 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

Perhaps the most popular socket terminal ever sold. Takes standard tube prongs (No. 99 or No. 100). Furnished for No. 99 prongs (1/8") unless otherwise specified. Insulation: XP Bakelite, 5/8" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-96	(2 Terminals)	$ .10	No. 6-96	(6 Terminals)	$ .24
No. 3-96	(3 Terminals)	.13	No. 7-96	(7 Terminals)	.28
No. 4-96	(4 Terminals)	.17	No. 8-96	(8 Terminals)	.32
No. 5-96	(5 Terminals)	.21	No. 9-96	(9 Terminals)	.35



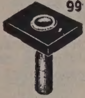
98

NO. 98 TERMINAL STRIPS

Terminal 3/32" Round, Brass, Cadmium Plated

Standard tube base prong of 3/32" diameter. To be used with No. 53 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers.

Code		Ea.	Code		Ea.
No. 2-98	(2 Terminals)	$ .09	No. 6-98	(6 Terminals)	$ .23
No. 3-98	(3 Terminals)	.12	No. 7-98	(7 Terminals)	.26
No. 4-98	(4 Terminals)	.15	No. 8-98	(8 Terminals)	.31
No. 5-98	(5 Terminals)	.20	No. 9-98	(9 Terminals)	.34



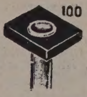
99

NO. 99 TERMINAL STRIPS

Terminal 1/8" Round, Brass, Cadmium Plated

Similar to No. 98, except that it is 1/8" in diameter. To be used with No. 42 terminal strips, and also with No. 96 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers.

Code		Ea.	Code		Ea.
No. 2-99	(2 Terminals)	$ .12	No. 6-99	(6 Terminals)	$ .32
No. 3-99	(3 Terminals)	.17	No. 7-99	(7 Terminals)	.36
No. 4-99	(4 Terminals)	.22	No. 8-99	(8 Terminals)	.41
No. 5-99	(5 Terminals)	.26	No. 9-99	(9 Terminals)	.46



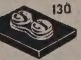
100

NO. 100 TERMINAL STRIPS

Terminal 5/32" Round, Brass, Cadmium Plated

Similar to No. 99, except 5/32" in diameter. To be used with No. 43 terminal strip, and No. 96 terminal strip.
Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals mounted on 5/8" centers.

Code		Ea.	Code		Ea.
No. 2-100	(2 Terminals)	$ .19	No. 6-100	(6 Terminals)	$ .44
No. 3-100	(3 Terminals)	.25	No. 7-100	(7 Terminals)	.50
No. 4-100	(4 Terminals)	.32	No. 8-100	(8 Terminals)	.56
No. 5-100	(5 Terminals)	.37	No. 9-100	(9 Terminals)	.62



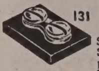
130

NO. 130 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

An inexpensive terminal strip with two screw terminals. Screws: 5-40 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/16" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-130	(2 Terminals)	$ .19	No. 6-130	(6 Terminals)	$ .57
No. 3-130	(3 Terminals)	.28	No. 7-130	(7 Terminals)	.67
No. 4-130	(4 Terminals)	.37	No. 8-130	(8 Terminals)	.76
No. 5-130	(5 Terminals)	.47	No. 9-130	(9 Terminals)	.86



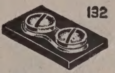
131

NO. 131 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 130, except larger.
Screws: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-131	(2 Terminals)	$ .23	No. 6-131	(6 Terminals)	$ .67
No. 3-131	(3 Terminals)	.34	No. 7-131	(7 Terminals)	.77
No. 4-131	(4 Terminals)	.45	No. 8-131	(8 Terminals)	.88
No. 5-131	(5 Terminals)	.56	No. 9-131	(9 Terminals)	.99



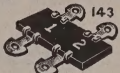
132

NO. 132 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 131, except larger.
Screws 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1 1/8" wide, 1/8" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-132	(2 Terminals)	$ .28	No. 6-132	(6 Terminals)	$ .76
No. 3-132	(3 Terminals)	.40	No. 7-132	(7 Terminals)	.88
No. 4-132	(4 Terminals)	.52	No. 8-132	(8 Terminals)	1.00
No. 5-132	(5 Terminals)	.64	No. 9-132	(9 Terminals)	1.12



143

No. 143 TERMINAL STRIPS

Terminal .040" Brass, Tin Plated

A strong two-way solder terminal. Solder tabs lie flat. Crimps securely around edges of panel.

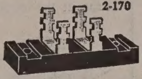
Special Strips

These strips can be made up special, with terminals mounted on any centers, from 3/8" up.

Standard Strips

Insulation: XP Bakelite, 3/8" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals. Terminals may be numbered or lettered in white, as illustrated. (See page 18 for imprinting cost.)

Code		Ea.	Code		Ea.
No. 2-143	(2 Terminals)	$ .12	No. 6-143	(6 Terminals)	$ .26
No. 3-143	(3 Terminals)	.15	No. 7-143	(7 Terminals)	.31
No. 4-143	(4 Terminals)	.20	No. 8-143	(8 Terminals)	.34
No. 5-143	(5 Terminals)	.23	No. 9-143	(9 Terminals)	.37



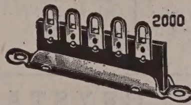
2-170

No. 170 TERMINAL STRIPS

Terminal .032" Brass, Tin Plated

A heavy solder Terminal.
Insulation: Black molded Bakelite, 5/16" wide, 1/4" thick. Terminals mounted on 3/8" centers. Mounting holes are 3/8" from center of end Terminals.

Code		Ea.	Code		Ea.
No. 1-170	(1 Terminal)	$ .20	No. 6-170	(6 Terminals)	$ .44
No. 2-170	(2 Terminals)	.24	No. 7-170	(7 Terminals)	.48
No. 3-170	(3 Terminals)	.29	No. 8-170	(8 Terminals)	.53
No. 4-170	(4 Terminals)	.34	No. 9-170	(9 Terminals)	.58
No. 5-170	(5 Terminals)	.39	No. 10-170	(10 Terminals)	.63



2000

NO. 2000 TERMINAL STRIPS

Terminals .019" Brass, Tin Plated

Compact and sturdy junction terminal strip. Useful in assembling radio chassis, wiring, etc.
Insulation: Bakelite. Brackets: Steel, cadmium plated. Terminals spaced on 5/16" centers.

Code		Mounting Hole Centers:	Per 100
No. 2002	(2 Terminals)	1"	$7.74
No. 2003	(3 Terminals)	1—5/16"	8.47
No. 2004	(4 Terminals)	1—5/8"	9.20
No. 2005	(5 Terminals)	1—15/16"	9.92
No. 2006	(6 Terminals)	2—1/4"	10.65
No. 2007	(7 Terminals)	2—9/16"	11.37
No. 2008	(8 Terminals)	2—7/8"	12.10
No. 2009	(9 Terminals)	3—3/16"	12.83
No. 2010	(10 Terminals)	3—1/2"	13.55
No. 2011	(11 Terminals)	3—13/16"	14.28
No. 2012	(12 Terminals)	4—1/8"	15.00
No. 2013	(13 Terminals)	4—7/16"	15.73

CINCH-JONES SALES ★

CINCH SOCKETS ARE STANDARD

MOLDED OCTAL
1-5/16" MOUNTING CENTERS

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and sturdy steel press-on type saddle with 4 ground lugs. Mounts in 1" chassis hole.

No.	Description	List Price
8AB	**Black**	**Each $ .15**
8AM	**Mica-Filled**	**Each .22**

MOLDED OCTAL
1½" MOUNTING CENTERS

Same as 8A series molded octal above except has clinch-on type saddle with 4 ground lugs and mounts in 1⅛" chassis hole. Available in black, mica - filled bakelite, or ceramic.

No.	Description	List Price
8EB	**Black**	**Each $ .15**
8EM	**Mica-Filled**	**Each .22**
8EC	**Ceramic**	**Each .51**

MOLDED LOKTAL

Steel mounting saddle with solder coated brass contacts and center guide clip with locking spring. 1 5/16" mounting centers. Molded from high dielectric black bakelite or mica-filled low loss bakelite. Mounts in 1" chassis hole.

No.	Description	List Price
8LB	**Black**	**Each $ .22**
8LM	**Mica-Filled**	**Each .29**

CHASSIS CLINCH
OCTAL AND LOKTAL

Designed to save valuable chassis space. Mounted in specially punched 1" chassis holes, and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring required. Molded from high dielectric black bakelite. Solder coated brass contacts and center guide clip.

No.	Description	List Price
8CC	**Octal**	**Each $ .13**
8CCL	**Loktal**	**Each .18**

RING MOUNT OCTAL

Molded from high dielectric black bakelite. Solder coated brass contacts. Used extensively on test equipment, public address amplifiers and on other apparatus where sockets are exposed. Molded keyway in side engages key in chassis hole, preventing socket from turning. Mounts in 1 11/64" chassis hole. Crimped retainer ring is furnished with these sockets.

No.	Description	List Price
8R1	**For 1/16" thick chassis**	**Each $ .19**
8R2	**For ⅛" thick chassis**	**Each .19**

MOLDED LOKTAL

Has same characteristics as molded loktal shown in left column, except saddle has 4 ground lugs.

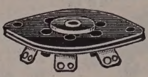
No.	Description	List Price
8LB1	**Black**	**Each $ .22**
8LM1	**Mica-Filled**	**Each .29**

WAFER LOKTAL
1-5/16" MOUNTING CENTERS

Laminated bakelite socket. Sturdy and positive grip solder coated contacts and center guide clip with locking spring. Mounts in 1 1/16" chassis hole. Has two .136 diameter mounting holes.

No.	List Price
85WS	**Each $ .17**

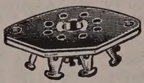
GLASS TUBE SOCKETS



Laminated bakelite sockets with solder coated positive grip brass contacts. 1½" mounting centers. .140 diameter mounting holes. Designed to fit four, five and seven prong tubes.

No.	Description	List Price
4WX	**4 Prong**	**Each $ .13**
5WY	**5 Prong**	**Each .13**
6WZ	**6 Prong**	**Each .14**
7WU	**7 Prong**	**Each .15**
7WA	**7 Prong (Large)**	**Each .15**

WAFER LOKTAL
1½" MOUNTING CENTERS



Laminated bakelite socket. Solder coated brass contacts and center guide clip with locking spring. Mounts in 1¼" diameter chassis hole. Two .136 diameter mounting holes.

No.	List Price
85WL	**Each $ .17**

WAFER OCTAL

Laminated bakelite sockets with solder coated brass positive grip contacts. Designed to fit all standard eight prong tubes. Available with 1 5/16" or 1½" mounting centers. Both styles have .136 diameter mounting holes.

No.	Description	List Price
8W1	**1 5/16" Mounting Centers**	**Each $ .15**
8W2	**1½" Mounting Centers**	**Each .15**

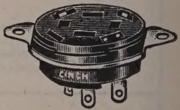
CINCH CAPACITOR "PLUG-IN" SOCKETS

Motion picture, telephone, airborne radio, broadcasting equipment, electric organs, and other electrical equipment need instant replacement when failures in electronic circuits occur at the capacitor connections. Cinch "Know How" has solved this problem.

SMALL

Designed for use with Mallory and Magnavox 1" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel mounting saddle has 4 ground lugs. 1½" mounting centers. 3 recessed center contacts for extended prongs of condenser and two outer contacts flush with surface for short prongs of condenser. All contacts are solder coated for fast, easy soldering.

No.	List Price
2C5	**Each $ .55**



LARGE

Designed for use with Mallory and Magnavox 1⅜" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel saddle has 1 27/32" mounting centers. Four recessed center contacts for extended prongs of condenser and three outer contacts flush with surface for short prongs of condenser. All contacts are solder coated.

No.	List Price
2C7	**Each $ .68**

CRYSTAL SOCKETS

2 PRONG
31/64" CENTERS

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .120" diameter recessed mounting hole. Socket body is 25/32" long, 5/16" thick, and 35/64" high. For use with FT243 type crystal.

No.	Description	List Price
2KB	**Black**	**Each $ .33**
2KM	**Mica-Filled**	**Each .37**

4 PRONG

Molded from mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .140 diameter mounting hole recessed 9/64" from surface in 5/16" diameter hole. Socket body is 25/32" long, 45/64" wide, and ½" high. Designed for use with two No. FT243 type crystals.

No.	List Price
2K4	**Each $ .44**

2 PRONG
½' CENTERS

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated phosphor bronze contacts on ½" centers. No. 4-40 tap mounting hole. 1⅛" long, ⅜" wide and 7/16" high. For No. CR-1 and CR-7 type crystals.

No.	Description	List Price
2K1B	**Black**	**Each $ .44**
2K1M	**Mica-Filled**	**Each .50**

CINCH-JONES SALES ★

7 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED SADDLE TYPE

Bottom Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Cadmium plated steel saddle with ⅞" mounting centers. .093 diameter mounting holes. Solder coated positive grip brass contacts. Designed for mounting through bottom of chassis in ⅝" diameter hole. For use with all standard seven pin miniature tubes.

No.	Description	List Price
7EB	**Black**	**Each $ .24**
7EM	**Mica-Filled**	**Each .31**

WAFER TYPE

⅞" Mounting Centers

Laminations consists of 1/16" top plate and 3/64" bottom plate from high grade chocolate XP bakelite. .095 diameter mounting holes. Solder coated brass contacts. Available with or without solder center shield and ground strap.

No.	Description	List Price
7W1	**With center shield & ground strap**	**Each $ .23**
7W2	**With center shield only**	**Each .21**
7W3	**Without center shield & ground strap**	**Each .21**
7W4	**Same as 7W1 except has two (2) 1/16" Top Plates**	**Each .25**

TUBE SHIELD AND BASE

Snap-On Type

Shield fits over and outside of retaining spring. Indentation on shield locks into ridge on base. Spring steel shield is 1 53/64" long. Base is made of hardened carbon steel supplying adequate spring retentivity on shield. Base has ⅞" mounting centers with mounting holes that coincide with those for miniature 7 pin sockets as established by R.M.A. standards. For use with saddle type and wafer sockets with ⅞" mounting centers illustrated on this page.

No.	List Price
7S1	**Each $ .18**

TUBE SHIELDS

"J" Slot Type

Durable steel shields complete with tube securing spring. "J" slot feature designed to fit securely with Cinch shield base type sockets, such as 7X series shown in next column. Also fit 7SB type shield bases shown below. Available in three lengths:

No.	Description	List Price
7S2	**1⅜" Long**	**Each $ .18**
7S3	**1¾"' Long**	**Each .19**
7S4	**2¼"' Long**	**Each .28**

SHIELD BASES FOR ABOVE SHIELDS

Durable steel shield bases designed for use with "J" slot type shields illustrated above. Available in two sizes: 7/16" high or ¾" high. Both types have ⅞" mounting centers.

No.	Description	List Price
7SB	**7/16" High**	**Each $ .12**
7SB1	**¾" High**	**Each .19**

MOLDED SADDLE TYPE

Top Mount

Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. Cadmium plated steel saddle with ⅞" mounting centers and .093 diameter mounting holes. Solder coated brass contacts. Designed for mounting through top of chassis in ⅝" diameter hole. Will securely hold all standard seven pin miniature tubes.

No.	Description	List Price
7AB	**Black**	**Each $ .24**
7AM	**Mica-Filled**	**Each .31**
7AC	**Ceramic**	**Each .55**

RING MOUNT TYPE

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and center shield. Mounts in ⅝" diameter round or "D" shaped hole. Complete with retainer ring.

No.	Description	List Price
7RB	**Black**	**Each $ .23**
7RM	**Mica-Filled**	**Each .30**

CHASSIS CLINCH TYPE

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed to save valuable chassis space. Mounted in specially punched ⅝" chassis hole and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring is required.

No.	Description	List Price
7CCB	**Black**	**Each $ .21**
7CCM	**Mica-Filled Bakelite**	**Each .26**

SHIELD BASE TYPE

Shield base is attached to socket body for mounting through top of chassis. Molded from high dielectric black bakelite, mica-filled low loss bakelite or ceramic material. Solder coated brass contacts and center shield. Cadmium plated steel shield base with ⅞" mounting centers. Use No. 7S2, 7S3, or 7S4 shields illustrated to left with these sockets.

No.	Description	List Price
7XB	**Black**	**Each $ .44**
7XM	**Mica-Filled Bakelite**	**Each .50**
7XC	**Ceramic**	**Each .72**

WAFER TYPE with

1" & 1-5/16" Mtg. Centers

Newly developed 7 pin miniatures to replace octal sockets for auto radios, television, and other sets. Newly designed contacts will hold tube firmly in place without using a tube shield despite constant vibration. Same pin circle as standard 7 pin miniature sockets with ⅞" mounting centers for all standard 7 pin miniature tubes. Available with or without center guide pin and ground strap.

1" Mounting Centers

No.	Description	List Price
7WL1	**With center pin and ground strap**	**Each $ .19**
7WL2	**With center pin only**	**Each .18**
7WL3	**Without center pin or ground strap**	**Each .17**

1-5/16" Mounting Centers

No.	Description	List Price
7WL4	**With center pin**	**Each .19**
7WL5	**Without center pin**	**Each .18**

9 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED — SADDLE TYPE

Bottom Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through bottom of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9EB	**Black**	**Each $ .36**
9EM	**Mica-Filled Bakelite**	**Each .42**

SHIELD BASE

Durable steel shield base designed for use with shields illustrated to right. 1⅛" mounting centers. May be used with any 9 pin wafer or saddle type sockets shown in right column.

No.	List Price
9SB	**Each $ .24**

TUBE SHIELDS

Made from durable steel. Complete with tube securing spring. "J" slot feature designed to fit securely with Cinch 9X series shield base type sockets illustrated to the right. Will also fit No. 9SB shield base shown at left. Available in three lengths.

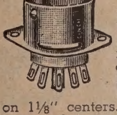
No.	Description	List Price
9S1	**1½" Long**	**Each $ .29**
9S2	**1 15/16" Long**	**Each .31**
9S3	**2⅜" Long**	**Each .40**

MOLDED—SADDLE TYPE

Top Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through top of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9AB	**Black**	**Each $ .36**
9AM	**Mica-Filled**	**Each .42**



SHIELD BASE TYPE

Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. One-piece cadmium plated steel shield base and saddle with .093 diameter mounting holes on 1⅛" centers. Solder coated brass contacts and center shield. Mounts through top of chassis in ¾" diameter hole. Use Cinch 9S type shields with these sockets.

No.	Description	List Price
9XB	**Black**	**Each $ .63**
9XM	**Mica**	**Each .68**
9XC	**Ceramic**	**Each .96**

WAFER TYPE

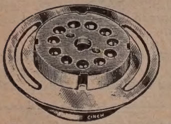
Has two laminations consisting of 1/16" top plate and 3/64" bottom plate made from 1⅛" mounting centers with .093 diameter holes. Solder coated brass contacts and center shield.

No.	List Price
9W	**Each $ .33**

CINCH-JONES SALES ★

CINCH SOCKETS ARE STANDARD FOR TELEVISION!

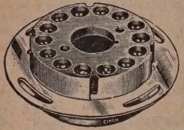
Television is growing by leaps and bounds. To meet the increasing demand Cinch "Know How" has engineered and perfected Magnal, Duodecal, and Diheptal sockets for cathode ray and television tubes. Other television products illustrated on this page include second anode connectors and Corona insulating shields.



MAGNAL—11 PRONG

Molded from mica-filled low loss bakelite. Socket is $1\frac{23}{32}''$ wide and $1\frac{9}{64}''$ high. Full floating silver plated beryllium copper contacts designed to insure easy insertion of tubes and yet provided excellent electrical connections. For use with 5BP1 and 2AP1 type cathode ray tubes.

No.	Description	List Price
3M11	**Mica Socket**	**Each $6.60**
3R11	**Steel Mounting Ring**	**Each .46**



DIHEPTAL 14 PRONG

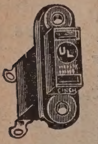
Molded from high dielectric black bakelite or mica-filled low loss bakelite. $2\frac{7}{32}''$ wide and 1⅛" high. Possesses same features as Cinch Magnal socket shown above.

No.	Description	List Price
3B14	**Black Socket**	**Each $2.20**
3M14	**Mica Socket**	**Each 2.75**
3R14	**Steel Mounting Ring**	**Each .46**

CORONA SHIELDS

Specifically designed for Television and high voltage wiring. These cadmium plated brass shields will provide excellent protection at proper positions in electrical connections. Outside diameter .470. Hole diameter .136. Thickness .172.

No.	List Price
3C1	**Per C $3.03**

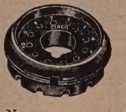


110-250 VOLT SOCKET

(Underwriters Listed)

When space is at a premium use this 110-250 volt 2 prong socket. Rated at 15 Amp., 110 V. or 10 Amp., 250 V. Molded from high dielectric black bakelite. Solder coated brass contacts on ½" centers designed to accept any 2 prong standard electric plug. Mounts in $\frac{25}{64}''$ x $\frac{23}{32}''$ hole. .144 diameter mounting holes on 1⅛" centers. Ideal for radio chassis and many other applications.

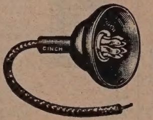
No.	List Price
2R2	**Each $ .22**



DUODECAL—12 PRONG

No larger in diameter than the tube base and only slightly longer than the tube pin. A new feature incorporates wire strain relief as an integral part of the contact. Molded from high dielectric black bakelite. For use with 10BP4, 2BP1, 5TP4, etc., type tubes.

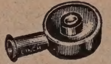
No.	List Price
3B12	**Each $ .88**



SECOND ANODE CONNECTORS

For television tubes—Silver plated snap button type plug well insulated by 1½" diameter rubber protective cap. Snaps into opening on side of tube. Available in three lengths wire leads.

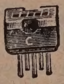
No.	Description	List Price
3A2	**12" Wire Lead**	**Each $ .99**
3A3	**15" Wire Lead**	**Each 1.16**
3A4	**18" Wire Lead**	**Each 1.38**



SECOND ANODE CONNECTOR

For diheptal based tubes. Cadmium plated brass contact surrounded by rubber insulator ¾" wide and $1\frac{3}{16}''$ long. Snaps over .096 diameter prong on side of diheptal tubes.

No.	List Price
3A1	**Each $ .83**

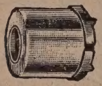


SUB-MINIATURE HEARING AID SOCKETS

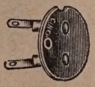
Used extensively for hearing aids, radio controlled model airplanes and numerous other applications which require sub-miniature tubes. Molded from mica-filled low loss bakelite with silver plated beryllium copper contacts. For Raytheon type CK series sub-miniature tubes. Available with 5, 6, or 7 contacts. Four prong tubes use No. 2H5 five prong socket.

No.	Description	List Price
2H5	**5 Prong**	**Each $ .41**
2H6	**6 Prong**	**Each .43**
2H7	**7 Prong**	**Each .45**

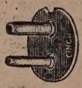
CONNECTOR PLUGS AND SOCKETS



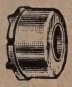
18G



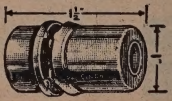
6K2



5K2



18E



Assembled

These low cost plugs and sockets are ideal for a multitude of applications. A "Cinch" where space is at a premium. Complete assembly of plug, socket, male and female shell will close to a compact unit of 1½" long. Polorized—Nickel plated brass tube pins—Solder coated brass contacts. Plugs, sockets and shells have lock feature which prevents turning in shells.

PLUGS

Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
5K2	2	6K2	18E	.08 ea.
5K3	3	6K3	18E	.09 ea.
5K4	4	6K4	18E	.10 ea.
5K5	5	6K5	18E	.11 ea.
5K6	6	6K6	18F	.13 ea.

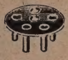
SOCKETS

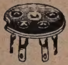
Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
6K2	2	5K2	18G	.07 ea.
6K3	3	5K3	18G	.08 ea.
6K4	4	5K4	18G	.09 ea.
6K5	5	5K5	18G	.10 ea.
6K6	6	5K6	18H	.11 ea.

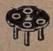
CINCH-JONES SALES ★

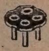
CINCH BATTERY PLUGS

Cinch manufactures a complete line of dependable plugs to fit all types of batteries. Made with nickel plated brass tube pins mounted on high grade chocolate bakelite. The chart below indicates the correct plug for most popular batteries. In addition to the battery plugs illustrated in this catalogue, Cinch manufactures a complete line of wafer plugs for radio chassis, speakers, and numerous other electrical applications. Send us a sample or sketch of the plug you may require.


5AB1


6K4


5AB2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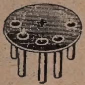
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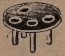
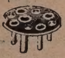

5AB5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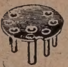
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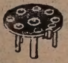
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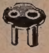
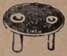

5A1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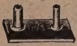
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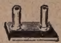
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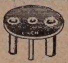
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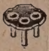
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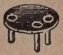
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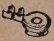
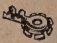
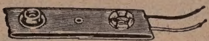

5M


5F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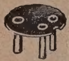
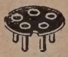

5C1


5C2

THIS REFERENCE CHART WILL ASSIST YOU IN SELECTING THE CORRECT PLUG FOR POPULAR BATTERIES

Part Number	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
5A1	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	Ea. $ .06
5A2	3 "A"	20F2	X125	VS025	P8024	P9403	Ea. .07
5A3	4½ "A"	G-3	746	VS002	P100	P-83A	Ea. .06
5A4	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P694A, P696L, P698A, P698L	Ea. .06
5A5	7½ "A"	G-5	687	VS003		P85A	Ea. .09
5B1	45 "B" Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .07
5B2	45 "B" Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .08
5M	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 4.40
5F	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 5.50
5MFA	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .30
5C1	4½ "C"	2370PI	X771	VS030	P3D	P231W	Ea. .10
5C2	22½ "C"	5156PI	768	VS031	P15B5	P5151	Ea. .11
5AB1	1½ "A"-90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793	Ea. .10
6K4	9 "A"-90 "B"	G6B60	752	VS047			Ea. .09
5AB2	1½ "A"-63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L P41A4G	AB419	Ea. .08
5AB3	6 "A"-90 "B"	2F4A60		VS044	P60A8F4	AB694	Ea. .09
5AB4	6 "A"-90 "B"	F4B60		VS048			Ea. .13
5AB5	6 "A"-90 "B"	D4A60, 2F4B60, F4A41		VS046	P41AFL	10896, AB648	Ea. .10
5AB6	7½ "A"-90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	Ea. .11
5AB7	9 "A"-90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AB994	Ea. .13
5AB8	9 "A"-90 "B"	4FA60					Ea. .11

LAMINATED SOCKETS

Cinch also manufactures a complete line of wafer sockets, round or rectangular, for a variety of applications; for batteries, speakers, and various other radio connections. Let us know your requirements.

PLUG CAPS AND SHELLS

For above Battery Plugs and for Connector Plugs and Sockets on page T-31.

Cadmium plated brass shell with rolled edge on 5/16" diameter neck opening. Outside diameter at base .625. Four 1/8" prongs coincide with notches on plugs. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18A	**Each $ .03**

Cadmium plated steel shells complete with fibre insulator. Available with 3/8" or 1/2" diameter hole with rolled edge. Inside diameter 31/32". 23/32" high. For use with Cinch No. 6K2, 6K3, 6K4, 6K5, and 6K6 type sockets.

No.	Description	List Price
18G	**3/8" Diameter Hole**	**Each $ .07**
18H	**1/2" Diameter Hole**	**Each .07**

Brass shell with black-nickel finish. 1/4" hole on top. Complete with fibre insulator. For use with Cinch No. 5AB1, 5AB5, 5B2, 5A2, and 5A5 type battery plugs.

No.	List Price
18C	**Each $ .06**

Part No. 18D same as 18C except has 5/32" diameter hole drilled between center hole and outside edge.

No.	List Price
18D	**Each $ .07**

Cadmium plated brass shell with 23/64" diameter opening on top of shell. Outside diameter at base .625. Four 1/8" prongs coincide with notches on plugs. 1/2" high. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18B	**Each $ .04**

Cadmium plated brass shells complete with fibre insulator. Available with 3/8" or 1/2" diameter hole with rolled edge. Inside diameter 31/32". 1/2" high. For use with Cinch No. 5C1, 5C2, 5AB6, 5AB7, 5AB8, 5K2, 5K3, 5K4, 5K5, and 5K6 type plugs.

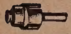
No.	Description	List Price
18E	**3/8" Diameter Hole**	**Each $ .08**
18F	**1/2" Diameter Hole**	**Each .08**

Cadmium plated brass shell complete with fibre insulator. Same as Cinch No. 18B shell except has 1/2" neck with 3/8" hole riveted to base. For use with same plugs as No. 18B.

No.	List Price
18J	**Each $ .11**

CINCH-JONES SALES ★

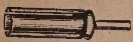
PIN PLUGS — JACKS — CONNECTORS — STRIPS — TERMINALS



PHONO PLUGS

R.C.A. type. For a multitude of applications: record players, auto radios, receivers, recording and reproducing equipment, experimental units, etc. Nickel plated ⅛" diameter tube pin. Available in two lengths: $\frac{9}{16}$" and $\frac{11}{16}$". Use No. 13A with type 81A and 81B phono jacks. Use No. 13E with type 81E extension jack.

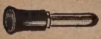
No.	Description	List Price
13A	**$\frac{9}{16}$" Pin**	**Each $ .09**
13E	**$\frac{11}{16}$" Pin**	**Each .09**



ANTENNA PLUG

Motorola type. Nickel plated ⅛" tube pin extends $\frac{17}{32}$" from cadmium plated split brass shall whose 8 cutting edges provide positive grounded connection when inserted into a Cinch No. 81C or 81F connector.

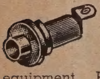
No.	List Price
13B	**Each $ .13**



INSULATED PIN PLUG

Nickel plated ⅛" brass tube pin $\frac{9}{16}$" long, assembled to $\frac{13}{32}$" long fibre insulator. May be used with Cinch No. 81A and 81B type phono jacks or with No. 49 series contact strips illustrated in right column.

No.	List Price
13C	**Each $ .10**

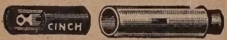


STAND-OFF TERMINALS

Insulated terminals for television and other high voltage electronic equipment. Provides excellent insulation for passing high voltages with through chassis. Molded from mica-filled low loss bakelite. Available in two lengths: $\frac{9}{32}$" or $\frac{13}{32}$". Diameter of cylinder is .110. Mounts in $\frac{5}{32}$" dia. hole. Actual size illustration of No. 16L.

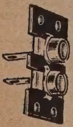
No.	Description	List Price
16S	**9/32"**	**Each $ .83**
16L	**13/32"**	**Each .83**

SHIELDED EXTENSION JACK



Cadmium plated brass shell 2$\frac{7}{16}$" long with black bakelite insert providing insulation for solder coated brass positive grip contact. Use Cinch No. 13E Phono plug with this jack.

No.	List Price
81E	**Each $ .28**

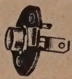


DOUBLE PHONO JACK

Two positive grip phono jacks mounted on $\frac{1}{16}$" bakelite panel with 1$\frac{3}{16}$" mounting centers. Jacks are spaced on ½" centers. Panel is 1½" x ½". Used on recording units, receivers, etc. Use Cinch No. 13A phono plug with this jack.

No.	List Price
81B	**Each $ .18**

SINGLE PHONO JACK

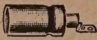


Precision engineered for many uses, such as: R.C.A. type recording units, receivers, and auto sets. Single prong positive grip phono jack mounted on $\frac{1}{16}$" chocolate bakelite disc with $\frac{11}{16}$" mounting centers Use Cinch No. 13A phono plug with this jack.

No.	List Price
81A	**Each $ .13**

ANTENNA CONNECTOR

Shell Type

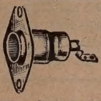


Same as No. 81F on right except without flange. This connector may be soldered in position. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81C	**Each $ .13**

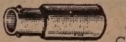
ANTENNA CONNECTOR

Flange Type



Motorola type shielded jack Sturdy steel flange with $\frac{15}{16}$" mtg. centers with .136 dia. mtg. holes. Solder coated shell, flange and contact. Can be mounted with screws or rivets. Used extensively on auto radios. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81F	**Each $ .20**

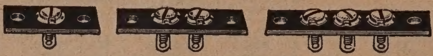


ADAPTER SHELL

Converts Motorola pin plug to Delco bayonet type receptacle. Cadmium plated brass shell 1$\frac{3}{32}$" long. Use with No. 13B Antenna plug.

No.	List Price
81K	**Each $ .15**

SCREW TYPE TERMINAL STRIPS

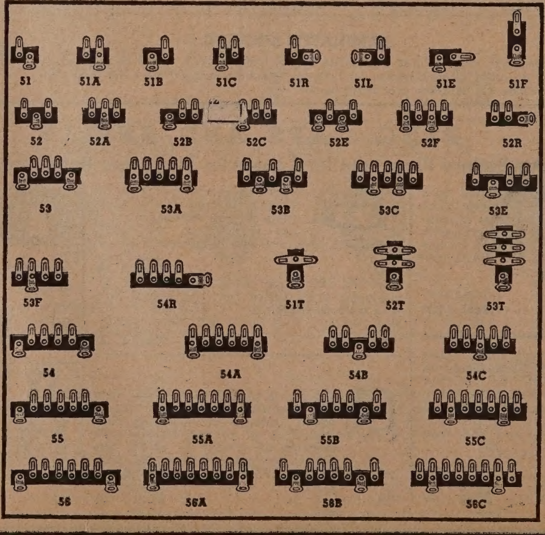


Ideal for chassis or breadboard layouts. Solder coated brass terminals. .136 diameter mounting holes. Strips with 1 to 6 lugs are of $\frac{1}{16}$" bakelite; 7 to 10 terminals mounted on $\frac{3}{32}$" bakelite. Ends of screws are captivated to prevent removal. Terminals are spaced on $\frac{7}{16}$" centers.

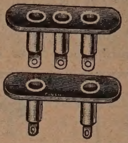
No.	Lugs	Mounting Centers	List Price
17- 1	**1**	**⅞"**	**Each $ .06**
17- 2	**2**	**1$\frac{5}{16}$"**	**Each .09**
17- 3	**3**	**1¾"**	**Each .13**
17- 4	**4**	**2$\frac{3}{16}$"**	**Each .17**
17- 5	**5**	**2⅝"**	**Each .20**
17- 6	**6**	**3$\frac{1}{16}$"**	**Each .24**
17- 7	**7**	**3½"**	**Each .30**
17- 8	**8**	**3$\frac{15}{16}$"**	**Each .34**
17- 9	**9**	**4⅜"**	**Each .39**
17-10	**10**	**4$\frac{13}{16}$"**	**Each .43**

LUG TYPE TERMINAL STRIPS

These bakelite strips are handy for neatly supporting resistors, condensers, etc., in circuit wiring. Solder coated brass lugs are spaced on ⅜" centers with .140 diameter mounting holes. Chocolate bakelite strips are $\frac{1}{16}$" thick and ⅜" wide.

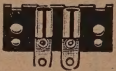


PHONO TIP JACKS



Double and triple tip jacks for speakers, headphones, etc. $\frac{9}{64}$" dia. mounting holes on 1$\frac{11}{16}$" centers. Nickel plated. Brass shells are $\frac{17}{32}$" long. Solder coated contact $\frac{25}{32}$" long. Contacts for double jack are on ⅞" centers. Triple jack contacts on $\frac{7}{16}$" centers. Mounted on $\frac{1}{16}$" chocolate XP grade bakelite.

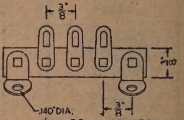
No.	Description	List Price
81D	**Double**	**Each $ .17**
81T	**Triple**	**Each .28**



CONTACT STRIPS

For connections which must be changed quickly and easily. Solder coated spring steel contacts spaced on ⅜" centers and mounted on $\frac{1}{16}$" bakelite. Contacts are sized for ⅛" diameter tube pins such as Cinch No. 13C illustrated in first column on this page.

No.	Contacts	Mounting Centers	List Price
49-1	**1**	**¾"**	**Ea. $ .06**
49-2	**2**	**1⅛"**	**Ea. .09**
49-3	**3**	**1½"**	**Ea. .11**
49-4	**4**	**1⅞"**	**Ea. .14**
49-5	**5**	**2¼"**	**Ea. .17**
49-6	**6**	**2⅝"**	**Ea. .20**



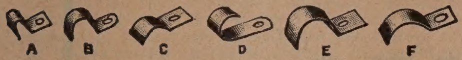
No.	Mtg. Centers	List Price
51		$2.75 c
51A		2.86 c
51B		2.75 c
51C		2.86 c
51R		2.75 c
51L		2.75 c
51E		2.75 c
51F		2.75 c
51T		3.03 c
52		3.74 c
52A		3.85 c
52B		3.74 c
52C		3.85 c
52E	¾"	5.17 c
52F	¾"	5.39 c
52R		3.74 c
52T		4.18 c
53	1½"	6.27 c
53A	1½"	6.49 c
53B	¾"	6.27 c
53C	¾"	6.49 c
53E		4.84 c
53F		4.95 c
53T		5.61 c
54	1⅞"	7.48 c
54A	1⅞"	7.70 c
54B		6.05 c
54C		6.16 c
54R		6.05 c
55	2¼"	8.58 c
55A	2¼"	8.80 c
55B	1½"	8.58 c
55C	1½"	8.80 c
56	2⅝"	10.34 c
56A	2⅝"	10.56 c
56B	1⅞"	10.34 c
56C	1⅞"	10.56 c

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★

RADIO HARDWARE

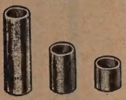
CABLE CLAMPS



Cadmium plated sturdy steel cable clamps designed for securing cables ranging from 1/16" diameter to 5/8" diameter. Illustrations are half size.

No.	Dia. of arc	Hole Dia.	Over-all Width	Over-all Length	Hole cent. to arc cent.	List Price	
85A	1/8"	.149	11/32"	15/32"	1/4"	$3.30 C	$28.60 M
85B	5/16"	.140	5/16"	23/32"	3/8"	2.31 C	20.35 M
85C	5/16"	.144	3/8"	21/32"	3/8"	2.09 C	16.50 M
85D	5/16"	.136	5/16"	27/32"	1/2"	1.49 C	12.65 M
85E	1/2"	.147	1/2"	15/16"	7/16"	2.86 C	25.85 M
85F	5/8"	.171	3/8"	1"	1/2"	1.54 C	13.20 M

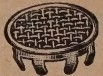
METAL SPACER SLEEVES



Zinc plated brass spacer sleeves. Six (6) popular sizes for spacing chassis, panels, etc. Illustrations are full size.

No.	Length	Outside Dia.	Inside Dia.	List Price
43A	3/16"	1/4"	3/16"	$1.65 C
43B	1/4"	1/4"	3/16"	1.93 C
43C	3/8"	1/4"	3/16"	1.93 C
43D	1/2"	1/4"	3/16"	1.93 C
43E	3/4"	1/4"	3/16"	2.28 C
43F	15/16"	1/4"	3/16"	2.48 C

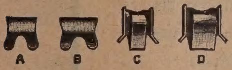
SCREEN TYPE PLUG BUTTON



For portable radios, transmitters, amplifiers, etc. Provides ventilation wherever required in radio, television and electronic equipment. Bright zinc plated steel button snaps in 1" diameter hole. Half size illustration.

No.	Description	List Price
41V	for 1" Hole	$16.50 C

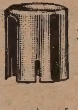
KNOB SPRINGS



For fastening knobs to shafts. Four (4) popular sizes. Fabricated from high grade spring steel. Heat treated to retain spring retentivity.

No.	Description	List Price	
83A		$ .88 C	$ 7.15 M
83B		1.10 C	9.35 M
83C	For 3/16" Shaft	1.21 C	10.45 M
83D	For 1/4" Shaft	1.60 C	13.20 M

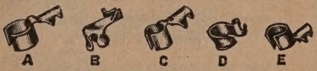
GRID CAP SHIELD



Fits firmly over the grid cap, completely shielding the tube. Cadmium plated shield is 1" high with 7/8" slot opening for grid leads.

No.	List Price
60S	Each $ .11

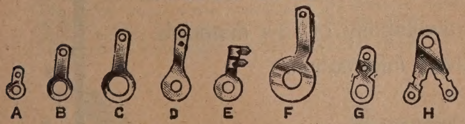
GRID CAPS



For glass or metal tubes. Made of heavy gage brass, solder coated for fast, easy soldering. No. 60A is for 23/64" diameter tube caps. All others designed for 1/4" diameter tube caps.

No.	List Price	
60A	$1.27 C	$10.45 M
60B	1.16 C	9.35 M
60C	1.32 C	11.00 M
60D	1.27 C	10.45 M
60E	1.10 C	8.80 M

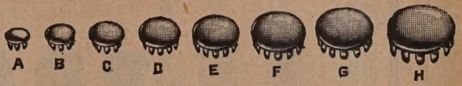
SOLDER LUGS



Popular flat type solder lugs for a multitude of wiring applications. Eight (8) different styles. All solder coated for fast, easy soldering. Illustrations are half size.

No.	Length	Diameter Large Hole	Diameter Small Hole	List Price	
14A	11/32"	.110	.078	$ .61 C	$ 4.95 M
14B	5/8"	.165	.093	.77 C	6.60 M
14C	41/64"	.250	.093	.66 C	5.50 M
14D	55/64"	.145	.093	.83 C	7.15 M
14E	11/16"	.125	None	1.43 C	12.10 M
14F	1 1/4"	.260	.093	2.26 C	19.25 M
14G	11/16"	.140	.093	.61 C	4.95 M
14H	53/64"	.141	.093	1.32 C	11.00 M

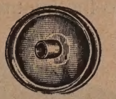
PLUG BUTTONS



Used to cover punched or drilled holes in metal, wood, fibre, tubes, plastic, cardboard, etc. Nickel plated steel plug buttons for eight popular size holes. Other sizes available, let us know your requirements. Spring tension prongs hold plug bottom firmly in position. Illustrations are 1/3 actual size.

No.	For hole Diameter	Cap Diameter	List Price
41A	1/4"	13/32"	$2.75 C
41B	3/8"	1/2"	2.75 C
41C	1/2"	21/32"	3.03 C
41D	5/8"	51/64"	3.85 C
41E	3/4"	15/16"	3.85 C
41F	7/8"	1 1/16"	4.68 C
41G	1"	1 5/32"	6.05 C
41H	1 1/4"	1 7/16"	6.60 C

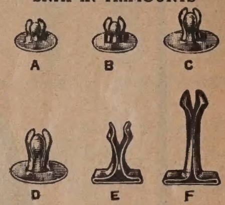
DIAL PULLEYS



Precision engineered aluminum idler dial pulleys. Five (5) popular sizes.

No.	Outside Dia.	String Dia.	Hub Dia.	List Price
70A	3/8"	5/16"	1/8"	$1.54 C
70B	17/32"	7/16"	1/8"	2.09 C
70C	39/64"	1/2"	1/8"	2.20 C
70D	3/4"	5/8"	3/16"	3.30 C
70E	1 1/8"	1"	3/16"	4.68 C

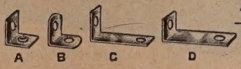
SNAP-IN TRIMOUNTS

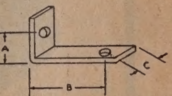


For holding two or more thicknesses of material firmly together. Can easily be removed a multitude of applications such as fastening dials, built-in aerials, cabinet backs, etc. Actual size illustrations of six (6) popular types.

No.	For Hole Diameter	Cap Diameter	Length	List Price	
40A	.125	9/32"	13/64"	$ .99 C	$ 8.25 M
40B	.136	23/64"	9/32"	1.21 C	9.90 M
40C	.144	3/8"	17/64"	1.32 C	11.00 M
40D	.171	3/8"	17/64"	1.54 C	13.20 M
40E	.156	23/64"	13/32"	1.71 C	14.30 M
40F	.125	3/8"	5/8"	1.43 C	12.10 M

ANGLE BRACKETS



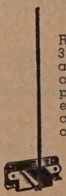


Cadmium plated brass and steel brackets for a variety of radio and other electronic applications. Illustrations are half size.

No.	"A" Dim.	"B"	"C"	"A" Hole	"B" Hole	list Price	
33A	7/32"	3/16"	9/32"	.136	6-32 Tap	$2.75 C	$23.10 M
33B	7/32"	7/32"	5/16"	.140	.140	1.65 C	13.75 M
33C	5/16"	3/4"	1/4"	.156	.140	1.32 C	11.00 M
33D	7/32"	25/32"	3/8"	.136	.187	2.09 C	17.60 M

DIAL POINTERS

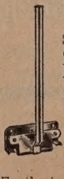
NEW! WIRE TYPE INDICATOR



Red enameled indicator 3½" long. May be cut to any length and curved or bent to any desired position. May be inserted from front or rear and projected upward or downward. Wire may then be tightly crimped into carriage. Aluminum carriage rides easily on rail. Simply installed by hooking dial cable over extrusions on rear of carriage.

No. **11A** List Price **Each $ .15**

BROAD BAND TYPE INDICATOR



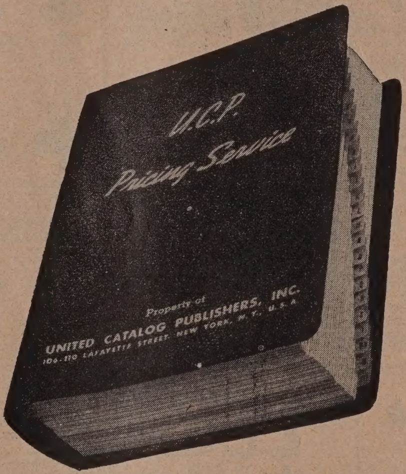
Similar to wire type indicator except has ¼" wide aluminum band, white enameled with red center stripe. Band is 2¾" long and may be cut or bent as desired. Indicator band is welded to aluminum carriage which rides on dial rail. Easily installed by hooking dial cable over outside extrusions and under center extrusion on rear of carriage.

No. **11B** List Price **Each $ .26**

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**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DELIVERY

Delivery is often dependent on the availability of raw **materials. So check with your distributor for delivery information.**

American Beauty

ELECTRIC SOLDERING IRONS

These electric soldering irons embody features of design and construction that specialized experience dating from 1894 in the exclusive manufacture of electric heating appliances has demonstrated to be desirable for efficient and lasting service. Hundreds of thousands are in use throughout the world in a wide variety of manufacturing plants; in service, maintenance and repair shops and in telephone, telegraph, radio and TV stations. Because of their proven dependability, durability and efficiency they are preferred by those who measure the value of a tool or mechanical device by the service rendered.

No. 3128—For servicing TV, electronic and radio equipment and similar light work.

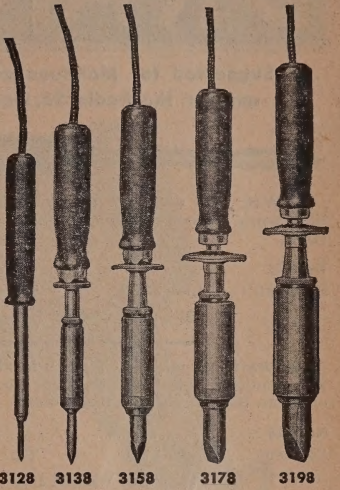
No. 3138—For TV, electronic and radio production; also for telephone, telegraph and similar work.

No. 3158—For the same purposes as the No. 3138 but for work requiring an iron of greater capacity.

No. 3178—For use on still heavier work than that for which the Nos. 3138 and 3158 irons are adapted.

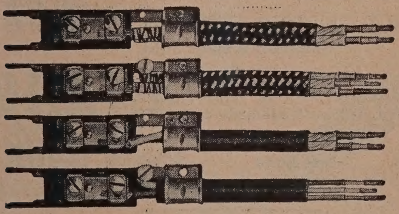
No. 3198—For use on very heavy soldering operations of all kinds.

Made in standard voltages and for 32 volts. No. 3138 also made for 6, 12, 24 and 55 volts. All sizes can be equipped with 3-conductor cord, one wire grounded, at slight additional charge. Separate heat-insulating stand supplied with each iron.



RELATIVE SIZES, SPECIFICATIONS AND PRICES

Cat. No.	Diameter of Tip	Watts	Net Weight	Length Over All	Casing Diameter	Approx. Ship. Wt.	List Price Each	Net Price Each (Less than 6)	Net Price Each (6 or more)
3128	¼″	60	7½ oz.	12¼″	9/16″	16 oz.	$ 5.50	$ 3.67	$ 3.51
3138	⅜″	100	16 oz.	12⅞″	⅞″	2 lbs.	8.75	5.83	5.58
3138 is made also in 130- and 150-watt inputs.)									
3158	⅝″	200	28 oz.	13⅝″	1¼″	3 lbs.	10.25	6.83	6.53
3178	⅞″	300	42 oz.	14⅜″	1 9/16″	4 lbs.	13.50	9.00	8.61
3198	1⅛″	550	60 oz.	15″	1¾″	5¾ lbs.	17.50	11.66	11.16



TERMINAL CONDUCTOR ASSEMBLY

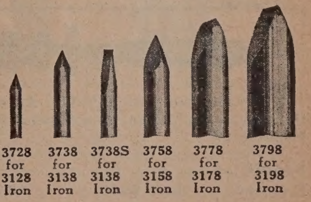
This illustration shows the Terminal Connector Assembly used in all American Beauty electric soldering irons. It is designed for use with either 2- or 3-conductor standard heater cord or rubber-covered cord—Types SJ, HSJ, etc.

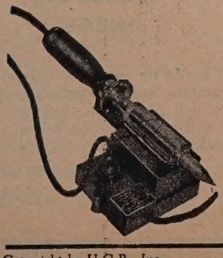
This assembly permits easy grounding for safety by a third conductor—particularly desirable when irons are used on 220-volt circuits or on metal benches accommodating groups of operators.

The cord is held firmly in place by a strain-clamp.

American Beauty COPPER TIPS

American Beauty Copper Tips are made from commercially pure, drawn bar copper rod and are heavily nickeled to resist corrosion and oxidation. Standard shaped tips with which various models are equipped are shown in illustration but pyramidal, instead of chisel type, and vice versa can be supplied when so specified without additional charge. For No. 3138 a special long, semi-chisel shaped tip (No. 3738-S) can be supplied for telephone, switchboard, television and radio work.





American Beauty TEMPERATURE REGULATING STAND

For use on (AC) Alternating Current Only

This is a thermostatically controlled device for the regulation of the temperature of an Electric Soldering Iron while at rest. Through an adjustment on bottom of stand the thermostat may be set for maintenance of any desired heat—from very low, or warm, to full working temperature. It is designed for use with Electric Soldering Irons up to 660 watts capacity and on circuits up to 240 volts.

Cat. No.	Net Weight	List Price	Net Price
475	27 oz.	$6.25	$4.41

DRAKE RADIO IRONS

Suggested for Maintenance Work and for the Radio Service Man

60 Watt Iron with ⅜" Tip. An excellent iron for light work. Porcelain element. Six ft. cord and small stand.

No. 315 .... List $2.50
Element .... List $1.00 Tip .... List $0.90
Shipping Weight 1 lb.

100 Watt Iron with ⅜" Tip. An ideal iron for those who require a hotter iron than our No. 315. Porcelain element. Six ft. cord and small stand.

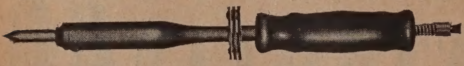
No. 316 .... List $3.40
Element .... List $1.50 Tip .... List $1.80
Shipping Weight 1 lb.

80 Watt Iron with ⅜" Tip. Recommended for light radio work. Mica wound element. Six ft. cord and large stand.

No. 225 .... List $5.50
Element .... List $3.40 Tip .... List $1.25
Shipping Weight 1½ lbs.

100 Watt Iron with ⅜" Tip. Recommended for general radio work. Mica wound element. Six ft. cord with large stand.

No. 325 .... List $6.00
Element .... List $4.00 Tip .... List $1.25
Shipping Weight 1½ lbs.



125 Watt Iron with ⅜" Tip. An extra hot iron for the serviceman. Mica wound element. Six ft. cord and large stand.

No. 326 .... List $6.50
Element .... List $5.00 Tip .... List $1.25
Shipping Weight 2 lbs.

200 Watt Iron with ⅝" Tip. Recommended for medium heavy work. Mica wound element. Six ft. cord and large stand.

No. 425 .... List $11.00
Element .... List $9.00 Tip .... List $ 2.00
Shipping Weight 2 lbs.

INDUSTRIAL IRONS

60 Watt Iron with ¼" Tip. An extra small iron for midget sets. Only 9" long.

No. 400 .... List $6.00
Element .... List $4.50 Tip .... List $0.60
Shipping Weight 1 lb.

100 Watt Iron with ⅜" Tip. Only 10 inches over all. Ideal for close work on radio sets.

No. 600-10 .... List $9.00
Element .... List $7.00 Tip .... List $1.25
Shipping Weight 2 lbs.

140 Watt Iron with ⅜" Tip. An extra hot iron for high speed work on production lines.

No. 600 Special .... List $9.50
Element .... List $7.50 Tip .... List $1.25
Shipping Weight 2 lbs.

80 Watt Iron with ⅜" Tip. Recommended for fine instruments, light telephone and other light soldering.

No. 450 .... List $7.00
Element .... List $5.00 Tip .... List $1.25
Shipping Weight 2 lbs.

100 Watt Iron with ⅜" Tip. The standard 100 watt iron. Ideal for switchboards and radio sets.

No. 600 .... List $8.50
Element .... List $6.50 Tip .... List $1.25
Shipping Weight 2 lbs.

200 Watt Iron with ⅝" Tip. For general factory work such as art glass, medium tin work.

No. 800 .... List $11.00
Element .... List $9.00 Tip .... List $ 2.00
Shipping Weight 3 lbs.

MODEL 350 MIDGET

Recommended for voice coil leads on speaker cones, meter connections, test equipment, hearing aids, crystal pickups, headphone leads, etc. This iron is a continuous duty 35 watt iron with a nickel-chromium element wound over mica insulation on a steel core.

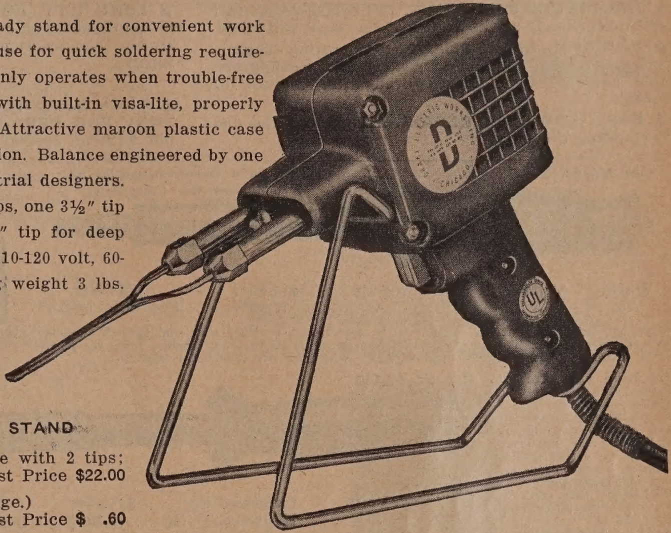
No. 350 .... List $5.50
Element .... List $4.00 Tips, ea. .... List $0.25
Shipping Weight 1 lb.

DRAKE

SOLDER GUN
HEAT CONTROLS
SOLDER POTS

DRAKE "*insta-heat*" SOLDERING GUN

Now supplied complete with ready stand for convenient work table storage. Always ready to use for quick soldering requirements. Saves power since gun only operates when trouble-free trigger is squeezed. Equipped with built-in visa-lite, properly focused to light soldering spot. Attractive maroon plastic case properly louvered for cool operation. Balance engineered by one of America's most famous industrial designers. Complete with easily removed tips, one 3½" tip for ordinary soldering; one 6½" tip for deep chassis soldering. Operates on 110-120 volt, 60-cycle A. C., 135 watts. Shipping weight 3 lbs.



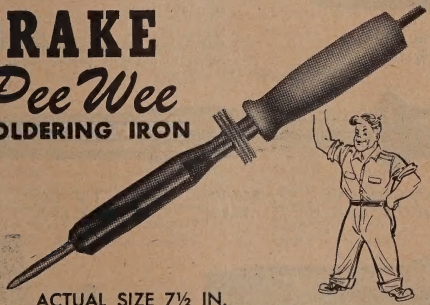
SUPPLIED WITH READY STAND

No. 900 Soldering Gun, complete with 2 tips; one 3½" and one 6½" ....List Price $22.00

No. 901 Extra 3½" Tips (2 to pkge.) List Price $ .60

No. 902 Extra 6½" Tips (2 to pkge.) List Price $ .60

DRAKE *PeeWee* SOLDERING IRON

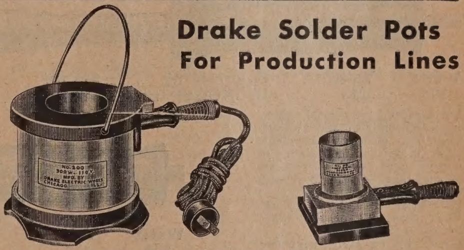


ACTUAL SIZE 7½ IN.

Designed specifically to be carried in a tool kit for "on the job" soldering. Excellent for all fine work—small, compact size makes it easy to handle. A full 35 watts with 3/16" tip. Operates on 110-120 volt, 60-cycle A. C. Baffle plates keep handle cool. Blued finish. Shipping weight, complete with stand, 1 lb.

Element............List $3.60 Tip............List $0.40
Shipping weight 1 lb.
No. 360 ....List Price $4.50

Drake Solder Pots For Production Lines



Model No. 200—300 Watt Unit

An ideal electric solder pot for production use. Used in factory production of tinned wire ends, terminal tinning and countless other volume tinning applications. Holds 2 lbs. of bar solder in 2½" diameter 2" deep cast iron well. Complete with detachable Underwriters' Approved cord and plug, and bale type carrying handle. Genuine nichrome element. Shipping weight 6 lbs.

No. 200 ....List Price **$7.50**

Model No. 100—150 Watt Unit

Designed for light tinning. Ideal for occasional jobs. Suited especially for tinning ends of stranded wires to prevent fraying. Can also be used for soldering cord tips to cables. One piece cast iron construction holds heat longer. Size of pot 1½" diameter 1" deep. Holds 1 lb. of bar solder. Complete with Underwriters' Approved cord and detachable plug. Shipping weight 3 lbs.

No. 100 ....List Price **$6.00**

CALROD* SOLDERING IRONS

FOR EVERY RADIO REQUIREMENT

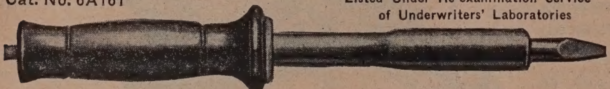
MANUFACTURING — SERVICE

*Registered trade-mark

- **HIGH-SPEED SOLDERING.** You can solder as fast and continuously as the nature of the work will allow.
- **UNIFORM PERFORMANCE.** Operating characteristics remain constant day after day. No appreciable decrease in efficiency even after months of service.
- **EASY, LOW-COST REPAIR.** Assembling and disassembling are easy.
- **LONG LIFE AND LOW MAINTENANCE.** Life is lengthened, and over-all costs are kept low because sturdy construction eliminates need of frequent repairs.
- **THEY NEED NOT BE RETURNED TO THE FACTORY FOR REPAIR.** Irons can be repaired on the job without special tools or skill.

Cat. No. 6A161

Listed Under Re-examination Service of Underwriters' Laboratories



Watts	Volts
75	115

Calorized tip ....$11.60*†
IRONCLAD tip .... 12.30*†

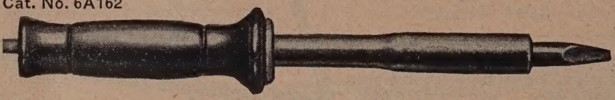
Tip diam.
See note below*

*Cat. No. 6A161 and Cat. No. 6A162 can be supplied with either a ⅜- or ½-inch diameter tip at prices given. The long ½-inch diameter tip projects 3⅜ inches from the shell. Price of iron with long calorized tip—$12.10 with long IRONCLAD tip—$13.20.

For light, intermittent soldering such as radio assembly and repair and installation, switchboard, ignition, wiring devices, meters and instruments, or very light high-speed soldering of similar products.

WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¼-lb.

Cat. No. 6A162



For light, high-speed soldering, such as assembly of radios, telephones, switchboards, appliances, meters, and instruments, and installation and repair of wiring and wiring devices, ignition. Excellent for service and repair men.

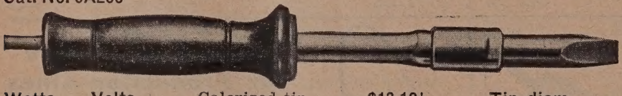
WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¾ lb.

Watts	Volts
100	115

Calorized tip ....$11.60*†
IRONCLAD tip .... 12.30*†

Tip diam.
See note above*

Cat. No. 6A200



For light, high-speed soldering, such as assembly of radios and switchboards, medium intermittent soldering on tinware, wiring, plumbing, and tinsmithing. Excellent general-purpose iron for shop and farm.

WEIGHTS: Less cord, 16 oz. With cord, 21 oz. Shipping, 27 oz.
Equal to old-style copper—2-lb.

Watts	Volts
100	115

Calorized tip ....$13.10†
IRONCLAD tip ...... 14.70†

Tip. diam.
¾ inch

Cat. No. 6A201

For medium, high-speed soldering of automobile and airplane assembly, electric equipment, light tanks and containers of copper and steel. Excellent general-purpose iron for manufacturing plant.

WEIGHTS: less cord, 24 oz. With cord, 29 oz. Shipping, 34 oz.
Equal to old-style copper—3-lb.

Watts	Volts
200	115

Calorized tip ....$16.40†
IRONCLAD tip ...... 18.30†

Tip. diam.
1 inch

Cat. No. 6A202

Watts	Volts
300	115

Calorized tip ....$19.80†
IRONCLAD tip ...... 21.80†

Tip. diam.
1¼ inch

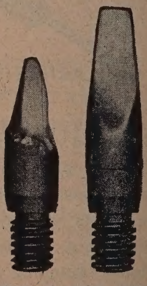
For heavy work such as light commutators, large-diameter pipe, medium-gage copper or steel tank and container material, roofing, heavy tinware.

WEIGHTS: Less cord, 37 oz. With cord, 42 oz. Shipping, 48 oz.
Equal to old-style copper—4-lb.

ASK ABOUT IRONCLAD TIPS

IRONCLAD TIPS MEAN

- No Filing
- Less Maintenance
- Lower Upkeep Cost
- Longer Life



Effect of solder (250 C for 363.5 hours) on plain copper (left) and Ironclad copper (right) soldering tips.

Note—230-volt irons available on request. Same prices apply. Above prices include supporting stand.

† Mfgr's suggested retail price.

ASK YOUR DISTRIBUTOR FOR A COPY OF BULLETIN GEA-4519.

MIDGET SOLDERING IRONS

FOR MANUFACTURING AND SERVICE OF RADIO AND ELECTRONIC EQUIPMENT

APPLICATION

This 8-inch, 1¾-ounce featherweight iron for close-quarter soldering with pin-point precision is used where conventional irons might cause damage . . . be clumsy to handle . . . be more expensive to operate. The Midget literally goes places with greater efficiency and less power . . . with no sacrifice in heat or speed. With its fingertip operation, this iron will help make an expert out of any solderer in a short time.

The Midget has Ironclad copper tips either ⅛- or 3/16-inch diameter, as desired.

THIS MIDGET DOES A BIG JOB IN

- Boosting Production Rates
- Increasing Operator Efficiency
- Cutting Down Employee Fatigue
- Saving on Repair and Maintenance
- Reducing Rejects
- Manufacturing and Repairing:
    - Radios and other electronic equipment
    - Meters
    - Instruments
    - Jewelry
    - Appliances
- . . . and many other products requiring precision soldering

RATING: 6 VOLTS, 25 WATTS

Description	Cat. No.	Price†
⅛-in. Ironclad copper tip (pyramid-shaped)	6A212	$6.50
¼-in. Ironclad copper tip (chisel-shaped)	6A210	6.50
3/16-in. Ironclad copper tip (pyramid-shaped)	6A214	6.50
⅛-in. Renewal tip and heater assembly	6A213	3.60
¼-in. Renewal tip and heater assembly	6A211	3.60
3/16-in. Renewal tip and heater assembly	6A215	3.60

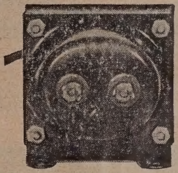
Net weight iron less cord 1¾ oz.
Net weight iron including cord 5 oz.
Shipping weight complete iron 8 oz.

Standard package consists of 6 irons of one tip size. Tip and heater assemblies can be purchased in any quantities.

⅛-in. dia tip, Cat. No. 6A212

¼-in. dia tip, Cat. No. 6A210

SPECIAL TRANSFORMER (OPTIONAL) FOR G-E MIDGET SOLDERING IRONS



Single-tap, Cat. No. 84G392

Specially designed 115-volt transformers are available as optional equipment in two types:

1. Single-tap 115/6 volts—for use where only one soldering heat is required
2. Four-tap 115/6.3/6/5.7/5.4 volts — gives wide range of heats (from 20 to 30 watts) for close temperature control of tips

Transformers are small, lightweight, but sturdy. Their 6-foot extension cords can be plugged in any 115-volt a-c circuit.

Description	Cat. No.	Price†
Single-tap	84G392	$5.[illegible]0

Publication Reference .... GEA-[illegible]

THE MIDGET OFFERS MAJOR ADVANTAGES

Low-cost soldering—Solders more efficiently, using only approximately one-fourth wattage normally used.

Fingertip operation—Only 8 inches long, weighs but 1¾ ounces. Styled for fingertip grip.

Quick, continuous heat—Famous G-E Calrod* heater built into Ironclad copper tip for rapid heat transfer.

Easy renewal—Ironclad tip and heater can be replaced as a unit merely by unscrewing from handle.

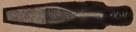
Long life, low maintenance—Low voltage p[illegible] use of heavy, long-lasting resistant wire. Reduces servicing with long-lasting Ironclad copper tip.

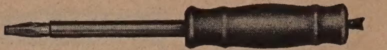
* Registered trade-mark.
† Manufacturers' suggested retail price.

HEXACON ELECTRIC SOLDERING IRONS

GENERAL INFORMATION—Equipped with 6 ft. (10,000 cycle) approved heater cord (covered with twine braid for extra long wear) and rubber plug. Continental or English type plugs 25c extra list. Metal stand furnished with each iron. Heating elements made of best grade nickel-chromium resistance wire, insulated with finest mica obtainable. Elements in the plug tip irons are replaceable by the user and in the screw tip irons replaceable at the factory. Tips in all irons are replaceable; made of hard drawn pure copper. Case is made from solid Hexacon steel (except No. 50 and P-30), affording it great mechanical strength, preventing denting. Terminal easily accessible and constructed to relieve cord strain. Smooth, cool, comfortable handle—readily replaceable. Voltage range: 32 to 250. Standard voltages 110/120, 121/130, 220/250. All other voltages $1.00 extra list.

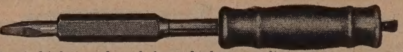
SCREW TIP IRONS



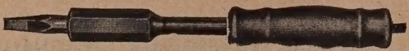


No. 50—For light soldering on radio, telephone and electrical apparatus. 50 Watts. Tip diam., 7/16". Ship. wt., 1 lb. Equal to ½-lb. old style copper..........each **$5.00**

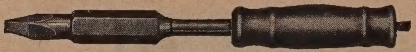
No. 60—Medium light soldering on telephone, radio, apparatus and linemen's kits. 60 Watts. Tip diam., ½". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper..........each **$7.00**



No. 85—A high speed tool for telephone, radio and home use. 90 Watts. Tip diam., ½". Ship, wt., 1¼ lb. Equal to 1½-lb. old style copper..........each **$7.75**

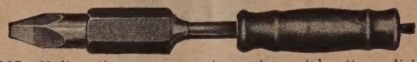


No. 120—Light tinware, toys, typewriter, light auto, etc. A high speed iron. 120 Watts. Tip diam., ⅝". Ship. wt., 1⅜ lb. Equal to 2-lb. old style copper..........each **$8.50**

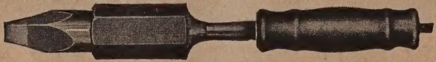


No. 130—Same as No. 120 except has larger tip and 10 more watts capacity. 130 Watts. Tip diam., ⅞". Ship. wt., 1⅝ lb. Equal to 2-lb. old style copper..........each **$9.50**

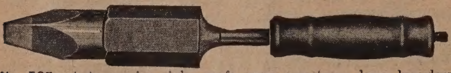
No. 170—Medium tinware, small cans, auto repairs, pipes, gutters, toys, small motors. 175 Watts. Tip diam., 1". Ship. wt., 2¼ lb. Equal to 2½-lb. old style copper..........each **$10.50**



No. 225—Medium tinware, cans, auto repairs, metal patterns, light roofing, small branders. 250 Watts. Tip diam., 1⅛". Ship wt., 2⅝ lb. Equal to 3-lb. old style copper..........each **$12.50**



No. 350—Heavy tinware, large cans, autos, roofing, refrigerators, ship and airplane. 350 Watts. Tip diam., 1⅜". Ship wt., 3⅜ lb. Equal to 4-lb. old style copper..........each **$14.00**

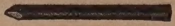


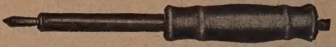
No. 500—Auto repairs, sinks, roofs, cans, armatures, large branders, tinsmiths, etc. 500 Watts. Tip diam., 1⅝". Ship. wt., 4 lb. Equal to 5-lb. old style copper..........each **$16.00**

No. 700—For extra heavy soldering and large branders. 700 Watts. Tip diam., 1¾". Ship. wt., 5 lbs. Equal to 7-lb. old style copper. each **$30.00**

OPERATE ON A.C. OR D.C., ANY CYCLE

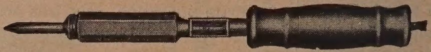
PLUG TIP IRONS





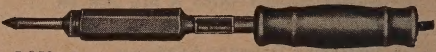
No. P-30—For extremely light soldering on finest wire and delicate instruments. 40 Watts. Tip diam., ¼". Ship. wt., ⅝ lb. Equal to ¼ lb. old style copper..........each **$5.00**

No. P-70—For light soldering on radio and telephone apparatus and electrical instruments. 80 Watts. Tip diam., ⅜". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper..........each **$7.00**



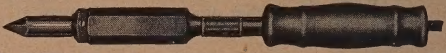
No. P-100—A high speed tool for telephone switchboards, electrical instruments, etc. 100 Watts. Tip diam., ⅜". Ship. wt., 1¼ lb. Equal to 1½-lb. old style copper..........each **$7.75**

No. P-125—For light tinware, toys, typewriter type bars, small cans, auto, etc. 130 Watts. Tip diam., ⅝". Ship. wt., 1½ lb. Equal to 2-lb. old style copper..........each **$9.25**



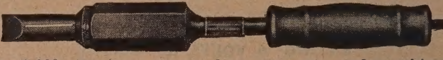
No. P-150—Extra high speed iron for radios, electrical apparatus and where a light iron with small diameter is required. 150 Watts. Tip diam., ⅜". Ship. wt., 1¾ lb. Equal to 2-lb. old style copper each **$8.50**

No. P-151—Same as No. P-150, except where a larger tip is desired. 175 Watts. Tip diam., ½". Ship. wt., 1¾ lb. Equal to 2½-lb. old style copper..........each **$9.00**

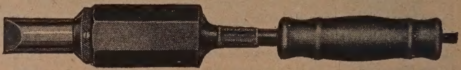


No. P-200—For medium tinware, cans, auto repairs, light roofing, sheet metal, etc. 200 Watts. Tip diam., ⅝". Ship wt., 2⅛ lb. Equal to 2¾-lb. old style copper..........each **$9.50**

No. P-250—Same as No. P-200, except where greater speed is required for manufacturing. 250 Watts. Tip diam., ⅝". Ship. wt., 2¼ lb. Equal to 3-lb. old style copper..........each **$10.75**



No. P-300—For heavy tinware, large cans, auto, roofing, refrigerator work, etc. 300 Watts. Tip diam., ⅞". Ship. wt., 2⅞ lb. Equal to 4-lb. old style copper..........each **$12.50**

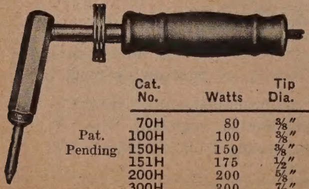


No. P-550—For auto radiators, copper sinks, roofs, heavy armatures, large branders, etc. 550 Watts. Tip diam., 1⅛". Ship. wt., 4⅛ lb. Equal to 5-lb. old style copper..........each **$16.50**

SPECIFY VOLTAGE WHEN ORDERING

HEXACON HATCHET TYPE IRON

For same use as Plug Tip irons of equal wattage, shown above. Replaceable elements and all other features of Plug Tip Irons.

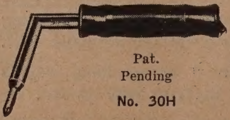


Perfect Balance
Less Fatigue
Better Soldered Joints

	Cat. No.	Watts	Tip Dia.	Ship. Wt.	Price
	70H	80	⅜"	1⅜ lbs.	$ 9.00
Pat. Pending	100H	100	⅜"	1½ lbs.	9.75
	150H	150	⅜"	2 lbs.	10.50
	151H	175	½"	2 lbs.	11.00
	200H	200	⅝"	2⅜ lbs.	11.50
	300H	300	⅞"	2⅞ lbs.	14.50

HEXACON FEATHERWEIGHT HATCHET IRON

So light its weight is hardly noticeable, but more powerful than most larger irons. Hatchet design makes iron effortless to use. No transformer or other cumbersome and expensive equipment required.



Pat.
Pending

No. 30H

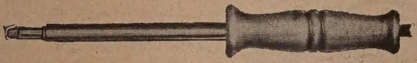
List Price........$5.50
Weight: 5½ ozs. (less cord).
*Watts: 40, 50 or 60.
Both ⅛" and ¼" dia. tips furnished with each iron.
Shipping weight: 1 lb.
*Specify watts when ordering.

SOLDERMASTER Royal Blue Line
ELECTRIC SOLDERING IRONS

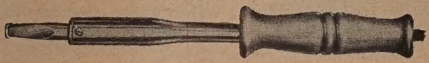
GENERAL INFORMATION—Replaceable elements. Best grade of Madagascar mica for insulation. No. 55 has brass-sheathed cartridge element. Best grade nickel-chrome resistance wire. Replaceable hard drawn copper tips. All one piece swaged cases CHROME PLATED. Equipped with 6 ft. Underwriters' Approved heater cord, rubber plug. Continental or English type plug 25c extra list. Stand for resting iron furnished.

VOLTAGES 110/120 220/250 A.C. or D.C., ANY CYCLE
SPECIFY VOLTAGE WHEN ORDERING

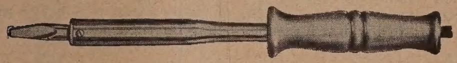
SCREW TIP IRONS



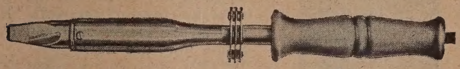
No. 55B—For light soldering, radio apparatus, etc. 55 Watts. Tip diam., $\frac{7}{16}$". Ship. wt., 13 oz...each **$2.75**



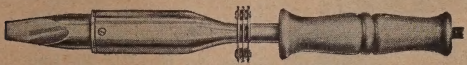
No. 76B—For light work, electrical instruments, etc. 75 Watts. Tip diam., ½". Ship. wt., 15 oz...each **$4.50**



No. 100B—Same as No. 76B except used where more speed is required and heavier work is done. For home use. 90 Watts. Tip diam., ½". Ship. wt., 16 oz...each **$5.00**

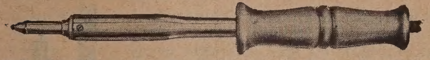


No. 150B—Ideal size for garage and repair work. For home use. 170 Watts. Tip diam., ⅞". Ship. wt., 24 oz...each **$7.00**

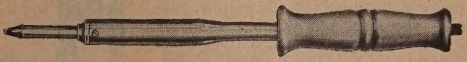


No. 300B—For heavy steel metal, auto radiators, etc. 275 Watts. Tip diam., 1⅛". Ship. wt., 38 oz...each **$10.00**

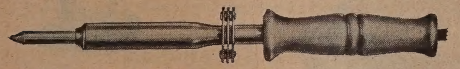
PLUG TIP IRONS



No. 71B—For light work, radio repairs, etc. 75 Watts. Tip diam., ⅜". Ship. wt., 16 oz...each **$4.50**

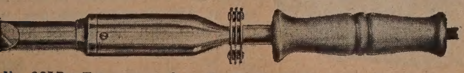


No. 101B—For same work as No. 71B, but where more speed is required or heavier work is done. For home use. 100 Watts. Tip diam., ⅜". Ship. wt., 18 oz...each **$5.00**



No. 121B—High speed iron for radio and electrical repairs. 125 Watts. Tip diam., ⅜". S hip. wt., 1¾ lbs...each **$6.00**

No. 201B—For same work as No 150B, except where plug tip is desired. 200 Watts. Tip diam., ⅝". Ship. wt., 34 oz.........each **$8.00**



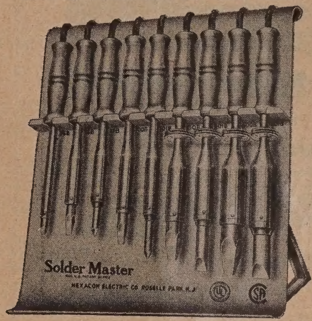
No. 301B—For same work as No. 300B, except where plug tip is desired. 300 Watts. Tip diam., ⅞". Ship. wt., 46 oz.......each **$10.00**

DISPLAYS

Increase your sales with these silent salesmen. Irons securely mounted, but readily removable for sale. Individually packed in cartons ready for shipment. Catalog number and wattage shown on front of display. Complete catalog information and price list on back.

SCROLL TYPE DISPLAY

Striking, Modernistic, All Metal Panel

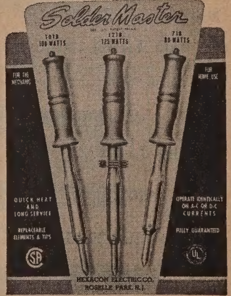


No. 1 DISPLAY Illustrated
Size 15" x 17½" (Nos. 1B, 2B, and 3B also same size)
This Display Panel Also Furnished With
Five or Seven Irons (See Below)

	Ship. Wt.	List Price
No. 1B—Nine Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B, 201B, 301B....	20 lbs.	**$56.75**
No. 2B—Seven Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B..........................	17 lbs.	**38.75**
No. 3B—Five Iron with Nos. 55B, 76B, 100B, 150B, 300B..	15 lbs.	**29.25**
No. 4B—Five Iron with Nos. 71B, 101B, 121B, 201B, 301B..	16 lbs.	**33.50**

ATTRACTIVE THREE COLOR CARDBOARD DISPLAY

This same display card also furnished with No. 5B and No. 5DB, but mounted with irons listed below.


Solder Master
101B 100 WATTS
121B 125 WATTS
71B 80 WATTS
FOR THE MECHANIC
FOR HOME USE
QUICK HEAT AND LONG SERVICE
REPLACEABLE ELEMENTS & TIPS
OPERATE IDENTICALLY ON A-C OR D-C CURRENTS
FULLY GUARANTEED
HEXACON ELECTRIC CO. ROSELLE PARK, N.J.

No. 6B DISPLAY Illustrated
Size 12" x 16½"
(Nos. 5B, 5DB also same size)

	Ship. Wt.	List Price
No. 5B—Three Iron with Nos. 55B, 76B, 100B....	4 lbs.	**$12.25**
No. 5DB—Three Iron with Nos. 55B, 100B, 150B on display and 2 No. 55B and 1 No. 100B for stock..	8 lbs.	**25.25**
No. 6B—Three Iron with Nos. 71B, 101B, 121B....	5 lbs.	**15.50**

ESICO

REG. U. S. PAT. OFF.

ELECTRIC SOLDERING IRONS FOR HOME, PROFESSIONAL MECHANIC AND FACTORY

● GREEN LABEL LINE

For intermittent duty. Meets all requirements of the home craftsman.

No. 415—List $2.15—3⁄8″ Tip—55 Watts

No. 416—List $3.25—1⁄4″ Tip—60 Watts

No. 417—List $4.35—3⁄8″ Tip—100 Watts

No. 418—List $5.45—1⁄2″ Tip—130 Watts

● ORANGE LABEL LINE

For Professional Mechanics — light or heavy soldering where iron must withstand operation for eight hour periods or more on frequent occasions.

No. 62—List $5.45—1⁄4″ Tip—60 Watts

No. 63—List $6.55—3⁄8″ Tip—100 Watts

No. 64—List $7.65—1⁄2″ Tip—130 Watts

No. 65—List $8.75—5⁄8″ Tip—200 Watts

No. 67—List $9.85—7⁄8″ Tip—300 Watts

No. 69—List $12.05—1 1⁄8″ Tip—500 Watts

● RED LABEL LINE

For Production Line Continuous Operations. These Irons are of most rugged construction.

No. 38—List $7.65—3⁄8″ Tip—100 Watts

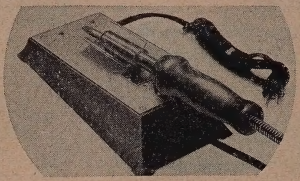
No. 58—List $9.85—5⁄8″ Tip—200 Watts

No. 78—List $12.05—7⁄8″ Tip—300 Watts

No. 98—List $14.25—1 1⁄8″ Tip—550 Watts

FOR FASTER SOLDERING... LONGER IRON LIFE

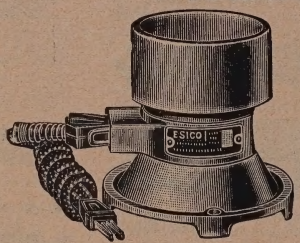
MAINTAINS DESIRED IRON TEMPERATURE BETWEEN JOBS ● PREVENTS OVERHEATING
SAVES ELECTRIC CURRENT ● ADJUSTABLE TO ANY SIZE IRON
SAVES TIME ● NO LONG WARM-UP PERIOD



A practical, time and money saving device which accurately regulates and maintains soldering iron temperature between jobs. Lengthens iron life by reducing tip oxidation and amalgamation of tip with solder which increases with over-heating.

When placed on stand, iron rests in a copper cradle which conducts heat of iron and actuates a bimetal to open or close a switch. Temperature is easily regulated by an adjusting slide at bottom of stand. As iron is removed from stand, full current is instantly supplied. Stem rest adjustable to accommodate various lengths of irons. Stand is a heavy gray iron casting—stays firmly fixed without being fastened.

● SOLDERING POTS



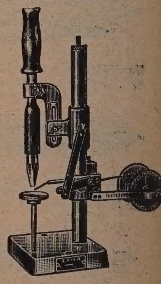
Ruggedly constructed, cast iron pots for production work. Elements are easily replaced even while pots are hot.

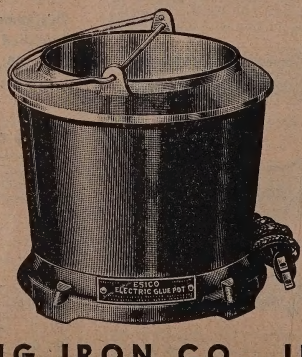
	Net Price
Cat. No. 12—1 1⁄2″ dia. Cap. 3⁄4 lbs.	$ 4.95
Cat. No. 36—2 1⁄2″ dia. Cap. 2 1⁄4 lbs.	6.05
Cat. No. 60—3 1⁄2″ dia. Cap. 3 3⁄4 lbs.	7.15

● SPOT SOLDERING MACHINE

Model "F" is a treadle operated machine which feeds solder forward as the iron moves away from the work. Suitable for spot soldering where a mechanical connection has first been made. Net price **$16.50**

Model "N" is a treadle operated machine for the advancement of the iron, but without a solder feed attachment. Net price........ **$8.25**





● GLUE POTS

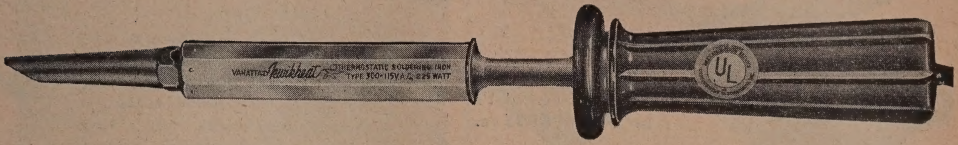
The catalogue No. 700 Glue Pot is of two quart capacity. It is the water jacket type and has a gasket sealed element and thermostat completely protected from moisture. Thermostat is normally set at 150 degrees for use with glue, but can be set at various temperatures for use with wax, etc. Net price **$20.35**

ELECTRIC SOLDERING IRON CO., INC.

THERMOSTATICALLY CONTROLLED

KWIKHEAT ELECTRIC SOLDERING IRONS

Built-in Vanatta Automatic Thermostat


VANATTA Kwikheat THERMOSTATIC SOLDERING IRON TYPE 300-115V A.C. 225 WATT
UL

KWIKHEAT TYPE NO. 300

225-Watts — 115 or 230 Volts AC Only

Weight of Iron with Standard No. 1 Tip	14 oz.
Shipping Weight per Iron with No. 1 Tip & resting stand	1½ lb.
Length of Iron with No. 1 Tip	13″
Length of Heater Cord	6 ft.

LIST PRICES

Iron with tip	
300/115/2	$12.25
115v 2 conductor bayonet plug	
300/230/2	13.00
230v 2 cond. cord bayonet plug	
300/115/3	14.00
115v 3 cond. cord bayonet or twist lock plug	
300/230/3	14.75
115v 3 cond. cord bayonet or twist lock plug	
Replacement Elements	
328/115	8.60
328/230	9.35
Tips, any style	1.50
#20 Anti-freeze compound	.60

TEMPERATURE

The Kwikheat Element can be set at the factory to any desired tip temperature between 275° and 875° F. Additional charges for this service.

1 to 49	$1.00 ea.
50 to 99	.50 ea.
100 or more	standard price.

CORROSION RESISTANT

Tips and core are forged of tellurium copper alloy and plated for resistance to corrosion.

HOT IN 90 SECONDS

Kwikheat Thermostatically controlled Soldering Irons are the only irons containing built-in thermostats. Allowing a much greater watt density with less radiation of heat.

TEMPERATURES ARE PRE-SET

Thermostat NOW set to give proper heat at the tip to flow solders allowed under tin conservation order M 8.

WHEN IRONS ARE TO BE USED FOR HEAVY OR HIGH SPEED SOLDERING SPECIFY A PRODUCTION IRON.

The use of recently developed alloys have permitted the increase of thermostat temperatures with reduced creep.

Please contact your jobber for trade discounts.

— 6 INTERCHANGEABLE TIPS —

¼″ at end

#0

For light soldering — radio and radar hook-up — light mechanical joints of all kinds . . . television and other delicate electronic soldering.

⅜″ at end

#1

Standard tip — light to medium soldering — electrical wiring — many uses for soldering various electronic components.

90° Bend
⅜″ at end

#3

For light soldering that is hard to reach with a straight tip — light production soldering where a twist of the wrist will put the end of the tip on the work.

½″ at end

#4

Medium to heavy soldering — heavy wiring — light sheet metal soldering — radio, radar, and television chassis soldering.

Solder Pot

#5

A small melting and tinning pot holding 1 ounce of solder.

1/16 x 7/16″
at end

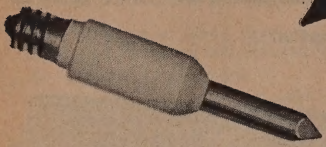
#9

For use when continuous soldering is done — such as production line soldering.

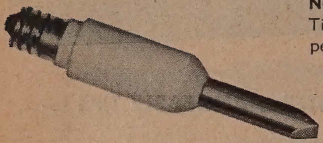
KWIKHEAT MFG. CO. **Glendale 4, California**

Ungar ELIMINATES THE NEED FOR HEAVY, BULKY SOLDERING IRONS!

HI-HEAT TIPS



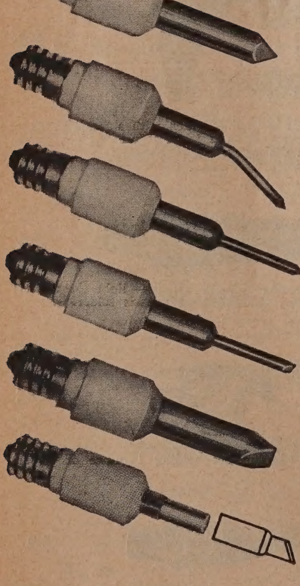
NO. 1236 Pyramid Tip 5/16" Packed 10 per box . . . **$1.35 ea.**



NO. 1239 Chisel Tip 3/8" Packed 10 per box . . . . **$1.35 ea.**

Now, wherever there's a job for a big bulky iron, reach for a trim, slim Ungar Soldering Pencil *instead*. Increased wattage Hi-Heat Pre-Tinned Tips, combined with the famed light-as-a-feather Ungar Handle, make a handy high-speed, high-heat soldering instrument that'll perform on a par with your heavy irons. And there's no limit to the versatility of this amazing tool—from precision experimental work to high-speed production soldering—from TV to model trains to electric motors and appliances—you can't find a smaller tool to do a bigger job—and do it so much *better!*

6 INTERCHANGEABLE 20-WATT TIPS FOR STANDARD SOLDERING OR PLASTICS



NO. 536 Tellurium Pyramid Tip 5/16" Packed 10 per box . . . . **$1.10 ea.**

NO. 537-C Offset Tip 1/8" Packed 10 per box . . . . **$1.10 ea.**

NO. 537-S Tellurium Straight Pencil Tip 1/8" Packed 10 per box . . . . **$1.10 ea.**

NO. 538 Tellurium 1/8" Chisel Tip Packed 10 per box . . . **$1.10 ea.**

NO. 539 Tellurium 3/8" Chisel Tip Packed 10 per box . . . . **$1.10 ea.**

NO. 540 Comb. of No. 267 Htg. Unit and No. 122 Brass Knive Tip for Plastics. Packed 10 per box . . . . . . **$1.10 ea.**

NO. 267—85c ea.
NO. 122—25c ea.

Ungar

ELECTRIC SOLDERING PENCILS

FEATHER-LIGHT FOR HARD-TO-REACH JOBS
HEAVY DUTY—PERFECTLY BALANCED

Check these features: Extra length brass shell firmly engages all threads, keeps heating unit tight; Spring action rivet assures positive contact always; Full length 65 strand, extra flexible cord; Cooler handle of durable molded plastic; Underwriters' listed; Ceramic separators for double safety.

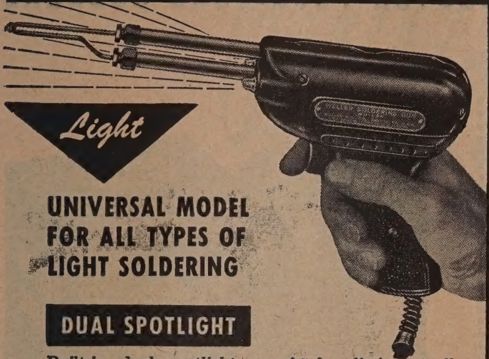
NO. 776 Handle and Cord Set only — Packed 25 per case . . Price **$1.10 ea.**

DISCOUNTS: $1.10-$9.90, 20%, $10-$99, 35%, $100 OR MORE, 40% — PLEASE CONTACT YOUR JOBBER — WE DO NOT SELL DIRECT

UNGAR ELECTRIC TOOL CO., INC., LOS ANGELES 54, CALIFORNIA

WELLER SOLDERING GUNS

FOR ALL YOUR SOLDERING



Light

UNIVERSAL MODEL FOR ALL TYPES OF LIGHT SOLDERING

DUAL SPOTLIGHT

Built-in dual spotlight completely eliminates all shadows—locates the work quickly and shows you exactly what you are soldering.

READY, AIM . . . SOLDER

Fast 5 second heat comes on the instant trigger is pulled. No wasted time or current. No need to unplug gun between jobs.

TRIGGER ACTION

Just pull the trigger switch . . . model WS-100 has single heat 100 watts; model WD-135 offers dual heat with two switch positions 100 and 135 watts.

ALL-PURPOSE

This universal model is ideally suited for all light soldering. It is also widely used by craftsmen and hobbyists for woodworking, leather tooling, plastic work, heating liquids, and many types of household repairs.

LONGER REACH

Plus flexible tip which can be easily formed to slip through chassis wiring, handles difficult, deep corner jobs with ease. Sturditip No. 7135, for models WS-100 and WD-135, is similar in design to tip type 7250 shown in the adjacent column. Package of 2 for 25c

Heavy

HEAVY-DUTY MODEL HANDLES ALL SOLDERING UP TO 250 WATTS

DUAL HEAT

Model WD-250 has 200 watts normal heat on first switch position, and 250 watts instant heat on second trigger position. Model WS-200 provides 200 watts single heat.

5 SECOND HEAT

Pull the trigger switch, and solder. Fast 5 second heating eliminates waiting. Heat goes off automatically when trigger is released . . . no wasted time or current, no need to unplug gun between jobs.

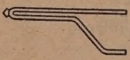
STREAMLINED

Streamlined design gives perfect balance and soldering ease. Improved transformer engineering provides light weight, compact unit with increased capacity and efficiency.

INCREASED VISIBILITY

'Over and under' terminal positions assure maximum visibility with built-in spotlight.

WELLERTIP



New, improved Rigidtip No. 7250 is standard with models WS-200 and WD-250. Chisel-shape tip has more copper and greater surface for faster heat transfer, and design provides bracing action for heavier soldering. Package of 2 for 35c.

HANDY SOLDERING GUIDE

WELLER
SOLDERING TIPS
10

SOLDERING TIPS

new edition, fully up-to-date is now available. 20 illustrated pages show ways to faster, easier soldering. Price 10c at your Distributor, or order direct.

WELLER
ELECTRIC CORP.

MODEL	WATTS	CYCLES	VOLTS	NET PRICE
WS-100	single heat 100	60	115	$11.95
WS-200	single heat 200	60	115	12.95
WD-135	dual heat 100/135	60	115	13.95
WD-250	dual heat 200/250	60	115	14.95

U. S. Pat. No. 2405866, Other Pat. Pending.

Printed in U. S. A.

Two famous KESTER FLUX-CORE SOLDERS

KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
"RESIN-FIVE"

KESTER "RESIN-FIVE" CORE SOLDER

Formulated especially for Radio and TV; will easily solder such metals as brass, zinc and ferrous alloys. It is non-corrosive and non-conductive.

KESTER SOLDER
Plastic Rosin-Core
KESTER SOLDER
Plastic Rosin-Core

KESTER PLASTIC ROSIN-CORE SOLDER

The most widely used solder in the TV and radio field. All Kester Solders are made from the finest tin and lead available.

- ★ Kester Plastic Rosin-Core Solder
- ★ Kester "Resin-Five" Core Solder
- ★ Kester Radio Solder
- ★ Kester Acid-Core Solder
- ★ Kester "A" Flux-Core Solder
- ★ Kester Nosput Flux-Core Solder
- ★ Kester Knorust Flux-Core Solder
- ★ Specialized Flux-Core Solders
- ★ Solid Wire and Bar Solders
- ★ Kester Preforms, Rings, Pellets, Washers, Ribbon
- ★ External Rosin Soldering Fluxes
- ★ Other Fluxes
- ★ Kester Soldering Iron Brackets

For Peak Soldering Efficiency, It's Kester!

Kester offers every conceivable type of Solder product. Strand sizes as small as .008″ diameter in Flux-Core Solder, unusual alloys and varying Flux contents or Core sizes.

A Technical Service for Manufacturers

If you are not getting peak efficiency or have a specific problem in your soldering operations, take advantage of the facilities of Kester's Technical Department. . . . It costs you nothing.

STANDARD FOR THE TV AND RADIO FIELD **KESTER SOLDER** **KESTER SOLDER COMPANY**

4201 Wrightwood Avenue, Chicago 39, Illinois • Factories Also at Newark, New Jersey - Brantford, Canada

ERSIN

Multicore

3-CORE SOLDER

THE ONLY SOLDER MADE WITH NON-CORROSIVE, EXTRA-ACTIVE ERSIN FLUX

CONTAINING NON-CORROSIVE FLUX
ERSIN
Multicore
THREE CORE
SOLDER
MULTICORE SOLDERS LTD.
MELLIER HOUSE,
ALBEMARLE ST.
LONDON. W.1
ERSIN
Multicore
THREE CORE
SOLDER
CONTAINS 3 CORES OF NON-CORROSIVE FLUX

ACTUAL PERFORMANCE PROVES THAT ERSIN MULTICORE

- ***melts more rapidly due to multiple core construction***
- ***removes surface oxides and prevents reforming***
- ***bonds properly on difficult metals***
- ***saves money***
- ***saves time***

Ersin Multicore, containing Ersin Flux, is the finest solder available for use where cored solders are required. It is fast acting, flows readily, and bonds difficult metals surely, safely and economically. The technical advantages listed below explain "how" and "why".

Multicore Solder is specified by many of the largest television and electronics manufacturers, as well as thousands of service and repair men, who have tested it against all others and use it exclusively for their requirements.

Every reel or carton of Ersin Multicore is clearly marked both as to gauge and alloy, showing the actual content of Tin and Lead. You know exactly what you are getting when you buy Ersin Multicore Solder!

Available in all Tin/Lead alloys and in standard wire gauge from 10 to 22. (14, 16 and 18 s.w.g. are most popular.)

TECHNICAL ADVANTAGES:

ERSIN FLUX

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high grade, water white rosin, homogeneously activated.

Ersin Flux has a vigorous fluxing action while retaining the non-corrosive and protective features of the original rosin.

Soldered joints made with Ersin Flux do not corrode even after prolonged exposure to humidity. It has been tested under climatic conditions ranging from the Arctic to the Tropics.

Ersin Flux reduces the surface tension of molten solder, causing it to wet metals rapidly, increasing speed of operation with resultant production economies.

Free from objectionable odor. Non-toxic in use.

Leaves nothing but pure rosin on the work after soldering, and may be used wherever plain rosin is specified. Complies with all pertinent Federal Specifications.

MULTICORE SOLDER

Three separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents "dry" joints, i.e. those having high electrical resistance.

Although there are three cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders.

Very rapid melting results from the multiple core construction which provides thinner walls of solder than are found in same gauge single cored solder.

Multicore's unique properties make perfect joints possible on difficult metals and alloys, even if oxidized.

Ability to tin rapidly produces perfect joints with less solder. Greater coverage per pound.

MULTICORE SALES CORPORATION • 164 DUANE STREET • NEW YORK 13, N. Y.

alert craftsmen prefer

SOLDER

by **ALPHA**

foremost in Quality

All Alpha Solders are approved by Underwriters Laboratories and exceed ASTM Class "A" Specifications. The most modern Rolling, Casting, Extrusion and Drawing Equipment, plus 58 years of experience in fabricating Tin Lead Alloys combine to bring you the finest solders that can be made.

TRI-CORE *"ENERGIZED"* ROSIN-FILLED SOLDER

Three cores for faster fluxing—contains faster acting "Energized" Rosin. Requires less heat, makes a fast, sure bond. "Takes" faster, especially on plated or oxidized surfaces. Non-corrosive, non-conducting. Used by leading Radio, Electronic and Television manufacturers.

SPOOLS—1 & 5 lbs.
DIAMETERS—.081 or .062
ALLOYS—Forty, Fifty or Sixty Grade*

ALPHA SOLID WIRE SOLDER

For use where separate flux is required. Made of finest virgin Tin & Lead. Alpha wire solder is extruded by the "Unity Process" assuring Homogenous alloy and uniform wire diameter throughout.

SPOOLS—1, 5, 25 or 50 lbs.
DIAMETERS—.125 or .062
ALLOYS—Forty, Fifty, or Sixty Grade*

OTHER ALPHA PRODUCTS

Bar Solder, Preforms, Sheet & Strip Foil, Powdered Solders, Lead & Tin Pipe & Tubing. Lead Anodes, Music Engraving Plates. Lead & Tin products in any form. Rolled, Cast, Extruded or Drawn.

TRI-CORE *"LEAK-PRUF"* ACID-FILLED SOLDER

For general all purpose soldering. Three cores of chalk-like flux which will not leak. No need to crimp or seal after using. Can be formed into rings, segments or pieces without loss of flux. Fast acting; solders Stainless Steel and other difficult metals. Non-sputtering, non-toxic, less corrosive. Used by leading metal manufacturing fabricators.

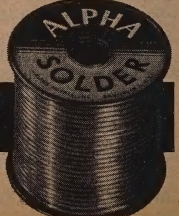
SPOOLS—1 & 5 lbs.
DIAMETER—.125
ALLOYS—Forty, Fifty or Sixty Grade*

ALPHA HANDY CANS — Rosin or Acid Core

For the small user, Ham, Hobbyist or Householder. A generous coil of Tri-Core solder in Acid or Rosin Core. Attractive metal tin packed in Handy counter display box. Retail 25c. 12 cans per box.

STANDARD PACKING

1 lb. spools—Individual Cartons—50 Cartons per Shipping Container.
5 lb. spools—Packed 10 spools per shipping container.



ALPHA

ALPHA METALS, INC.

buy from your parts jobber

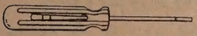
*Subject to Government Restrictions

VACO PRODUCTS COMPANY • CHICAGO 11, ILLINOIS • U. S. A.

Hand Forged Chrome Vanadium Screw and Nut Drivers With Amberyl* S/B* (Slo-Burn) Fire Safe Break and Shock Proof Handles

*Trade Marks Registered U. S. Pat. Off.

ROUND BLADE SCREW DRIVERS



VACO 5/8 A616-8

Pocket Styles*—3/32" & ⅛" Blades.
***High carbon tool steel blades only.**

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 010	13/32" x 1¾"	3/32" x 1⅝"	¼ lb.
A 130-2	½" x 1⅞"	⅛" x 2"	½ lb.
A 130-3	½" x 1⅞"	⅛" x 3"	⅔ lb.
A 116-2	½" x 2½"	3/32" x 2"	⅔ lb.
A 116-3	½" x 2½"	3/32" x 3"	⅓ lb.

Electrician and Cabinet Styles—⅛" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 216-2*	⅝" x 2¾"	⅛" x 2"	¾ lb.
*With Pocket Clip.			
A 216-4	¾" x 3"	⅛" x 4"	1 lb.
A 216-6	¾" x 3"	⅛" x 6"	1¼ lbs.
A 216-8	¾" x 3"	⅛" x 8"	1½ lbs.
A 216-10	¾" x 3"	⅛" x 10"	1¾ lbs.

Electrician and Regular Cabinet Styles — 3/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 316-3	⅞" x 3½"	3/16" x 3"	1¼ lbs.
A 316-4	⅞" x 3½"	3/16" x 4"	1½ lbs.
A 316-6	⅞" x 3½"	3/16" x 6"	1¾ lbs.
A 316-8	⅞" x 3½"	3/16" x 8"	2 lbs.
A 316-10	⅞" x 3½"	3/16" x 10"	2½ lbs.

General Service Round Blade Styles —¼" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 416-4	1" x 3⅝"	¼" x 4"	2¼ lbs.
A 416-5	1" x 3⅝"	¼" x 5"	2½ lbs.
A 416-6	1" x 3⅝"	¼" x 6"	2¾ lbs.
A 416-8	1" x 3⅝"	¼" x 8"	3¼ lbs.
A 416-10	1" x 3⅝"	¼" x 10"	3½ lbs.

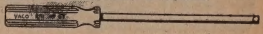
Heavy Duty General Service Round Blade Styles — 5/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 516-6	1-1/16" x 4"	5/16" x 6"	4 lbs.
A 516-8	1-1/16" x 4"	5/16" x 8"	4½ lbs.
A 516-10	1⅛" x 4¼"	5/16" x 10"	5½ lbs.
A 516-12	1⅛" x 4¼"	5/16" x 12"	6½ lbs.

RADIO ALIGNING TOOLS

NON-METALLIC ALIGNER

No metal — completely non-capacitance. Bone fibre blade may be repointed as required.



Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
AT 55	½" x 2½"	3/16" x 4"	¾ lbs.

VACO Super Hard NUT DRIVERS

Color Coded Hollow Handles For Quick Size Identification. For Use on Hardened Steel Self-Threading Sheet Metal Screws, Etc.

Stock Number	Hexagon Size (Across Flats)	Handle Diameter and Length	Color Code	Fits Machine Screw Nos.
S 61	3/16"	1" x 3⅝"	Brown	2 and 3
S 82	¼"	1" x 3⅝"	Red	4
S 103	5/16"	1" x 3⅜"	Green	5 and 6
S 114	11/32"	1" x 3⅝"	Ivory	8
S 125	⅜"	1" x 3⅝"	Blue	10
S 146	7/16"	1" x 3⅝"	Orange	12 and ¼"
S 167	½"	1" x 3⅝"	Yellow	5/16"

ALL HOLLOW SHAFT NUT DRIVERS

Stock Number	Hexagon Size (Across Flats)	Handle Diameter and Length	Weight per Doz.
S 160	½"	1" x 3⅝"	3 lbs. 4 oz.
S 180	9/16"	1" x 3⅝"	3 lbs. 8 oz.

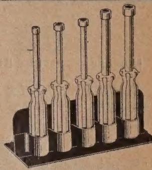
VACO EXTRA HARD NUT DRIVERS

Size Stamped on Each Shaft for Easy Identification
Solid Amberyl S/B Fire Safe Handles

Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 5	5/32"	⅞" x 3½"	1 lb. 8 oz.
S 6	3/16"	⅞" x 3½"	1 lb. 10 oz.
S 7	7/32"	⅞" x 3½"	1 lb. 11 oz.
S 8	¼"	⅞" x 3½"	1 lb. 12 oz.
S 9	9/32"	⅞" x 3½"	1 lb. 14 oz.
S 10	5/16"	⅞" x 3½"	2 lbs.
S 11	11/32"	⅞" x 3½"	2 lbs. 8 oz.
S 12	⅜"	⅞" x 3½"	2 lbs. 12 oz.
S 14	7/16"	⅞" x 3½"	2 lbs. 14 oz.
S 15	15/32"	⅞" x 3½"	2 lbs 15 oz.
S 16	½"	⅞" x 3½"	3 lbs.

Extra Large Size

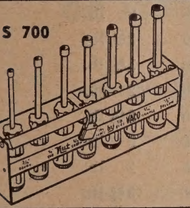
Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 17	17/32"	1-1/16" x 4"	4½ lbs.
S 18	9/16"	1-1/16" x 4"	4½ lbs.
S 19	19/32"	1-1/16" x 4"	4½ lbs.
S 20	⅝"	1-1/16" x 4"	4½ lbs.



No. S 500 METAL BENCH HOLDER

Furnished with 1 each of five most popular sizes: S 8, S 10, S 11, S 12, S 14. Weight each . . . 1½ lbs.

S 700

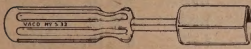


VACO WALL OR BENCH PADLOCK TYPE NUT DRIVER STAND

Holds One Complete Driver Outfit . . . from 3/16" to ½".

Stock Number		Weight (Packed)
S 700		2¼ lbs.
S 70	(Stand only)	1 lb. 2 oz.

VACO AMBERYL ELECTROLYTIC CONDENSER NUT DRIVERS



Weight per box . . . 3 lbs.

Packed 4 each of following sizes in display box, or assorted as desired:
No. S 32 for 31/32" Nuts
No. S 34 for 1" Nuts
No. S 36 for 1-5/32" Nuts

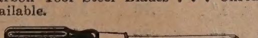
AMBERYL HANDLE PHILLIPS SCREW DRIVERS

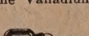
Stock Number	Point Number	Handle Diameter and Length	Blade Diameter and Length	Takes Screws Number	Weight per Doz.
P 01	1	¾" x 3"	⅛" x 2½"	4 and smaller	¾ lb.
P 1	1	⅞" x 3½"	3/16" x 3"	4 and smaller	1¼ lbs.
P 2	2	1" x 3⅝"	¼" x 4¾"	5 to 9	2½ lbs.
P 3	3	1-1/16" x 4"	5/16" x 6"	10 to 16	3½ lbs.
P 4	4	1-3/16" x 4½"	⅜" x 8"	18 and larger	6 lbs.
P 5§	2	1¼" x 2⅛"	¼" x 1¾"	5 to 9	1¼ lbs.
P 6§	1	1⅛" x 1¾"	3/16" x 1¼"	4 and smaller	1 lb. 2 oz.
P 12†	1	½" x 2½"	⅛" x 2½"	4 and smaller	11 oz.
P 101‡	1	¾" x 3"	3/16" x 3"	4 and smaller	1¼ lbs.

§Stub. †Pocket Clip. ‡Screw-Holding.

WOOD HANDLE PHILLIPS SCREW DRIVERS

High Carbon Tool Steel Blades . . . Chrome Vanadium Blades Also Available.





Stock Number	Handle Diameter and Length	Blade Diameter and Length	Take Screws Number	Weight per Doz.
WP 10	1" x 4"	3/16" x 3"	4 and smaller	1¼ lbs.
WP 20	1⅛" x 5"	¼" x 4¾"	5 to 9	2½ lbs.
WP 30	1¼" x 6"	5/16" x 6"	10 to 16	3¾ lbs.
WP 40	1-5/16" x 7"	⅜" x 8"	18 and larger	5 lbs.
WP 50 (Stub)	1-5/16" x 2½"	¼" x 1¾"	5 to 9	1 lb. 2 oz.
WP 60 (Stub)	1-5/16" x 2½"	3/16" x 1¼"	4 and smaller	1 lb.

VACOMBO Nut Setter Kit No. ZS 60

Kit Consists of:

- 1 — ZH 1 Amberyl Handle with Clutch
- 1 — ZS 8 Hex. Wrench ¼" x 3"
- 1 — ZS 10 Hex. Wrench 5/16" x 3"
- 1 — ZS 11 Hex. Wrench 11/32" x 3"
- 1 — ZS 12 Hex. Wrench ⅜" x 3"
- 1 — ZS 14 Hex. Wrench 7/16" x 3"
- 1 — ZR 77 Seven Section Leatherette Tool Roll

Also Available
6" Extension No. ZX 56
3/16" Hex. Wrench No. ZS 6
½" Hex. Wrench No. ZS 16

Weight packed . . . 9 oz.

VACOMBO Screw Driver Kit No. ZB 50

Kit Consists of:

- 1 — ZH 1 Amberyl Handle with Clutch, 1" x 3⅝"
- 1 — ZB 24 Blade ⅛" x 4" Out of Handle
- 1 — ZB 34 Blade 3/16" x 4" Out of Handle
- 1 — ZB 45 Blade ¼" x 5" Out of Handle
- 1 — ZP 14 Blade No. 1 Phillips x 4"
- 1 — ZP 24 Blade No. 2 Phillips x 4"
- 1 — ZR 77 Seven Section Leatherette Tool Roll

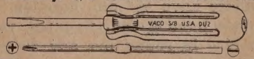
Also Available — 6" Extension No. ZX 56

Specifications: Amberyl S/B (Slo-Burn) Fire Safe Handle — Oil Tempered Chrome Vanadium Blades — Bright Cadmium Rust-Proof Plated Finish.

Weight packed . . . 8 oz.

VACO DUPLEX REVERSIBLE SCREW DRIVERS

with Amberyl S/B (Slo-Burn) Plastic Handle



A Phillips bit on one end

A regular bit on other end

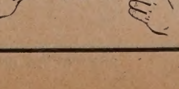
TWO SIZES
DU2 Light Duty —
DUH4 Heavy Duty

Chrome vanadium steel blade. Long lasting Amberyl handle of high dielectric and impact strength . . . shock and break resistant . . . impervious to most alkalies and acids.

Specifications

Stock Number	Handle Diameter and Length	Blade Diameter and Length
DU 2	1" x 3⅝"	No. 1 Phillips 3/16" x 2¾" Regular 3/16" x 2¾"
DUH 4	1 1/16" x 4"	No. 2 Philips ¼" x 2¾"

A Flip of the Wrist Does It . . . From Phillips to Regular.



Precision engineered blade may easily be inserted or removed and reversed to provide either a regular or Phillips bit. Ideal for automobiles, radios, refrigerators, household utilities, toys, etc., where straight slot screws and cross slot screws are frequently used in combination.

Quality XCELITE *Tools*

REG. TRADE MARK

Creators of

SHOCK-PROOF BREAK-PROOF AMBER PLASTIC HANDLE

SCREWDRIVERS

ROUND BLADES

Number	Size Blade	List	Weight Box of 10	
R-3321	3/32″ x 1″	$ .18	¼ lb.	
*R-3322	3/32″ x 2″	.33	½ lb.	4 ea. on 332 Display
*R-3323	3/32″ x 3″	.33	½ lb.	
*R-3324	3/32″ x 4″	.33	½ lb.	
**R-181	⅛″ x 1″	.33	½ lb.	4 ea. used on #12 Display
*R-183	⅛″ x 3″	.33	½ lb.	
*R184½	⅛″ x 4″	.33	½ lb.	
R-182	⅛″ x 2″	.50	½ lb.	
††R-184	⅛″ x 4″	.55	½ lb.	
††R-186	⅛″ x 6″	.60	¾ lb.	
††R-188	⅛″ x 8″	.66	1 lb.	
††R-1810	⅛″ x 10″	.75	1 lb.	
R-5323	5/32″ x 3″	.65	1 lb.	ea. on #10 Display
R-5324	5/32″ x 4″	.65	1 lb.	
R-5325	5/32″ x 5″	.65	1 lb.	
R-5328	5/32″ x 8″	.80	1¼ lb.	
R-3163	3/16″ x 3″	.75	1½ lb.	
R-3164	3/16″ x 4″	.80	1½ lb.	
R-3166	3/16″ x 6″	.95	1¾ lb.	
R-3168	3/16″ x 8″	1.00	1¾ lb.	
R-31610	3/16″ x 10″	1.15	2 lb.	
R-31618	3/16″ x 18″	1.95	(pk. 1)	
R-142	¼″ x 2″	.95	1¾ lb.	
R-144	¼″ x 4″	1.00	2 lb.	
R-146	¼″ x 6″	1.05	2¼ lb.	
R-148	¼″ x 8″	1.15	2½ lb.	
R-1410	¼″ x 10″	1.25	2¾ lb.	
R-5166	5/16″ x 6″	1.25	3½ lb.	
R-5168	5/16″ x 8″	1.35	4 lb.	

**24 of this number used on #24 display.

*These numbers have ½″ dia. handles.

††These numbers have ⅝″ dia. handles. For insulated blades any size in round list add 35 cents to list price.

There's an XceLite Screwdriver "sized" to fit every job.

Note: We have standardized our packages on the decimal system instead of in dozens, in accordance with Government practice. All screwdrivers and nut drivers will be packed ten in a box, except where otherwise noted (exceptions are large sizes or slow moving items). Weights given above are correct to the nearest quarter-pound limit.

SQUARE BLADES

Number	Size Blade	List	Weight Box of 10	
S-183	⅛″ x 3″	$ .50	½ lb.	
S-184	⅛″ x 4″	.50	½ lb.	
S-185	⅛″ x 5″	.50	½ lb.	
†SH-183	⅛″ x 3″	Temp. Disc.		
†SH-184	⅛″ x 4″	Temp. Disc.		
†SH-185	⅛″ x 5″	Temp. Disc.		
S-3163	3/16″ x 3″	.80	1¾ lb.	
S-3164	3/16″ x 4″	.85	1¾ lb.	
S-3166	3/16″ x 6″	1.00	2 lb.	
S-3168	3/16″ x 8″	1.05	2 lb.	
S-31610	3/16″ x 10″	1.20	2¼ lb.	
S-142	¼″ x 2″	1.00	1¾ lb.	
S-144	¼″ x 4″	1.05	2 lb.	
S-146	¼″ x 6″	1.10	2½ lb.	
S-148	¼″ x 8″	1.20	3 lb.	
S-5162	5/16″ x 2″	1.05	2 lb.	
S-5166	5/16″ x 6″	1.30	3¾ lb.	
S-5168	5/16″ x 8″	1.40	4¼ lb.	
S-51610	5/16″ x 10″	1.55	4¾ lb.	
S-51612	5/16″ x 12″	1.65	5¼ lb.	
S-388	⅜″ x 8″	1.75	6 lb.	
††S-3812	⅜″ x 12″	2.50	1¼ lb.	1 in box
††S-3818	⅜″ x 18″	2.75	1¼ lb.	
††S-7166	7/16″ x 6″	1.90	1¼ lb.	
††S-71612	7/16″ x 12″	2.50	1¼ lb.	
††S-71618	7/16″ x 18″	2.75	1¼ lb.	
S-1424	¼″ x 24″	2.50	1¼ lb.	

Stubbies

Number	Size Blade	List	Weight Box of 10
S-3161	3/16″ x 1″	$ .60	¾ lb.
S-141	¼″ x 1″	.70	1¼ lb.
S-5161	5/16″ x 1″	.70	¼ lb.

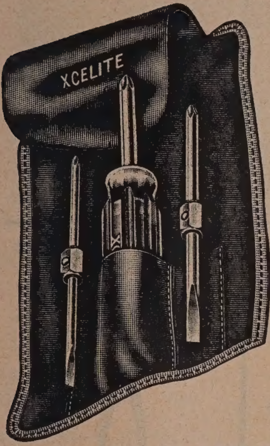
††Large double-grip handles.

†Screwholding type used on SH-10 Display.

Quality XCELITE *Tools*

REG. TRADE MARK

DUAL-PURPOSE SCREWDRIVERS



IN ROLL KIT

No. CK-3....$4.35 List
Contains RB-1, RB-2, RB3 and Combination Handle.

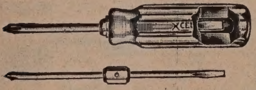
No. CK-2....$3.40 List
Contains RB-1, RB-2 and Combination Handle.

See Below for Individual Listing of Blade Sizes.

IN PLASTIC BOX

No. BC22 Containing RB1, RB2 and Reg. Handle..........Temp. Disc.
No. BC23 Containing RB1, RB2, RB3 and Reg. Handle....Temp. Disc.

OR INDIVIDUALLY



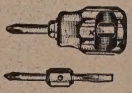
BLADE COMBINATIONS
(Please Order by Number)

No. 1—No. 1 Phillips and 3/16" XceLite
No. 2—No. 2 Phillips and ¼" XceLite
No. 3—No. 3 Phillips and 5/16" XceLite

COMPLETE (Regular Type)	List Price	BLADES ONLY (Regular Type)	List Price
No. CR1	$1.75	No. RB1	$0.95
No. CR2	1.75	No. RB2	.95
No. CR3	1.75	No. RB3	.95

HANDLES ONLY

	List Price
No. 25 Regular	$0.80



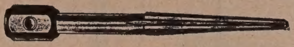
STUBBY TYPE

COMPLETE (Stubby Type)		BLADES ONLY (Stubby Type)	
No. CS1	$1.50	No. SB1	$0.75
No. CS2	1.50	No. SB2	.75

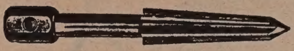
HANDLES ONLY

No. 26 Stubby....................$0.75

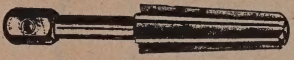
DETACHABLE REAMERS



No. 61
Temp. Disc.
⅛" — 5/16"



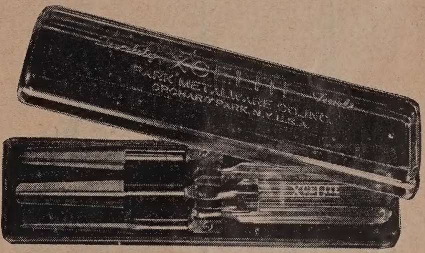
No. 62
Temp. Disc.
¼" — ½"



No. 63
Temp. Disc.
7/16" — 11/16"

Detachable to fit your XceLite No. 14 Nut Driver or "Combination-Detachable" Screwdriver! Short enough to get in where ordinary reamers can't! Enlarge holes in plastic, sheet metal, wood!

REAMER SETS IN BOX

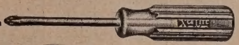


No. BR32 Contains Reg. Handles, No. 61 and 62 Reamers .Temp. Disc.
No. BR33 Contains Reg. Handle, No. 61, 62 and 63 Reamers Temp. Disc.

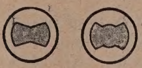
REAMERS IN PLASTIC ROLL KIT

No. RK-42 Contains Reg. Handle, No. 61 and 62 Reamers Temp. Disc.
No. RK-43 Contains Reg. Handle, No. 61, 62 and 63 Reamers Temp. Disc.

XceLite- Phillips



No.	Point Size	Length Blade	Diameter Blade	Weight	List Price
X-108	1	6"	3/16"	2 lbs.	$1.15
X-101	1	3"	3/16"	1¼ lbs.	1.05
X-102	2	4"	¼"	2 lbs.	1.35
X-103	3	6"	5/16"	3 lbs.	1.80
X-104	4	8"	⅜"	3 lbs.	2.25
X-1010	1	10"	3/16"	3 lbs.	1.60
X-1020	1	10"	¼"	3 lbs.	1.80
SHORT STUBBY TYPE					
SX-101	1		3/16"	⅞ lb.	1.00
SX-102	2		¼"	2 lbs.	1.10



XCELITE Clutch Head Screwdrivers

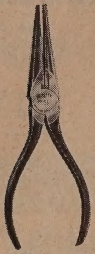
Type G No.	Size	Diameter Blade	Length Blade	List Price Each
G-183	⅛"	3/16"	3"	$1.20
G-5324	5/32"	¼"	4"	1.32
G-3164	3/16"	¼"	4"	1.32
G-146	¼"	5/16"	6"	1.75
G-5166	5/16"	⅜"	6"	2.15

SUBJECT TO CHANGE WITHOUT NOTICE

Quality XCELITE *Tools*

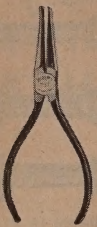
REG. TRADE MARK

No. 51 XCELITE Long Needle Nose and Side Cutter Plier



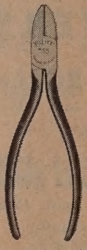
List Price $3.40

No. 52 XCELITE Long Needle Nose (Without Side Cutter)



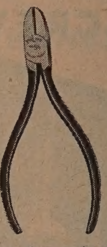
List Price $2.90

No. 55 XCELITE Electricians' Diagonal Plier 5″



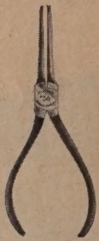
List Price $3.25

No. 54 XCELITE Electricians' Diagonal Plier 4″



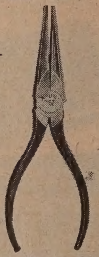
List Price $3.25

No. 56 XCELITE Slim Needle Nose Plier



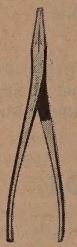
List Price $3.15

No. 57 XCELITE Long Duck Bill Plier 7″



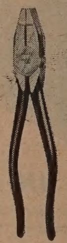
List Price $3.25

No. 59 XCELITE Chain Nose Electricians' Plier



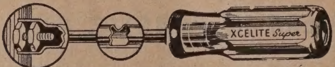
List Price $3.55

No. 60 XCELITE Side Cutting Plier 6″



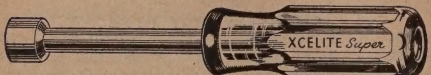
List Price $3.15

HOLLOW SHAFT NUT DRIVERS



No. and Length Overall	Nut Size	Depth of Hole	Weight per Box	List	Insulated List
HS-8 6″	¼″	5″	1½ lbs.	$1.15	$1.50
HS-10 6″	5/16″	5″	1 lb.	1.15	1.50
HS-11 6″	11/32″	5″	1 lb.	1.15	1.50
HS-12 6″	⅜″	5″	1 lb.	1.15	1.50
HS-14 7″	7/16″	5″	1¼ lbs.	1.30	1.65
HS-16 7″	½″	5″	1½ lbs.	1.35	1.70
HS-18 7″	9/16″	5″	1⅜ lbs.	1.40	1.75
HS-20 7″	⅝″	5″	1⅞ lbs.	1.65	2.00

XCELITE NUT DRIVERS

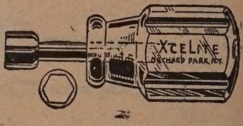


6" Overall Length				9" Overall Length		
Number	Size	Polished	Chrome Plated	Number	Size	List
6		$0.80	$0.90	A-6	3/16″	$1.05
7	7/32″	.80	.90	A-7	7/32″	1.05
8	¼″	.80	.90	A-8	¼″	1.05
9	9/32″	.80	.90	A-9	9/32″	1.05
10	5/16″	.80	.90	A-10	5/16″	1.05
11	11/32″	.80	.90	A-11	11/32″	1.05
12	⅜″	.80	.90	A-12	⅜″	1.05
14	7/16″	1.25		A-14	7/16″	1.38
16	½″	1.25		A-16	½″	1.38

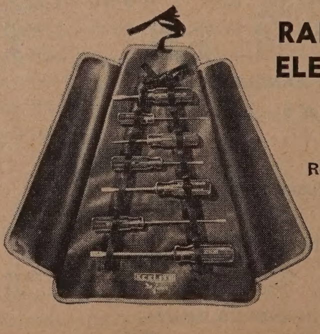
STUBBIES

3¼" Overall Length

Number	Nut Size	List
S-8	¼″	$0.77
S-10	5/16″	.77
S-12	⅜″	.77



XCELITE No. 3 *De Luxe*



RADIO AND ELECTRICAL KIT

Set includes:
R-142, R-3163, R-5166, R-184, R-144, X-101 and R-3166.

No. 3 .... $7.75
No. 3C Chrome Plated $8.50

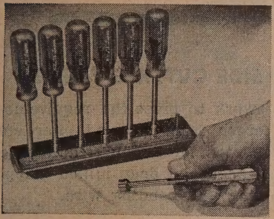
SUBJECT TO CHANGE WITHOUT NOTICE

Quality XCELITE *Tools*

REG. TRADE MARK

NO. 17 NUT DRIVER SET

Amber Handles — Highly Polished Blades



Consisting of:

Number	Size
6	3/16"
7	7/32"
8	¼"
9	9/32"
10	5/16"
11	11/32"
12	⅜"

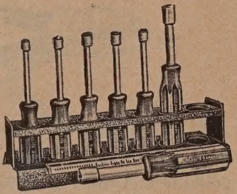
Complete with Rack $6.15

NO. 137 NUT DRIVER SET

With Colored Handles

Consisting of:

Number		Size	List Pol.	List Chr.
127-6	Black	3/16"	.85	.90
127-8	Red	¼"	.85	.90
127-10	Yellow	5/16"	.85	.90
127-11	Green	11/32"	.85	.90
127-12	Blue	⅜"	.85	.90
HS-16	Red	½"	1.40	1.50
HS-18	Brown	9/16"	1.45	1.55



No. 137 Polished Finish..**$8.15**

No. 137C Chrome Plated.. **8.95**

No. 117 SET With Colored Handles

Set consists of Nos. 127-6, 127-7, 127-8, 127-9, 127-10, 127-11, 127-12. Furnished in either full polished or chrome finish. Complete with same type stand as No. 127. Individual Drivers, Polished .... .85 Chrome.... .95

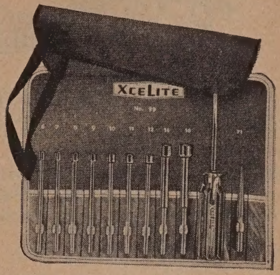
No. 117 Set Polished Finish ....Temp. Disc.

No. 117C Chrome Plated ....Temp. Disc.

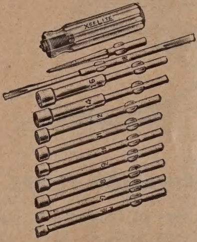
No. 99 PR MULTI-PURPOSE SET

With the new patented STAY-LOCKED fastener

Pat. No.
2,476,762



A convenient Plastic Roll-Type Kit holds the entire set of tools. Open it offers ready access to the various sizes—closed it's a compact roll that fits readily into your pocket. Each unit slips easily into the Universal Handle and is held securely by the Stay-Locked fastener, yet they can be easily removed. All tools are CHROME PLATED.



CONTENTS

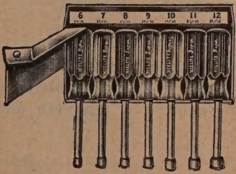
99-1	Multi-Purpose Handle
99-82	Reversible Phillips Blade
99-81	Screwdriver Blade
99-6-7-8-9-10-11-12-14-16	Nut Drivers

ACCESSORIES

99-82	Reversible Phillips Blade
99-83	Reversible Reed and Prince Blade
99-72	Reamer Temp. Disc.

Number	Description	List
99	Comb. Set in Metal Box	Temp. Disc.
99-PR	Comb. Set in Plastic Roll	10.95
99-1	Handle	.95
99-6 through 99-12	Nut Drivers	.65 ea.
99-14	Nut Driver	.90
99-16	Nut Driver	.90
99-71	Reamer ⅛" - 5/16"	Temp. Disc.
99-72	Reamer ¼" - ½"	Temp. Disc.
99-81	Reversible Screw Driver	1.15
99-82	Reversible Phillips	1.15
99-83	Reversible Reed & Prince	1.15

Delux No. 127 NUT DRIVER SET



NEW LARGER HANDLES — BRIGHTER COLORS

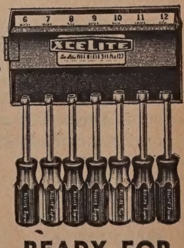
Makes Size Selection Easy.

Set consists of Nos. 127-6, 127-7, 127-8, 127-9, 127-10, 127-11, 127-12. Furnished in either full polished or chrome finish.

Individual Drivers, Polished....**$0.85** Chrome....**$0.95**

No. 127 Polished Finish **$7.15**

No. 127C Chrome Plated **7.95**



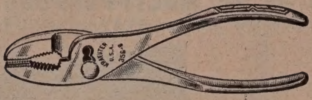
READY FOR QUICK WORK

The metal container can be fastened to the wall or work bench by screws which are inaccessible when locked. Red Wrinkle finish.

KRAEUTER & COMPANY, INC. NEWARK, NEW JERSEY, U.S.A.

KRAEUTER

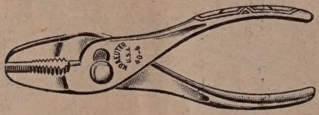
The choice of skilled mechanics



"GRIPTITE" COMBINATION PLIERS

The finest quality combination pliers. Designed for heavy duty. Slightly tapered nose, sharp deep milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The 8" and 10" sizes have three slip joint adjustments which give a wide range of parallel grips.

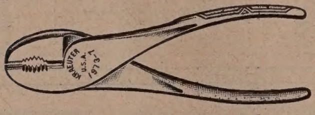
No.	Length	Finish	Wt. per doz.	Price Each
356	5½ in.	Full Nickel	3½ lbs.	**$1.75**
356	6 in.	Full Nickel	5¼ lbs.	**2.00**
356	8 in.	Full Nickel	8¾ lbs.	**2.50**
356	10 in.	Full Nickel	14 lbs.	**3.00**



THIN NOSE COMBINATION PLIERS

The tapered jaws and thin nose of these pliers enable the mechanic to grip objects difficult to reach in tight, narrow working spaces. Knurled handles, milled gripping teeth and wire cutters.

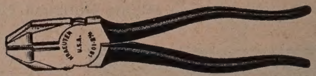
No.	Length	Finish	Wt. per doz.	Price Each
40	6 in.	Nickel Plated	4¼ lbs.	**$1.50**



MECHANICS' SIDE CUTTING PLIERS

Gripping pliers with side cutters. Tapered nose, milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The cutters are very handy for light wire work.

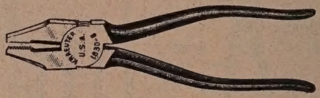
No.	Length	Finish	Wt. per doz.	Price Each
1973	5½ in.	Full Nickel	3½ lbs.	**$2.75**
1973	7 in.	Full nickel	7¼ lbs.	**3.00**



LINEMEN'S SIDE CUTTING PLIERS

Designed for heavy work to meet the requirements of linemen. Drop forged from selected plier steel, skilfully hardened and tempered. Powerful wire cutters, a well balanced head and deep milled gripping jaw surface for holding and bending wire.

No.	Length	Finish	Wt. per doz.	Price Each
1801	6 in.	Blue Temper	5¼ lbs.	**$2.75**
1801	7 in.	Blue Temper	7½ lbs.	**3.20**
1801	8½ in.	Blue Temper	11¼ lbs.	**4.00**

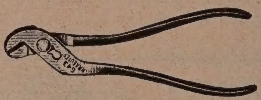


ELECTRICIANS' SIDE CUTTING PLIERS

Used extensively in electric wiring of fixtures, appliances and other general repair work.

Very popular with mechanics on production work where electric wiring is required in the finished product.

No.	Length	Finish	Wt. per doz.	Price Each
1830	4 in.	Blue Temper	1½ lbs.	**$2.00**
1830	5 in.	Blue Temper	2¼ lbs	**2.25**
1830	6½ in.	Blue Temper	4¾ lbs.	**2.50**
1830	7 in.	Blue Temper	6¾ lbs.	**2.75**
1830	8 in.	Blue Temper	8¼ lbs.	**3.00**



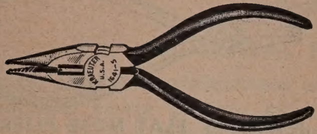
IGNITION PLIERS

Very narrow head, serrated gripping teeth and well shaped handle grips. Three slip joint positions. Generally used on distributor, generator, magneto and carburetor work.

No.	Length	Finish	Wt. per doz.	Price Each
643	5 in.	Blue Temper	1 lb.	**$1.65**

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . . SEND FOR CATALOG

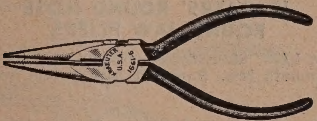
KRAEUTER
The choice of skilled mechanics



SHORT CHAIN NEEDLE NOSE PLIERS

Short tapered jaws for bending and looping wire. The short nose gives these pliers extra leverage and gripping strength. Used for wiring switches and other open electric work.

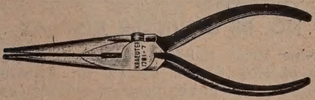
No.	Length	Finish	Wt. per doz.	Price Each
1641	5 in.	Blue Temper	2¾ lbs.	$2.25
1643	Same without Cutter		2¾ lbs.	2.00



LONG CHAIN NEEDLE NOSE PLIERS

Long tapered jaws and needle nose. Used extensively in all industries . . . from switchboard, electric fixture and appliance wiring . . . to motor ignition, aviation and general manufacturing work.

No.	Length	Finish	Wt. per doz.	Price Each
1661	6 in.	Blue Temper	3½ lbs.	$2.75
1671	Same without Cutter		3½ lbs.	2.25



EXTRA LONG CHAIN NOSE PLIERS

Extra long tapered jaws with narrow pointed nose. Used extensively in automotive . . . electric . . . aviation and general production and repair work.

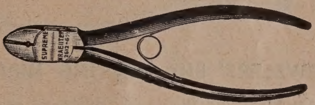
Length of jaw 2¾ in.

No.	Length	Finish	Wt. per doz.	Price Each
1781	7 in.	Blue Temper	3¾ lbs.	$3.10
1771	Same without Cutter		3¾ lbs.	2.50

DIAGONAL "OBLIQUE" CUTTING PLIERS

Made especially for close cutting. Used extensively in electrical work, radio manufacturing, telephone and automotive ignition work.

No.	Size	Finish	Wt. per doz.	Price Each
4501	4½ in.	Blue Temper	1½ lbs.	$2.10
	5 in.	" "	2¾ lbs.	2.40
	6 in.	" "	3¾ lbs.	2.75



WIRE STRIPPING DIAGONAL CUTTING PLIERS

Narrow head and notched cutters for stripping fine wire .062 diameter. The spring in the handle makes this a very fast cutting tool. Used by manufacturers of electric fixtures, appliances, radio and radio tubes.

No.	Length	Finish	Wt. per doz.	Price Each
2612	6½ in.	Blue Temper	3 lbs.	$3.10

"HIGH POWER" DIAGONAL CUTTING PLIERS

This type diagonal plier has the joint very close to the end of the cutter to give added leverage which makes cutting easy. A well balanced tool adaptable to the work in many trades.

No.	Length	Finish	Wt. per doz.	Price Each
4610	7 in.	Blue Temper	5¾ lbs.	$2.70

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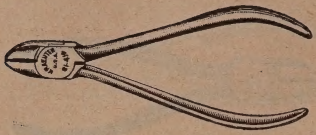
KRAEUTER

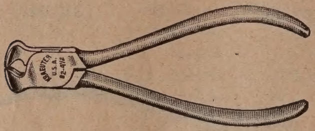
The choice of skilled mechanics



JEWELERS' DIAGONAL CUTTING PLIERS

Carefully edged cutting jaws. Designed for very fine close work.

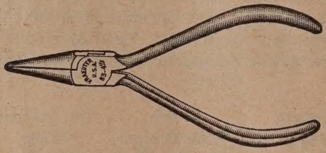
No.	Size	Finish	Wt. per doz.	Price Each
81	4½″	Full Polished	1 lb.	$2.75



JEWELERS' END CUTTING NIPPERS

Carefully edged cutting jaws. Designed for very fine close work.

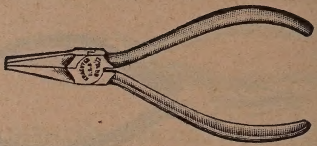
No.	Size	Finish	Wt. per doz.	Price Each
82	4½″	Full Polished	1½ lbs.	$3.25



JEWELERS' CHAIN NOSE PLIERS

Jaws 1/32″ diameter at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

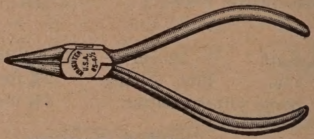
No.	Size	Finish	Wt. per doz.	Price Each
83	4½″	Full Polished	1¼ lbs.	$2.50



JEWELERS' FLAT NOSE PLIERS

Jaws ⅛″ wide at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

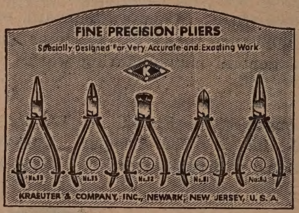
No.	Size	Finish	Wt. per doz.	Price Each
84	4½″	Full Polished	1½ lbs.	$2.60



JEWELERS' ROUND NOSE ROUND JAW PLIERS

Each jaw 1/32″ diameter at point of nose. No cutter. 15/32″ smooth jaw. Supplied with milled jaws when specified.

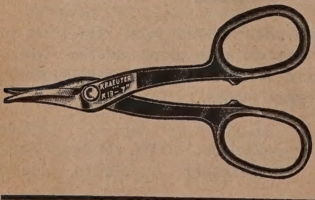
No.	Size	Finish	Wt. per doz.	Price Each
85	4½″	Full Polished	1¼ lbs.	$2.60


FINE PRECISION PLIERS
Specially Designed For Very Accurate and Exacting Work
KRAEUTER & COMPANY, INC., NEWARK, NEW JERSEY, U. S. A.

NO. 88 COUNTER DISPLAY

Size 12½″ x 8¾″ with easel back
One each of Nos. 81, 82, 83, 84, 85. Fine precision made pliers for the hobby crafters—model builders—skilled technicians.

Price, complete $13.70



COMBINATION PATTERN SNIP

Drop forged from solid steel and skillfully heat treated for hard shearing blades. The bolt and nut assembly is machine finished with bearing surfaces properly hardened to resist wear.

No.	Length	Cut	Finish	Wt. ea.	Price Each
K13	7″	1⅝″	Polished head Black handles	5½ oz.	$2.00

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KRAEUTER

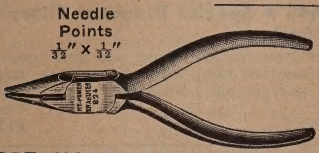
The choice of skilled mechanics

Professional Line

SPECIAL NEEDLE POINT PLIERS

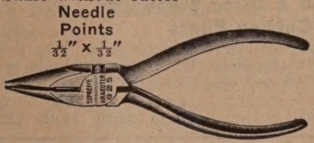
Designed for light fine professional work. The special needle points of these pliers make them invaluable where delicate adjustments have to be made.

(NOSE OF THESE PLIERS NOT GUARANTEED)


Needle Points 1/32" x 1/32"
KRAEUTER 824

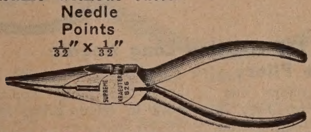
SHORT NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
824	4½ in.	Full Polished	1½ lbs.	$2.60
834	Same without cutter			2.25


Needle Points 1/32" x 1/32"
SUPREME KRAEUTER 825

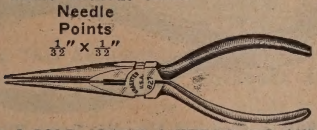
MEDIUM NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
825	5 in.	Full Polished	2¼ lbs.	$2.75
835	Same without cutter			2.40


Needle Points 1/32" x 1/32"
SUPREME KRAEUTER 826

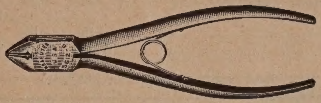
LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
826	6 in.	Full Polished	3 lbs.	$3.10
836	Same without cutter			2.70


Needle Points 1/32" x 1/32"
KRAEUTER 827

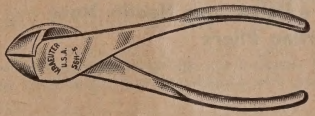
EXTRA LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
827	7 in.	Full Polished	3¾ lbs.	$3.40
837	Same without cutter		3¾ lbs.	3.00


KRAEUTER U.S.A. 5612

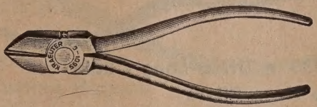
NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5612	6½ in.	Full Polished (With Stripping Notch)	3 lbs.	$3.70


KRAEUTER U.S.A. 5611

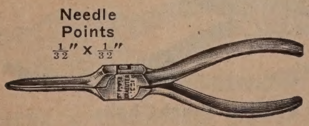
OVAL HEAD DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5611	5 in	Full Polished	2 ¼ lbs.	$3.15


KRAEUTER U.S.A. 5601

NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5601	4½ in.	Full Polished	2 lbs.	$2.70
5601	5 in.	Full Polished	2¾ lbs.	2.90
5601	6 in.	Full Polished	3¾ lbs.	3.20


Needle Points 1/32" x 1/32"
KRAEUTER 842

NEEDLE POINT SNIPE NOSE PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
842	6 in.	Full Polished	2¼ lbs.	$2.75

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Utica Tools

ADD POWER TO YOUR HANDS

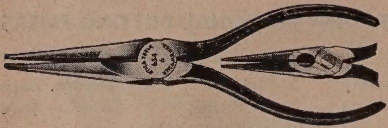
U TI CA

No. 41 • Electricians' Diagonal Pliers—

Hardened and tempered in oil. Narrow nose for radio and electrical work.

Size	4 in.	5 in.	6 in.
List Price	$2.20	$2.54	$2.80

Can be furnished with insulation stripper.



No. 654 • Utica Long Needle Nose Side Cutting Pliers

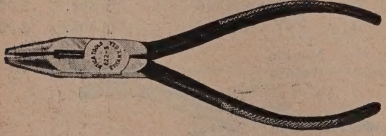
This is a long, fine, spring-tempered nose, side-cutting pliers, drop forged and with hand-honed cutting knives.

Size	6 in.	7 in.
List Price	$2.80	$3.30

No. 1033 • Utica Long Chain Needle Nose Pliers

This is a long needle nose type of pliers without a side cutter. It has a spring-tempered needle nose with a fine balance for delicate work.

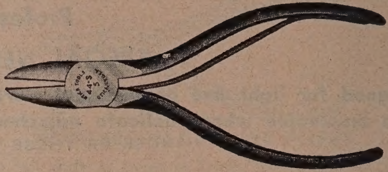
Size	6 in.	7 in.
List Price	$2.20	$2.40



No. 622 • Utica Short Chain Nose Mechanic's Pliers

This pliers is a Short Chain Nose Side Cutting Pliers, hand-honed cutting knives. It makes an all around Electrical Mechanic's pliers.

Size	5 inches
List Price	$2.40



No. 44S • Special Diagonal Pliers with Spring

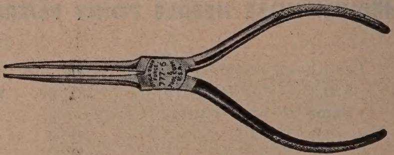
A slim nose cutting pliers designed especially for radio and electrical work. Extra fine hand honed edges permit nearly flush cuts.

Size	5 in.	6 in.
List Price	$2.86	$3.20

No. 50 • Utica Standard Side Cutting Pliers

An ideal tool for electrical work. Drop forged and skillfully tempered. Its cutting qualities are unsurpassed by any side cutting pliers.

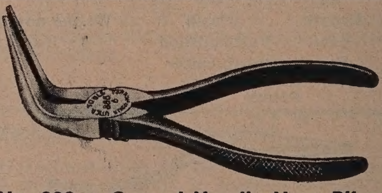
Size	4 in.	5 in.	6 in.	7 in.	8 in.
List Price	$2.10	$2.20	$2.40	$2.70	$3.00



No. 777 • Utica Long Needle Nose Pliers

This pliers has a long, half-round, spring-tempered nose for very fine work in assembling small electrical apparatus.

Size	6 inches
List Price	$2.54



No. 888 • Curved Needle Nose Pliers—

This is a long curved spring-tempered Needle Nose Pliers for use in deep and narrow places. It may be used without turning or twisting the hand in the assembling of small fixtures, electrical apparatus, etc.

Size	6 inches
List Price	$2.90

Utica Tools

ADD POWER TO YOUR HANDS

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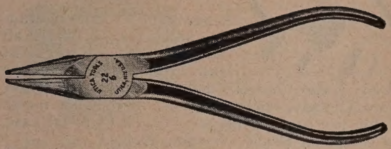
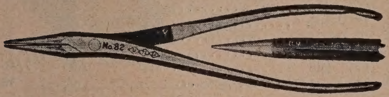


No. 22 • Utica Chain Nose Pliers

This is a Short Chain Nose Pliers forged from a fine quality of steel with fine points particularly adapted for the use of Jewelers, Opticians, Telephone Installers, Electricians and Radio Assemblers.

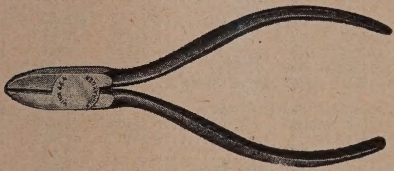
Size	4 in.	4½ in.	5 in.	6 in.
List Price	**$1.80**	**$1.95**	**$2.04**	**$2.20**



No. 82 • Utica Chain Nose Wiring Pliers

This is a special Radio Repair Man's Pliers having a chain nose for those who prefer this type of construction.

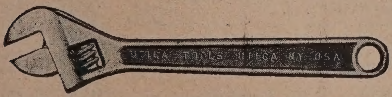
Size	8 inches
List Price	**$2.60**



No. 46 • Midget Diagonal Pliers

A small Diagonal for radio and electrical work. Hand honed edges with a slim nose for use in cramped quarters.

Size	4 inches
List Price	**$2.36**

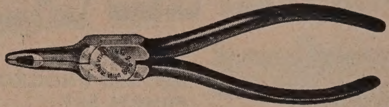

UTICA TOOLS UTICA NY USA

No. 91 • Thin Adjustable 22½° Angle Wrenches, Electronically Hardened Steel

Both the handle and jaw are drop forged from a high grade **Alloy Steel**, hardened and tempered in oil. Will not break or wear in the gear teeth and allow play in the wrench, permitting the jaw to slip off the nut.

It will give better service and last longer than any other wrench.

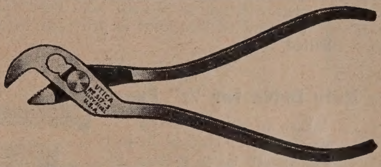
Size	4 in.	6 in.	8 in.	10 in.	12 in.
List Price	**$1.86**	**$1.86**	**$2.20**	**$2.78**	**$4.12**



No. 896 • Utica Radio Pliers

This is a General Radio Repair Man's Pliers. It has a center cutter and flat scored nose for looping and bending.

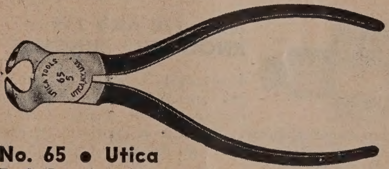
Size	6 inches
List Price	**$3.30**



No. 517 • Utica Ignition Pliers

This Ignition Pliers with its unique design will fit all ignition units, spring tempered. A great little tool for the hard to get at adjustments.

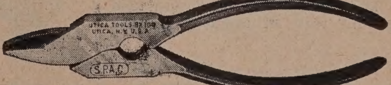
No. 517	5 inches
List Price	**$1.60**



No. 65 • Utica End Cutting Nippers

This Nippers is forged from a fine grade of steel, carefully tempered. A light, strong End Cutting Nippers, used by Electricians and Machinists. The keen cutting edges and "Perfect Fit" handles make this a very popular tool.

Size	4½ in.	5 in.
List Price	**$2.90**	**$3.14**



No. 100BX • Utica-Smith Pocket Armor Cutters

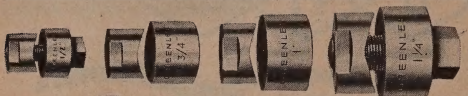
The easiest, quickest tool made for cutting armored cable. Fully illustrated instructions packed with each tool.

Size	7 inches
List Price	**$4.40**

TOOLS FOR CRAFTSMEN
GREENLEE

KNOCKOUT PUNCHES AND CUTTERS

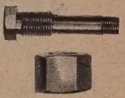
Greenlee Tool Co., Rockford, Illinois



NO. 735 KNOCKOUT PUNCH SET

Designed primarily for the electrical trade to permit fast, easy enlarging of knockouts and cutting of holes for conduit in metal boxes and cabinets. Also excellent for automobile work where holes are needed for heater pipes and other accessories. Simply insert the tool in a knockout or small drilled hole and give the screw a few turns with an ordinary wrench. No. 735 set has four punches for cutting ⅞, 1 3/32, 1 11/32, 1 11/16-inch holes for ½, ¾, 1, 1¼-inch conduit. Set is neatly packed in leather case illustrated. The ½-inch punch will cut a ⅞-inch hole for ½-inch conduit where no standard knockout is provided when a 7/16" hole is drilled.

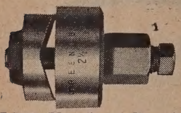
Heavy Duty Drive for ½" Punch



To increase length of service of the ½-inch Knockout Punch in cutting ⅞-inch holes in heavier-gauge sheet metals, the No. 1387 AV Drive Screw with No. 1388 AV Drive Nut illustrated is recommended.

NO. 737 KNOCKOUT PUNCH SET

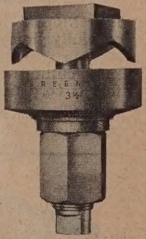
Similar to the No. 735 set, but consists of only two punches for cutting holes to accommodate 1½" and 2" conduit. Packed in leather case.



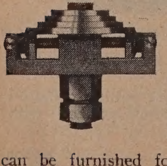
NOS. 738 AND 739 KNOCKOUT PUNCHES

For cutting holes to accommodate 2½" and 3" conduit. Design is similar to that of smaller GREENLEE Knockout Punches: insert in a knockout or drilled hole and turn drive nut with an ordinary wrench. Packed and sold individually.

NOS. 741 AND 742 KNOCKOUT PUNCHES

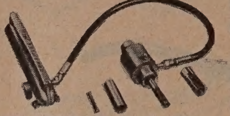


For quickly making smooth openings for 3½" and 4" conduit. Hole is clean, no filing of burrs necessary. Operation is similar to that of other GREENLEE Knockout Punches. Simply insert in hole for 1" conduit and turn drive nut with an ordinary wrench.



No. 740 Knockout Cutter

Companion tool to GREENLEE Knockout Punches. Enlarges knockouts to take 1½, 2, 2½ and 3-inch conduit. Operation is simple since an ordinary wrench drives the tool. Cutting is done by the drive action of two wheel cutters. Special discs can be furnished for cutting odd sizes of holes from 1 1/16 to 3½-inch diameter. Packed in leather case.



NO. 7646 HydraRam KNOCKOUT PUNCH DRIVER

A powerful portable hydraulic unit for driving all GREENLEE Knockout Punches. Also drives GREENLEE Radio Chassis Punches using ⅜" or larger drive screws. Quickly, easily cuts holes in 10-gauge metal. Excellent for use in tight places. Packed in metal case. List price complete, $86.50. Weight, 20 lbs.

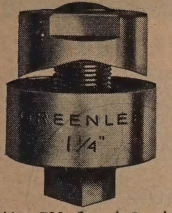
KNOCKOUT PUNCHES — LIST PRICES AND WEIGHTS (IN POUNDS)

	Hole Size	*Price*	*Weight*
No. 735 Knockout Punch Set Complete..		$10.00	2½
AV121 ½" Punch	⅞"	1.25	1/16
AV122 ½" Die	⅞"	.65	1/16
AV322 ⅜" x 1¾" Drive Screw...		.25	1/16
AV123 ¾" Punch	1 3/32"	1.45	⅛
AV124 ¾" Die	1 3/32"	.80	3/16
AV125 1" Punch	1-11/32"	1.65	3/16
AV126 1" Die	1-11/32"	.95	⅜
AV127 1¼" Punch	1 11/16"	1.90	5/16
AV128 1¼" Die	1 11/16"	1.05	7/16
AV249 ¾" x 2⅞" Drive Screw....		.35	⅜
Heavy Duty Drive for ½" Punch Complete		$1.10	¼
AV1387 Heavy Duty Drive Screw..		.75	⅛
AV1388 Heavy Duty Drive Nut....		.35	⅛
No. 737 Knockout Punch Set Complete...		$10.00	3½
AV439 1½" Punch	1-15/16"	2.30	½
AV440 1½" Die	1-15/16"	2.00	⅝
AV441 2" Punch	2⅜"	3.20	⅞
AV442 2" Die	2⅜"	2.50	1
AV304 ¾" x 3½" Drive Screw....		.50	7/16
No. 738 Knockout Punch Complete.....		$14.00	4¼
AV1429 2½" Punch	2⅞"	5.40	1⅜
AV1430 2½" Die	2⅞"	5.00	1½
AV1433 Drive Nut		1.35	9/16
AV1434 ¾" x 5⅞" Drive Screw...		2.75	⅞
No. 739 Knockout Punch Complete.....		$19.00	6½
AV1431 3" Punch	3½"	8.00	2½
AV1432 3" Die	3½"	7.50	2½
AV1433 Drive Nut		1.35	9/16
AV1434 ¾" x 5⅞" Drive Screw ...		2.75	⅞
No. 741 Knockout Punch Complete.....		$39.00	10⅜
AV2981 3½" Die	4"	14.00	3¼
AV2982 3½" Punch	4"	18.00	3
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 742 Knockout Punch Complete.....		$48.00	12⅛
AV2983 4" Die	4½"	18.00	3½
AV2984 4" Punch	4½"	24.00	4½
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 740 Knockout Cutter Complete.....		$15.00	4½
AV323 Lock Screw (2)		.30	
AV324 Wheel Cutter (2)		.50	
AV325 Feed Nut		.20	
AV326 Disc for 1½" Conduit		.70	
AV2021 Disc for 2" Conduit		.80	
AV2022 Disc for 2½" Conduit		1.00	
AV2023 Disc for 3" Conduit		1.20	
AV327 Body		5.00	
AV328 Center Shaft (¾" diameter)		.80	
AV329 Drive Nut		.80	
AV330 Retainer Screw (2)		.45	
AV331 Cutter Bushing (2)		.25	
AV332 Cutter Support (2)		.65	
AV333 Key Washer		.25	
669GB Woodruff Key		.05	

TOOLS FOR CRAFTSMEN
GREENLEE

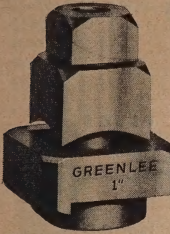
RADIO CHASSIS PUNCHES
ROUND, SQUARE, "KEY" AND "D" TYPES

Greenlee Tool Co., Rockford, Illinois


No. 730 Round Punch

NO. 730 ROUND PUNCH

Swiftly cuts clean, accurate holes in radio chassis for sockets, switches, controls and other equipment. Operates simply with an ordinary wrench for drive power . . . just insert in a small drilled hole and turn drive screw. No reaming or filing . . . hole is smooth, perfect. Thirteen sizes from ½ to 2¼″ diameter.

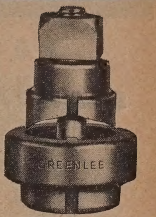

No. 731 Square Punch

NO. 731 SQUARE PUNCH

Cuts square or oblong openings as desired. Available in three sizes for making ⅝″, ¾″ and 1″ square holes. Drive screw fits into ½″ hole, which can be drilled or made with ½″ No. 730 Greenlee Round Punch. Operates with an ordinary wrench for drive power. Individually packed.

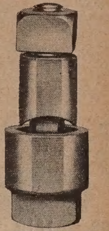
NO. 732 "KEY" PUNCH

Quickly, easily cuts holes for keyed radio sockets. Operates on same principle as other Greenlee Radio Chassis Punches . . . an ordinary wrench supplies the drive power. In four sizes to make openings of $\frac{15}{16}$″, 1-11/64″, 1-17/64″, 1-21/64″. Drive screw fits into ½″ hole. Individually packed.


No. 732 "Key" Punch

NO. 733 "D" PUNCH

Simplifies and speeds the work of making "D" shaped openings for high-frequency, miniature tube sockets and other equipment using this type opening. Available in ½″ size. Operates on same principle as other Greenlee Radio Chassis Punches with an ordinary wrench supplying the drive power. Drive screw fits into ⅜″ drilled hole. Individually packed.


No. 733 "D" Punch

NO. 730 RADIO PUNCHES — LIST PRICES AND WEIGHTS (WTS. IN OZ.)

	Price	Wt.
½″ No. 730 Radio Punch Complete	$2.15	1¾
AV-1760 ½″ Punch	1.25	¼
AV-1759 ½″ Die	.65	¾
AV-1675 ¼″ Screw	.25	¾
⅝″ No. 730 Radio Punch Complete	2.15	2¼
AV-1742 ⅝″ Punch	1.25	½
AV-1743 ⅝″ Die	.65	1
AV-1675 ¼″ Screw	.25	¾
¾″ No. 730 Radio Punch Complete	2.15	3
AV-113 ¾″ Punch	1.25	¾
AV-114 ¾″ Die	.65	1¼
AV-322 ⅜″ Screw	.25	1
⅞″ No. 730 Radio Punch Complete	2.15	4¾
AV-121 ⅞″ Punch	1.25	1½
AV-122 ⅞″ Die	.65	2¼
AV-322 ⅜″ Screw	.25	1
1″ No. 730 Radio Punch Complete	2.35	6½
AV-87 1″ Punch	1.35	1½
AV-88 1″ Die	.75	3¾
AV-112 ⅜″ Screw	.25	1¼
1$\frac{1}{16}$″ No. 730 Radio Punch Complete	2.50	7
AV-1763 1$\frac{1}{16}$″ Punch	1.45	2¼
AV-1764 1$\frac{1}{16}$″ Die	.80	3½
AV-112 ⅜″ Screw	.25	1¼
1⅛″ No. 730 Radio Punch Complete	2.50	7¼
AV-91 1⅛″ Punch	1.45	2½
AV-92 1⅛″ Die	.80	3½
AV-112 ⅜″ Screw	.25	1¼
1$\frac{5}{32}$″ No. 730 Radio Punch Complete	2.50	7¾
AV-83 1$\frac{5}{32}$″ Punch	1.45	2½
AV-84 1$\frac{5}{32}$″ Die	.80	4
AV-112 ⅜″ Screw	.25	1¼
1$\frac{3}{16}$″ No. 730 Radio Punch Complete	2.50	8
AV-115 1$\frac{3}{16}$″ Punch	1.45	2¾
AV-116 1$\frac{3}{16}$″ Die	.80	4
AV-112 ⅜″ Screw	.25	1¼
1¼″ No. 730 Radio Punch Complete	2.50	9¾
AV-117 1¼″ Punch	1.45	3
AV-118 1¼″ Die	.80	5½
AV-112 ⅜″ Screw	.25	1¼
1⅜″ No. 730 Radio Punch Complete	2.85	10½
AV-119 1⅜″ Punch	1.65	3¾
AV-120 1⅜″ Die	.95	5½
AV-112 ⅜″ Screw	.25	1¼
1½″ No. 730 Radio Punch Complete	3.20	12¼
AV-89 1½″ Punch	1.90	4¼
AV-90 1½″ Die	1.05	6¾
AV-112 ⅜″ Screw	.25	1¼
2¼″ No. 730 Radio Punch Complete	6.20	37
AV-437 2¼″ Punch	3.20	11½
AV-438 2¼″ Die	2.50	18
AV-304 ¾″ Screw	.50	7½

NO. 731 SQUARE RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
⅝″ No. 731 Square Punch Complete	$3.35	4¾
AV-2891 ⅝″ Square Punch	1.40	¾
AV-2881 ⅝″ Square Die	1.15	1¼
AV-2886 31/64″ Drive Screw	.60	1¾
AV-2929 Drive Nut	.20	1
¾″ No. 731 Square Punch Complete	3.90	6¾
AV-2882 ¾″ Square Punch	1.65	1
AV-2883 ¾″ Square Die	1.35	2¼
AV-2914 31/64″ Drive Screw	.70	2½
AV-2929 Drive Nut	.20	1
1″ No. 731 Square Punch Complete	4.50	8¾
AV-2884 1″ Square Punch	1.80	2¼
AV-2885 1″ Square Die	1.50	2¼
AV-2887 31/64″ Drive Screw	1.00	3¼
AV-2929 Drive Nut	.20	1

NO. 732 "KEY" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
15/16″ No. 732 "Key" Punch Complete	$3.75	8½
AV-2972 15/16″ Die	1.00	1¾
AV-2973 15/16″ Punch	1.50	2½
AV-2974 31/64″ Drive Screw	1.05	3¼
AV-2929 Drive Nut	.20	1
1-11/64″ No. 732 "Key" Punch Complete	4.00	10¾
AV-3256 1-11/64″ Die	1.10	3
AV-3257 1-11/64″ Punch	1.60	2¾
AV-3258 31/64″ Drive Screw	1.10	4
AV-2929 Drive Nut	.20	1
1-17/64″ No. 732 "Key" Punch Complete	4.25	12½
AV-2975 1-17/64″ Die	1.15	3
AV-2976 1-17/64″ Punch	1.70	4
AV-2977 31/64″ Drive Screw	1.20	4½
AV-2929 Drive Nut	.20	1
1-21/64″ No. 732 "Key" Punch Complete	4.50	12½
AV-3262 1-21/64″ Die	1.25	4
AV-3263 1-21/64″ Punch	1.80	2½
AV-3264 31/64″ Drive Screw	1.25	4¾
AV-2929 Drive Nut	.20	1

NO. 733 "D" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
½″ No. 733 "D" Punch Complete	$3.50	2
AV-3032 ½″ Die	1.00	½
AV-3033 ½″ Punch	1.50	¼
AV-3034 $\frac{5}{16}$″ Drive Screw	.75	1
AV-3035 Drive Nut	.25	¼

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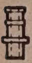
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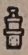
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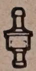
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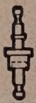
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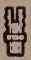
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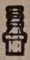
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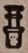
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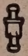
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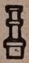
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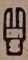
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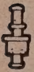
PLUGS

Male
Female
1700 C-D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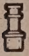
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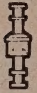
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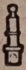
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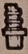
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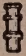
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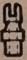
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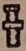
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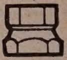
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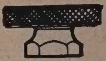
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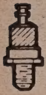
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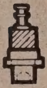
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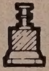
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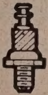
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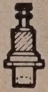
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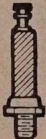
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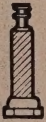
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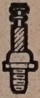
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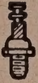
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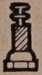
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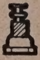
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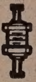
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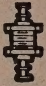
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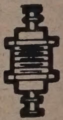
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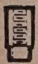
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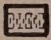
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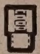
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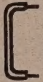
HANDLES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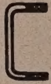
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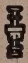
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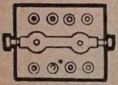
MELAMINE RESISTOR BOARDS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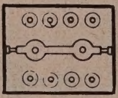
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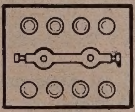
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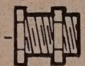
PANEL BEARINGS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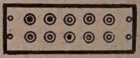
STANDARD BOARDS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TERMINAL BOARDS MADE TO CUSTOMER PRINT SPECIFICATIONS

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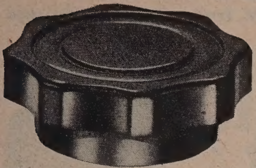
Molders of Plastics

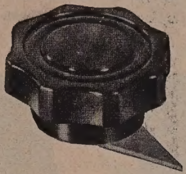
1428 NORTH WELLS STREET • CHICAGO 10, Ill.

STANDARD COLORS FOR DAVIES KNOBS: Black, Walnut, Red or Ivory. Others to order. Quality radio knobs for standard 1/4" shaft. Set screw, spring, or knurled hole mounting, or 1/4" brass bushing.

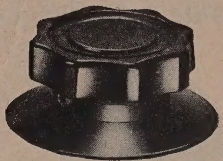
ELECTRONIC INSTRUMENT KNOBS



Type No.	Diameter	Height
4100	1 1/8"	5/8"
4101	1 3/8"	11/16"
4102	1 5/8"	3/4"
4103	2 3/8"	7/8"



Type No.	Diameter	Pointer length from shaft center
4100-P	1 1/8"	7/8"
4101-P	1 3/8"	1 1/16"
4102-P	1 5/8"	1 1/16"
4103-P	2 3/8"	1 9/16"



Type No.	Diameter	Skirt diameter
4104	1 1/8"	1 1/2"
4106	1 3/8"	1 1/2"
4108	1 5/8"	3"
4109	2 3/8"	2 1/16"

Skirt available with or without indicator line filled.

No. 1400. (With pointer).
Height 13/32". Diameter 11/16".

No. 1450. (No pointer).
Height 13/32". Diameter 11/16".
Set screw, spring, or knurled hole mounting.

No. 1475. (No Pointer).
Height 1/2". Diameter 1". Set screw, spring, or knurled mounting.

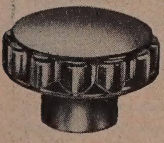
No. 1700.
Height 19/32". Diameter 3/4". Set screw, spring, or knurled hole mounting.

No. 2500.
Height 3/4". Diameter 3/4".

No. 2600.
Height 7/8". Diameter 7/8".
Set screw, spring, or knurled hole mounting.

No. 2965.
Short Shank. Dia. 7/8"; Hgt. from 1/2" to 1 1/2".
Medium Shank. Dia. 7/8"; Hgt. from 9/16" to 1 1/2".
Long Shank. Dia. 7/8"; Hgt. from 9/16" to 1 1/2".

This type knob can be supplied with arrow; Off-On; Tuning; Volume; Tone; Batt-Elec.; Band Switch; Radio-Phono, or Dot markings. Set screw, spring, or knurled hole mounting.



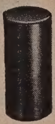
No. 3008.
Dia. 1 1/4"; Hgt. 3/4".

No. 3009.
Dia. 1 1/2"; Hgt. 3/4".

No. 3000
Long Shank Dia. 1 3/4"; Hgt. 3/4", 1", 1 1/4" & 1 1/2".
Short Shank. Dia. 1 3/4". Hgt. 3/4", 1", 1 1/4" & 1 1/2".
1/4" molded hole or brass insert. Plain or threaded hole. Set screw or knurled hole mounting.

	Length overall	Hgt.	Dia.
No. 2110	1 5/8"	19/32"	3/4"
No. 2100	2 1/2"	5/8"	3/4"
Molded hole or brass insert, set screw mounting.			
No. 2110-P	1 15/16"	19/32"	3/4"
No. 2100-P	2 13/16"	5/8"	3/4"
Metal insert and pointer, set screw mounting.			

No. 2300—Zephyr bar knob. Length 1 1/4".
No. 2350—Zephyr bar knob. Length 2".
Molded hole, set screw mounting.
No. 2300-A—Zephyr bar knob. Length 1 1/4".
No. 2350-A—Zephyr bar knob. Length 2".
1/4" brass insert and set screw.



No. 1800 Series
These can be furnished in either plain or recessed tops. Dia. 7/16"; Heights range from 1" to 1 3/8". Also supplied with studs of various lengths.

No. 5149 — Rectangular touch tuning knob. Push on, self-locating.
No. 5149-A—Oval touch tuning knob. Push on, self-locating.
Hgt. 13/16" - 1 1/32".

No. 1750—Touch Tuning. Push on, self-locating.
No. 1760—Touch Tuning, Recessed top, push on, self-locating. Dia. 31/64". Hgt. 9/16", 11/16", 13/16", 15/16".
No. 1770—Binding Post and Switch knob. No. 6-32 and No. 8-32 brass inserts. Dia. 31/64". Hgt. 1/2", 5/8", 3/4", 7/8".

No. 2710
Height 1/2". Dia. 3/4". Metal-faced insert or plain insert. Female thread available 8-32, 10-32 and 10-24.

No. 2150
Streamlined bar knob. Length 1 1/4".

No. 1780
Push button knob. Dia. 1/2". Hgt. 1", 1 1/8", 1 7/32", 1 3/8".

No. 1790
Recessed top. Dimensions same as No. 1780.

Factory & General Offices: 1428 N. WELLS ST., CHICAGO 10, ILL.
Branch Offices: Baltimore, Cincinnati, Grand Rapids, New York, Los Angeles, Milwaukee, Boston and Philadelphia
Foreign Office: Toronto, Canada

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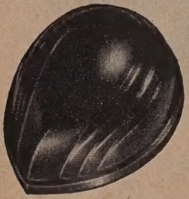
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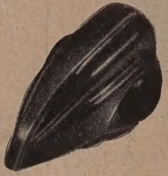
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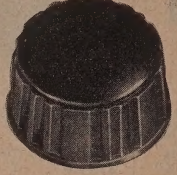
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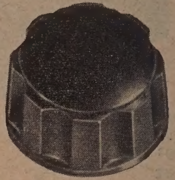
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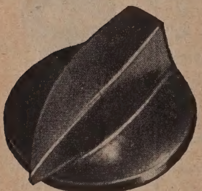
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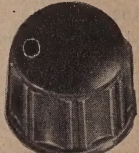
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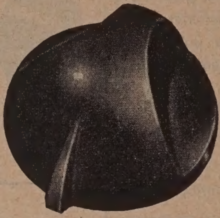
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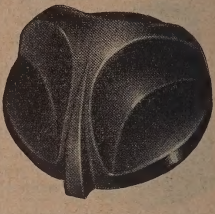
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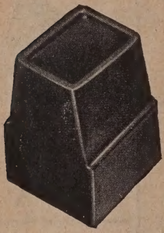
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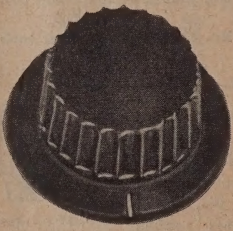
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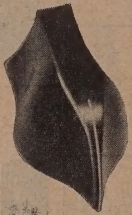
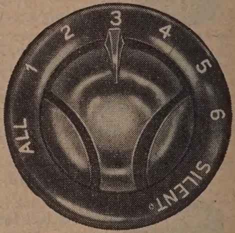

TYPE RB-41



RB-11 *with* RB-1000

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Shown above, are but a few of the many Rogan plastic knobs available to you from our regular stock molds. These are supplied without tool charge, resulting in considerable savings in cost, faster delivery. Choice of a wide selection of sizes, shapes and colors. Molded of phenolic or urea thermosetting materials, which will not soften, warp, or scratch easily. Heat resisting materials can be used so knobs can withstand 350-400° F. continuous heat. Most knobs supplied with 1/4" shaft hole and set screws. Special shaft hole sizes and means of fastening can be supplied to specifications at nominal cost.

KNOBS CAN BE BRANDED, AS REQUIRED

Rogan's famous "deep relief" branding process, applied after molding, provides sharp perfect marking at low cost. Any type marking, graduations or numerals can be branded on blank knobs to fit your requirements. Rogan knobs are available in black, brown or walnut, when molded of phenolic materials; and in all light pastel colors when molded of urea materials. Whatever your knob requirements may be, Rogan is equipped to supply you faster, better, more economically. The complete line of Rogan knobs with specifications is shown in the new Rogan catalog. Write for your copy now.

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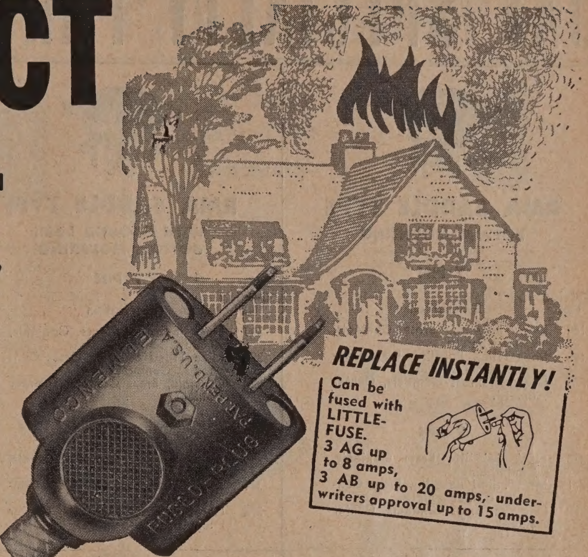

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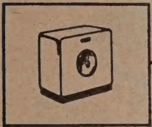
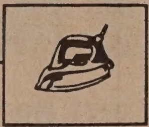

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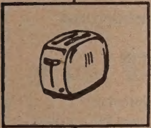
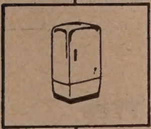

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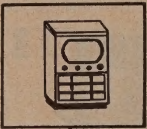
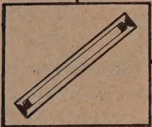

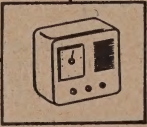

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- Eastman Kodak
- Electro-Physical Labs.
- General Electric
- Gerlat Lighting
- I. B. M.
- Buick Motors
- Philco
- R. C. A.
- Sylvania
- Thomas Edison
- Webster-Chicago
- Western Electric
- Westinghouse

JAY SPECIALTY PARTS COMPANY

RMA SADDLE TYPE

BOTTOM MOUNTING

7 PIN

Catalog No.	Description
100	Black Bakelite, Brass Contacts, Center Shield.
105	Mica Filled Bakelite, Brass Contacts, Center Shield.
220	Ceramic, Brass Contacts, Center Shield.

9 PIN

Catalog No.	Description
270	Black Bakelite, Brass Contacts, Center Shield.
271	Mica Filled Bakelite, Brass Contacts, Center Shield.
272	Ceramic, Brass Contacts, Center Shield.

RMA SADDLE TYPE

WITH GROUND LUGS BOTTOM MOUNTING

7 PIN

Catalog No.	Description
300	Black Bakelite, Brass Contacts, Center Shield.
305	Mica Filled Bakelite, Brass Contacts, Center Shield.
320	Ceramic, Brass Contacts, Center Shield.

9 PIN

Catalog No.	Description
370	Black Bakelite, Brass Contacts, Center Shield.
371	Mica Filled Bakelite, Brass Contacts, Center Shield.
372	Ceramic, Brass Contacts, Center Shield.

RMA SADDLE TYPE

TOP MOUNTING

7 PIN

Catalog No.	Description
107	Black Bakelite, Brass Contacts, Center Shield.
108	Mica Filled Bakelite, Brass Contacts, Center Shield.
222	Ceramic, Brass Contacts, Center Shield.

9 PIN

Catalog No.	Description
273	Black Bakelite, Brass Contacts, Center Shield.
274	Mica Filled Bakelite, Brass Contacts, Center Shield.
275	Ceramic, Brass Contacts, Center Shield.

JAN SADDLE TYPE

TOP MOUNTING

7 PIN

Catalog No.	Description
240PH	Black Bakelite, Phosphor Bronze Contacts, Center Shield.
241PH	Mica Filled Bakelite, Phosphor Bronze Contacts, Center Shield.
113PH	Ceramic, Phosphor Bronze Contacts, Center Shield.

9 PIN

Catalog No.	Description
196PH	Black Bakelite, Phosphor Bronze Contacts, Center Shield.
197PH	Mica Filled Bakelite, Phosphor Bronze Contacts, Center Shield.
170PH	Ceramic, Phosphor Bronze Contacts, Center Shield.

SNAP-ON JAN TYPE

TOP MOUNTING

7 PIN

Catalog No.	Description
250	Black Bakelite, Brass Contacts, Center Shield.
251	Mica Filled Bakelite Brass Contacts, Center Shield.
252	Ceramic, Brass Contacts, Center Shield.

9 PIN

Catalog No.	Description
450	Black Bakelite, Brass Contacts, Center Shield.
451	Mica Filled Bakelite Brass Contacts, Center Shield.
452	Ceramic, Brass Contacts, Center Shield.

SHOCK PROOF TYPE

BOTTOM MOUNTING

7 PIN

Catalog No.	Description
140PH	Black Bakelite, Phosphor Bronze Contacts, Center Shield.
143PH	Mica Filled Bakelite, Phosphor Bronze Contacts, Center Shield.

JAN BASE SHIELD TYPE

TOP MOUNTING

7 PIN

Catalog No.	Description
234PH	Black Bakelite, Phosphor Bronze Contacts.
235PH	Mica Filled Bakelite, Phosphor Bronze Contacts.
235BC JAN no.—TS102P01	Mica Filled Bakelite, Beryllium Copper Contacts, Silver Pl. Tin Dipped.
238PH	Ceramic, Phosphor Bronze Contacts.
238BC JAN no.—TS102C01	Ceramic, Beryllium Copper Contacts, Silver Pl. Tin Dipped.

JAN no.—SO-10M = our No. ST235BCSCS
JAN no.—SO-10C = our No. ST238BCSCS
JAN no.—SO-11M = our No. ST235BC
JAN no.—SO-11C = our No. ST238BC

9 PIN

Catalog No.	Description
167PH	Black Bakelite, Phosphor Bronze Contacts.
169PH	Mica Filled Bakelite, Phosphor Bronze Contacts.
169BC JAN no.—TS103P01	Mica Filled Bakelite, Beryllium Copper Contacts, Silver Pl. Tin Dipped.
176PH	Ceramic, Phosphor Bronze Contacts.
176BC JAN no.—TS103C01	Ceramic, Beryllium Copper Contacts, Silver Pl. Tin Dipped.

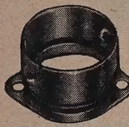
ALL ABOVE SOCKETS WITH CENTER SHIELD BRASS CAD. PL.

PRODUCTS OF ELCO CORPORATION

JAY SPECIALTY PARTS COMPANY

7 PIN JAN TYPE SHIELDS

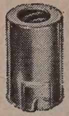
Model No.	L	Type Designation	Material	Finish	Spring
121	1⅜	TS102U01	Brass	Nickel Pl.	Phos. Bronze
120	1¾	TS102U02	Brass	Nickel Pl.	Phos. Bronze
149	2¼	TS102U03	Brass	Nickel Pl.	Phos. Bronze
127	1⅜	SOS 3	Steel	Cad. Pl.	Steel
126	1¾	SOS 6	Steel	Cad. Pl.	Steel
148	2¼	None	Steel	Cad. Pl.	Steel
326	1¾	None	Steel with Lead Jacket		Steel



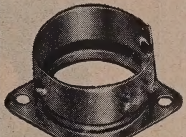
7 PIN JAN TYPE BASE SHIELD

129NP	Brass	Nickel Plated
129CP	Steel	Cadmium Plated

9 PIN JAN TYPE SHIELDS



Model No.	L	Type Designation	Material	Finish	Spring
193	1½	TS103U01	Brass	Nickel Pl.	Phos. Bronze
191	$1\frac{15}{16}$	TS103U02	Brass	Nickel Pl.	Phos. Bronze
195	2⅜	TS103U03	Brass	Nickel Pl.	Phos. Bronze
192	1½	None	Steel	Cad. Pl.	Steel
190	$1\frac{15}{16}$	None	Steel	Cad. Pl.	Steel
194	2⅜	None	Steel	Cad. Pl.	Steel



9 PIN JAN TYPE BASE SHIELD

179NP	Brass	Nickel Plated
179CP	Steel	Cadmium Plated

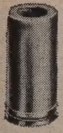


Fig. 1

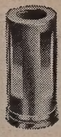


Fig. 2

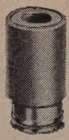


Fig. 3

7 PIN SNAP-ON TYPE SHIELDS

Fig.	Model No.	L	Material
1	200	1-53/64	Steel Cad. Pl.
2	224	1-53/64	Steel Cad. Pl.
3	225	1-53/64	Steel with Lead Jacket

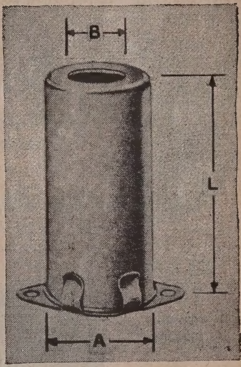
9 PIN SNAP-ON TYPE SHIELDS

Fig.	Model No.	L	Material
1	227	2-1/16"	Steel Cad. Pl.
2	228	2-1/16"	Steel Cad. Pl.
3	229	2-1/16"	Steel with Lead Jacket

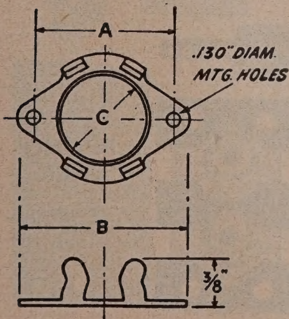
SLIP-ON SHIELDS

Dimensions	7 Pin 41S17-2	9 Pin 41S17-5
A	.865	.904
B	.500	.500
L	1.875	1.875

Material—Steel Cadmium Plated

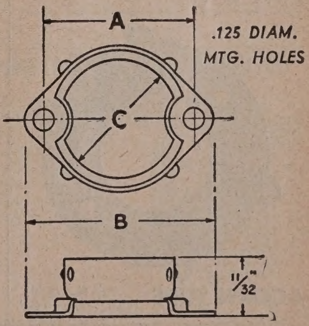


SHIELD CLIPS



Dimensions	SHIELD CLIP 7 Pin 41S17-1	SHIELD CLIP 9 Pin 41S17-8	SNAP-ON SHIELD CLIP 7 Pin 249	SNAP-ON SHIELD CLIP 9 Pin 248
A	.875	1.125	.875	1.125
B	1.125	1.375	1.093	1.406
C	.633	.750	.656	.780

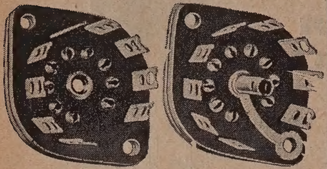
Material—Steel Cadmium Plated



PRODUCTS OF ELCO CORPORATION

JAY SPECIALTY PARTS COMPANY

WAFER SOCKETS



7 PIN MINIATURE

Part No.	Mtg. Cent.	Cent. Shield	Grd. Strap
57A28	7/8"	less	less
57A26	7/8"	with	with
57A11	1"	less	less
57A16	1"	with	with
57A12	1 5/16"	less	less
57A17	1 5/16"	with	with

9 PIN MINIATURE

Part No.	Mtg. Cent.	Cent. Shield	Grd. Strap
57A13	1 1/8"	less	less
57A25	1 1/8"	with	with
57A70	1 5/16"	less	less
57A67	1 5/16"	with	with

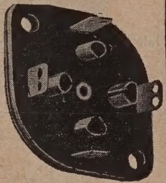
LOCTAL

WAFER SOCKETS

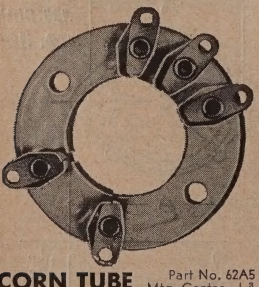
Part No.	Mtg. Cent.
52L5E	1 5/16"

GLASS TUBE

WAFER SOCKETS



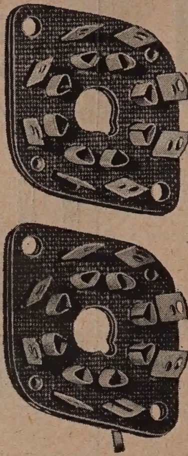
Part No.	No. Prongs	Mtg. Center
34-1-AA	4	1½"
34-1-B	5	1½"
34-1-C	6	1½"
34-1-DX	7	1½"



ACORN TUBE

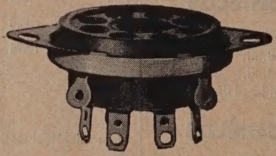
Part No. 62A5
Mtg. Center—1 3/16"

OCTAL WAFER SOCKETS



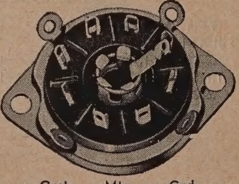
Part No.	Mtg. Cent.	Grd. Lug
39M5E	1 5/16"	less
39M5EG	1 5/16"	with
39M1E	1½"	less
39M1EG	1½"	with

MOLDED OCTAL SOCKETS



Part No.	Casting	Mtg. Cent.	Contacts
60A10	Black	1 5/16"	Brass Cad. Pl.
60A9	Mica	1 5/16"	Brass Cad. Pl.
60A9J	Mica	1 5/16"	Phos. Br. Sil. Pl. Tin'd
65A8J	Ceramic	1 5/16"	Phos. Br. Sil. Pl. Tin'd
60A5	Black	1½"	Brass Cad. Pl.
60A13	Mica	1½"	Brass Cad. Pl.
60A13J	Mica	1½"	Phos. Br. Sil. Pl. Tin'd
65A5J	Ceramic	1½"	Phos. Br. Sil. Pl. Tin'd

MOLDED LOCTAL SOCKETS

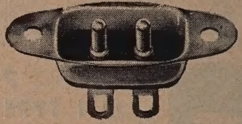


Part No.	Casting	Mtg. Cent.	Grd. Lugs
60A22	Black	1 5/16"	less
60A20	Black	1 5/16"	with

ANODE CONNECTOR

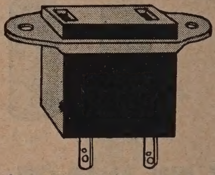
41A14..15" leads..
41A15..18" leads..
For use with T.V. Tubes

MALE INTERLOCK



28A116 ....
For use with all T.V. sets

LINE RECEPTACLE



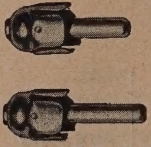
Useful for operating electrical appliances from Clock Radio.
10 Amp 250 V 15 Amp 125 V
Molded phenolic, drawn steel shell non-ferrous contacts.
No. 150A16

PHONO JACK

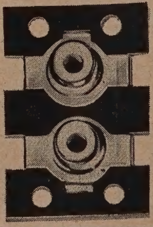
(SINGLE)

25A65

PHONO PLUGS



28A33
11/16"
prong
28A79
9/16"
prong



PHONO JACK

(DOUBLE)

25A27

Products of A. W. FRANKLIN Mfg. Corp.

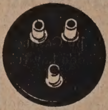
JAY SPECIALTY PARTS COMPANY

LAMINATED BATTERY PLUGS

28A8
1½V-A Bat.

28A31
6V-A Bat.

28A9
4½V-A Bat.


28A30
45V-B Bat.

28A107
4½V-C Bat.

28A106
6V-A-90V-B Bat.

28A70
9V-A-90V-B Bat.

28A6
45V-Midget B Bat.

28A69
A & B Bat.

28A62
7½V-A Bat.

Pt. No.	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.
28A8	1½-A	4F, 4FL, 6F, 8F, 8FL, TE	741, 742, 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L
28A9	4½-A	G-3	746	VS002	P100	P83A
28A31	6-A	2F4, 2F4L, F4P1, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P694A, P696L, P698A, P698L
28A62	7½-A	G-5	687	VS003	—	P85A
28A6	45-B—Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303
28A30	45-B—Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303
28A107	4½-C	2370P1	X771	VS030	P3D	P231W
28A69	1½-A—63-90-B	6FA60, 4GA41, 4GA2	—	VS037	P60A4L, P41A46	AB419
28A106	1½-A—90-B	17DG60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793
28A70	7½-A—9-A—90-B	G5A42, F5A60, F6A60, G6M60, 4FA60	— 753, 754	VS038 VS018, VS019	P87, P841 P841A	AB794 AB878, AB994

BATTERY STRAPS

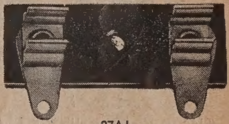
25A45B—45 Volt B Battery
25A90B—90 Volt B Battery

BATTERY CONNECTORS

25F
(Female)

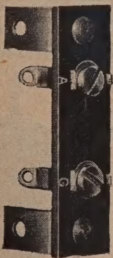
25M
(Male)

FUSE HOLDER


27A1

SCREW TYPE TERMINAL STRIPS

47A-4

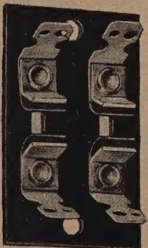

47A-44

47A-38

Plates $\frac{1}{16}$" XP Bakelite Sheet. Terminals & Screw Cad. Pl. Standard $\frac{7}{16}$" spacing between Terminals.

Part No.	No. Terminals	Mount. Cent.
47A-1	1	⅞
47A-2	2	$1\frac{5}{16}$
47A-3	3	1¾
47A-4	4	$2\frac{3}{16}$
47A-5	5	2⅝
47A-6	6	$3\frac{1}{16}$
47A-7	7	3½
47A-8	8	$3\frac{15}{16}$
47A-9	9	4⅜
47A-10	10	$4\frac{13}{16}$
47A-44	2	1¾
47A-38	2	1¾

SERIES 150 WAFER SWITCHES



1¼" Mounting Centers

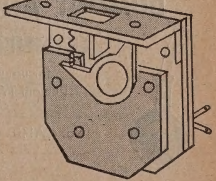
$1\frac{9}{16}$" x 1⅛" Overall

For use on AC-DC battery combination radio receivers. These switches are available for use in any circuit layout.

150A1

SERIES 150 BATTERY SWITCHES

This ingenious line of inexpensive wafer switches was designed primarily for use on AC-DC battery combination radio receivers. The set will operate on batteries only when the line plug is inserted into the switch. These switches may be put to various other uses to meet specific requirements.



No. 150A15

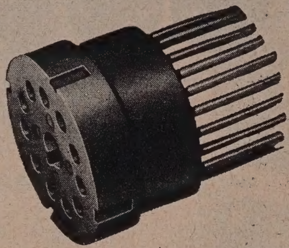
Products of A. W. FRANKLIN Mfg. Corp.

JAY SPECIALTY PARTS COMPANY

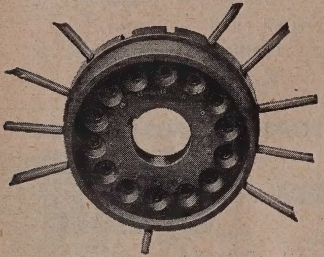
MAGNAL CATHODE RAY TUBE SOCKET

- Molded one-piece body to permit the use of high voltages without breakdown under high humidity and stratospheric conditions
- Deeply imbedded contacts of Phosphor Bronze
- Used with Tubes 5BPA, 5DPA, 5LPA, 3GPA, 7EP4

4011A
UNWIRED, 11 contacts
4011B
WIRED, 10 leads 20" long



DI-HEPTAL TELEVISION SOCKET



- Black Bakelite Casting
- 14 Pin Cathode Ray Tube Socket
- Full Floating Contacts
- Used with Tubes 3BP1, 5CP1, 7JP4, 7GP1, 7GP4

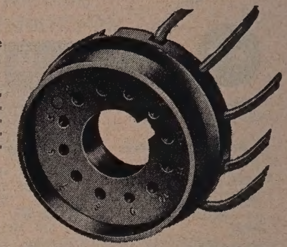
4014A....UNWIRED, 12 contacts....
4014B....WIRED, 10 leads 20" long....

DUO-DECAL TELEVISION SOCKET

- Black Bakelite Casting
- 12 Pin Cathode Ray Tube Socket
- Full Foating Contacts
- Used with Tubes 2BP1, 5TP4, 7SP4, 10BP4, 10CP4, 10EP4, 10FP4, 12JP4, 12KP4, 12LP4, 15AP4, 16AP4, 16DP4, 20BP4, K1003

4012A
UNWIRED, 10 contacts

4012B
WIRED, 5 leads, 20" long



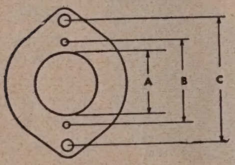
HALF-MOON DUO-DECAL TELEVISION SOCKET

- Black Bakelite Casting
- Used with Tubes 2BP1, 5TP4, 7SP4, 10BP4, 10CP4, 10EP4, 10FP4, 12JP4, 12KP4, 12LP4, 15AP4, 16AP4, 16DP4, 20BP4, K1003

40S5A....UNWIRED, 5 contacts....
40S5B....WIRED, 5 leads 20" long....

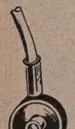
— PRODUCTS OF A. W. FRANKLIN MFG. CORP. —

ADAPTOR PLATES



Part No.	A	B	C
47-7	5/8	7/8	1 5/16
47-9	3/4	1 1/8	1 1/2

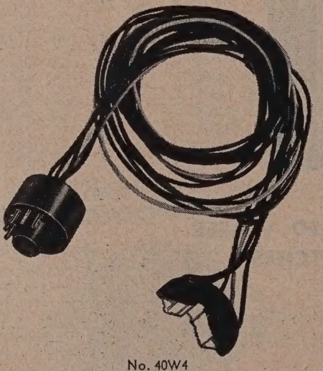
DUMONT ANODE CONNECTOR



for use with
Dumont TV Tubes

No. 42A14D—15" lead

TELEVISION EXTENSION ADAPTOR

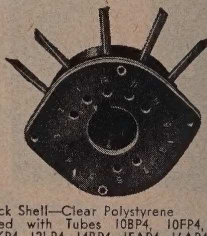


No. 40W4

No. 40W4—Permits TV Tube to remain connected in Cabinet while Chassis is removed for servicing. 40" leads.

No. 40W5—Permits conversion without cutting Picture Tube Cable. Has 20" leads.

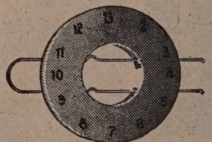
LAMINATED DUO-DECAL TELEVISION SOCKET



- Back Shell—Clear Polystyrene
- Used with Tubes 10BP4, 10FP4, 12JP4, 12KP4, 12LP4, 14RP4, 15AP4, 16AP4, 16DP4

40L13A....UNWIRED, 10 contacts....
40L13B....WIRED, 5 leads 20" long....

TV ESCUTCHEON PLATE



No. 600-2
with
spring

Channels:
2-13

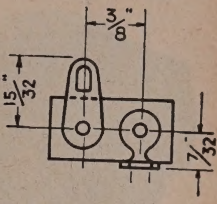
No. 600-1
Channels:
1-13 (Reg. replacement)

JAY SPECIALTY PARTS COMPANY, N. Y., N. Y.

JAY SPECIALTY PARTS COMPANY

INSULATED TERMINAL LUG STRIPS

These standard-type Terminal Strips have a spacing between all Terminals of 3/8" and are mounted on 1/16" thick bakelite. Catalog numbers are specified under part drawings. Special designs other than those shown can be supplied upon request.



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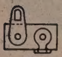
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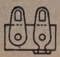
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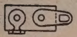
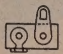

11 R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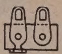
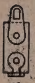

13 G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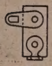
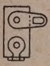
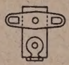

12 L


12 R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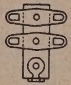
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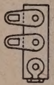
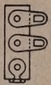
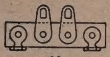

22 L


22 R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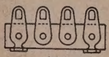
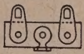

20-G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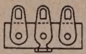
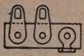

21-G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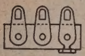
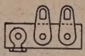
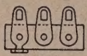
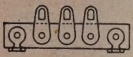

24-G


25


25-G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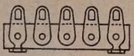
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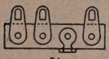
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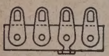
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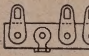
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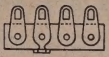
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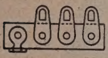
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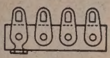
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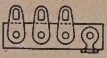
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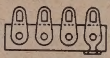
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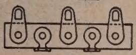
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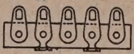
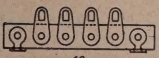

35-G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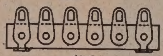
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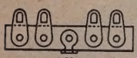
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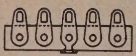
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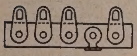
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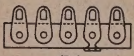
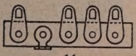

43-G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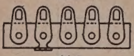
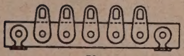

44-G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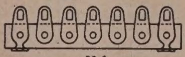
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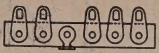
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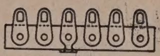
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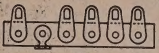
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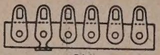
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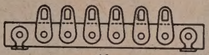
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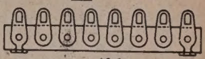
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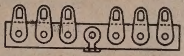
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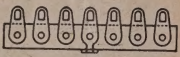
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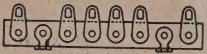
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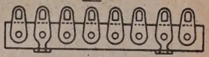
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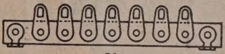
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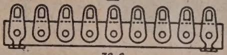
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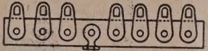
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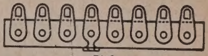
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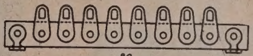
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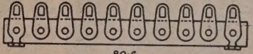
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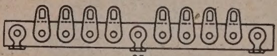
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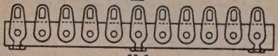
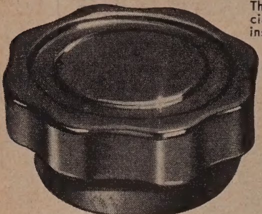

83-G

JAY SPECIALTY PARTS COMPANY

INSTRUMENT KNOBS

These easy, "natural grip" knobs are specially appreciated by all who use them. They are applicable for any instrument where a control knob is required.



Cat. No.

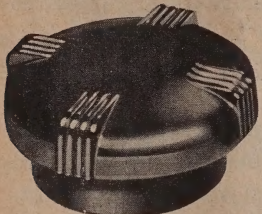
S-619-64BB. Black only, with brass insert and 2 set screws; diam. 1", height ⅝" ....

S-308-64BB. Black only, with brass insert and 2 set screws; diam. 1⅛", ht. ⅝" ....

S-385-64BB. Black only, with brass insert and 2 set screws; diam. 1⅜", ht. $\frac{11}{16}$" ....

S-309-64BB. Black only, with brass insert and 2 set screws; diam. 1⅝", ht. ¾" ....

S-310-64BB. Black only, with brass insert and 2 set screws: diam. 2⅜", ht. ⅞" ....

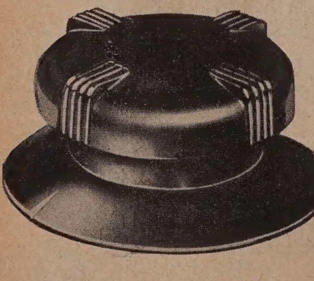


Cat. No.

S-483-64BB. Black with brass insert and 2 set screws; diam. 1⅛", ht. $\frac{11}{16}$" ......

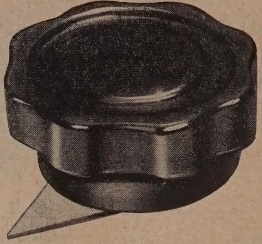
S-481-64BB. Black with brass insert and 2 set screws; diam. 1⅝", ht. $\frac{13}{16}$" ......

S-482-64BB. Black with brass insert and 2 set screws; diam. 2⅜", ht. $\frac{15}{16}$" ......



Cat. No.

S-489-64BBL. Black with brass insert and 2 set screws; filled white indicator line; skirt diam. 2$\frac{1}{16}$", ht. $\frac{15}{16}$" ....



Cat. No.

S-619-64BB-40275. Black only, with brass insert, 2 set screws, and ⅝" vinylite pointer; diam. 1", ht. ⅝" ....

S-308-64BB-40275. Black only, with brass insert, 2 set screws, and ⅝" vinylite pointer; diam. 1⅛", ht. ⅝" ....

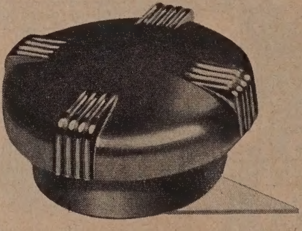
S-308-64BB-40269. Black only, with brass insert, 2 set screws, and ⅞" vinylite pointer; diam. 1⅛", ht. ⅝" ....

S-385-64BB-40260. Black only, with brass insert, 2 set screws, and 1$\frac{1}{16}$" vinylite pointer; diam. 1⅜", ht. $\frac{11}{16}$" ....

S-385-64BB-40269. Black only, with brass insert, 2 set screws, and ⅞" vinylite pointer; diam. 1⅜", ht. $\frac{11}{16}$" ....

S-309-64BB-40260. Black only, with brass insert, 2 set screws, and 1$\frac{1}{16}$" vinylite pointer, diam. 1⅝", ht. ¾" ....

S-310-64BB-40291. Black only, with brass insert, 2 set screws, and 1$\frac{1}{16}$" vinylite pointer; diam. 2⅜", ht. ⅞" ....

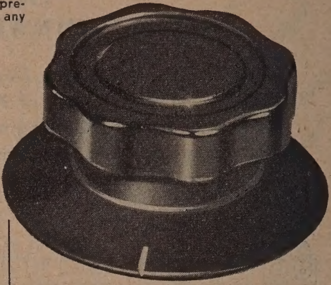


Cat. No.

S-483-64BB-40269. Black with brass insert, 2 set screws, and ⅞" vinylite pointer; diam. 1⅛", ht. $\frac{11}{16}$"

S-481-64BB-40260. Black with brass insert, 2 set screws, and 1$\frac{1}{16}$" vinylite pointer; diam. 1⅝", ht. $\frac{13}{16}$"

S-482-64BB-40291. Black with brass insert, 2 set screws, and 1$\frac{9}{16}$" vinylite pointer; diam. 2⅜", ht. $\frac{15}{16}$"



Cat. No.

S-311-64BBL. Black with brass insert and 2 set screws; filled white indicator line; skirt diam. 2$\frac{1}{16}$", ht. ⅞" ....

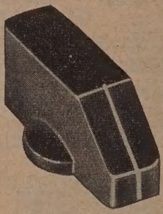
S-312-64BBL. Black with brass insert and 2 set screws; filled white indicator line; skirt diam. 3", ht. $\frac{15}{16}$" ....

S-380-64BBL. Black with brass insert and 2 set screws; filled white indicator line; skirt diam. 1½", ht. $\frac{13}{16}$" ....

S-381-64BBL. Black with brass insert and 2 set screws; filled white indicator line; skirt diam. 1¾", ht. $\frac{27}{32}$" ....

POINTER KNOBS

These Pointer Bar Knobs are simple and practical for any kind of instruments with graduations or dials mounted on panels.



Cat. No.

S-626-1L. Black only, no insert, white filled indicator. Length 1½", ht. ⅝" ....

Cat. No.

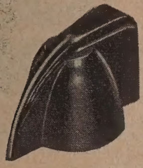
S-626-79L. Black only, no insert, white filled indicator. Length 1½", ht. ⅝" with co-bore on top for mtg. screw.

PRODUCTS OF KURZ-KASCH, INC.

JAY SPECIALTY PARTS COMPANY

POINTER KNOBS

Continued

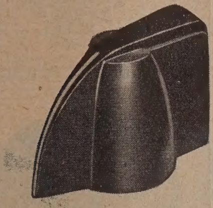


Cat. No.

S-292-1L. Black, walnut, red, gray, ivory, without brass insert. Filled pointer. Length 1¼", ht. ⅝".

S-292-3L. Black, walnut and red, brass insert and filled pointer. Length 1¼", ht. ⅝".

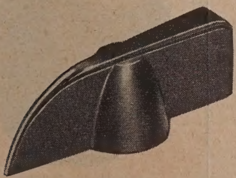
S-292-3L-BB. Black only, brass insert, filled pointer and 2 set screws. Length 1¼", ht. ⅝" ....



Cat. No.

S-246-3L. Black only, flush type brass insert, filled pointer. Length 1½", ht. ⅞" ....

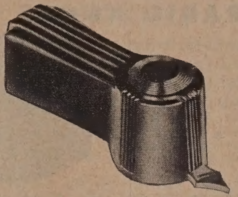
S-246-3-BBL. Black only, flush type brass insert, filled pointer, 2 set screws. Length 1½", ht. ⅞" ....



Cat. No.

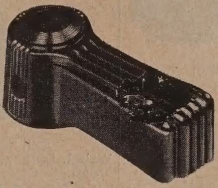
S-293-1L. Black only, no brass insert, filled pointer. Length 2¼", ht. ⅝" ....

S-293-3L. Black only, brass insert, filled pointer. Length 2¼", ht. ⅝" ....



Cat. No.

S-6844-64BB-40250. Black only, brass insert, 2 set screws, nickel plated brass pointer with 11/16" radius. Length 1¾", ht. ⅝" ....



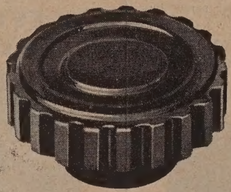
Cat. No.

S-6844-64. Black only, projecting brass insert. Length 1¾", ht. ⅝" ....

S-6844-64BB. Black only, projecting brass insert, 2 set screws. Length 1¾", ht. ⅝" ....

TERMINAL AND CONTROL KNOBS

These styles of Terminal and Control Knobs have been proven by experience to have wide demand and application for various instruments.

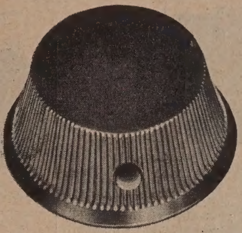


Cat. No.

S-68-3. Black only with flush type brass insert; diam. 1¾", ht. ⅞" ....

S-78-3. Black only with flush type brass insert; diam. 1", ht. ⅝" ....

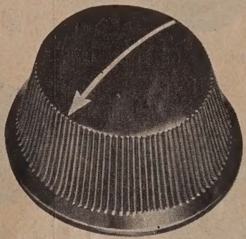
S-81-3. Black, with flush type brass insert; diam. 1⅜", ht. 11/16" ....



Cat. No.

S-5446-3. Black only, flush type brass insert. Diam. 1½", ht. ¾" ....

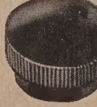
S-230-64. Black only, with projecting brass insert. Diam. ¾", ht. 9/16" ....



Cat. No.

S-17-64L. Black only, projecting brass insert, filled white arrow. Diam. 1⅛", ht. 9/16" ....

S-18-3L. Black only, flush type brass insert, filled white arrow. Diam. 1½", ht. ¾" ....



Cat. No.

S-76-3. Black with 10/32 tapped brass insert; diam. ¾", ht. 9/16" ....

S-76-2. Black with 8/32 tapped brass insert; diam. ¾", ht. 9/16" ....

S-82-1. Black with 632 tapped brass insert; diam. ⅝", ht. 17/32" ....

S-82-2. Black with 8/32 tapped brass insert; diam. ⅝", ht. 17/36" ....

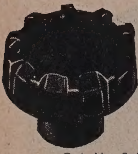
S-222-1. Black with 6/32 tapped brass insert; diam. ½", ht. 7/16" ....

S-222-2. Black with 8/32 tapped brass insert; diam. ½", ht. 7/16" ....

PRODUCTS OF KURZ-KASCH, INC.

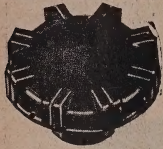
JAY SPECIALTY PARTS COMPANY

RADIO KNOBS



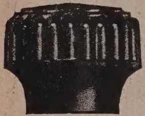
Cat. No. S-480-7
Walnut spring type only; diam. 15/16'', ht. 23/32''.

Cat. No. S-480-35
Walnut, push on type to fit standard 1/4'' straight-knurled split shaft. Diam. 15/16'', ht. 23/32''.

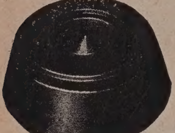


Cat. No. S-474-7
Walnut, spring type. Diam. 1 1/32'', ht. 11/16''.

Cat. No. S-474-35
Walnut, push on type to fit standard 1/4'' straight-knurled split shaft. Diam. 1 1/32'', ht. 11/16''.

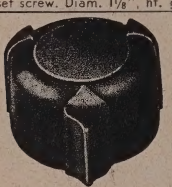


Cat. No. S-282-1
Black or walnut. Set screw type. Diam. 29/32'', ht. 3/4''.



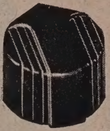
Cat. No. S-465-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 15/16'', ht. 19/32''.

Cat. No. S-466-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 1 1/8'', ht. 21/32''.



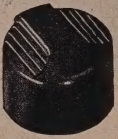
Cat. No. S-467-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 1'', ht. 41/64''.

Cat. No. S-468-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 13/16'', ht. 37/64''.

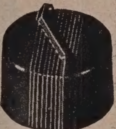


Cat. No. S-475-1
Walnut, set screw type. Diam. 3/4'', ht. 17/32''.

Cat. No. S-476-1
Walnut, set screw type. Diam. 3/4'', ht. 17/32''.

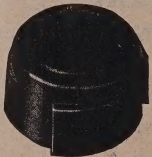


Cat. No. S-477-1
Walnut, set screw type. Diam. 1'', ht. 5/8''.



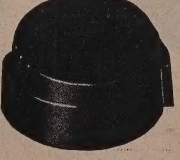
Cat. No. S-478-1
Walnut or ivory. Set screw type. Diam. 13/16'', ht. 9/16''.

Cat. No. S-479-1
Walnut or ivory. Set screw type. Diam. 1'', ht. 21/32''.



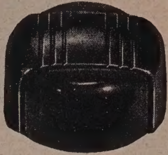
Cat. No. S-471-1
Walnut or ivory. Set screw type. Diam. 7/8'', ht. 39/64''.

Cat. No. S-472-1
Walnut. Set screw type. Diam. 1 1/8'', ht. 21/32''.



Cat. No. S-469-1
Walnut. Set screw type. Diam. 1'', ht. 5/8''.

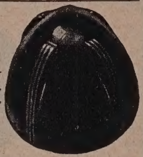
Cat. No. S-470-1
Walnut. Set screw type. Diam. 13/16'', ht. 9/16''.



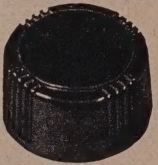
Cat. No. S-462-1
Walnut or ivory. Set screw type. Diam. 1'', ht. 5/8''.

Cat. No. S-473-1
Walnut. Set screw type. Diam. 1 1/8'', ht. 5/8''.

Cat. No. S-449-1
Walnut. Set screw type. Diam. 3/4'', ht. 5/8''.



Cat. No. S-450-1
Walnut. Set screw type. Diam. 7/8'', ht. 7/8.

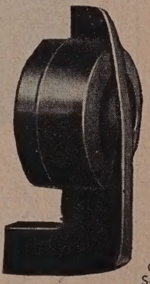


Cat. No. S-451-7AA
Black, walnut, ivory. Molded spring type shaft hole fits standard 1/4'' shaft with one set screw. Diam. 13/16'', ht. 17/32''.

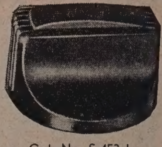
Cat. No. S-452-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 1'', ht. 5/8''.

Cat. No. S-457-1
Walnut. No brass insert. Molded hole fits standard 1/4'' shaft with one set screw. Diam. 1 1/8'', ht. 5/8''.

TELEVISION KNOBS

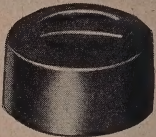


Cat. No. S-634-29*
Brown, red, beige and black. No brass insert. Spring type to fit a 1/4'' shaft. Diam. 1'', ht. 9/16''.



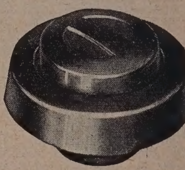
Cat. No. S-453-1
Walnut and black. No brass insert. Molded hole to fit standard 1/4'' shaft with one set screw. Diam. 1'', ht. 21/32''.

Cat. No. S-453-29
Walnut and black. Push-on type fits standard 1/4'' shaft flatted to .156'' complete with spring.

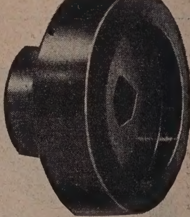


Cat. No. S-636-96*
Brown, black, red and beige. Push on type fits 3/16'' shaft flatted to .156'' with spring. Diam. 1'', ht. 9/16''.

Cat. No. S-636-29*
Brown, black, red and beige. Push on type fits standard 1/4'' shaft flatted to .156'' complete with spring. Diam. 1'', ht. 9/16''.



Cat. No. S-638-29*
Brown, black, red and beige. Push on type fits standard 1/4'' shaft flatted to .156'' with spring. Diam. 1 1/2'', ht. 29/32''.



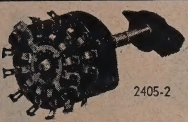
Cat. No. S-635-100
Brown, black, red and beige. Push on type fits 17/64'' shaft flatted to .237'' with spring. Diam. 1 1/2'', ht. 27/32''.

Cat. No. S-635-98
Brown, black, red and beige. Push on type fits 3/8'' shaft flatted to .327'' with spring. Diam. 1 1/2'', ht. 27/32''.

PRODUCTS OF KURZ-KASCH, INC.

*Knobs can be had gold filled.

JAY SPECIALTY PARTS COMPANY


2405-2

1112-1

2203-1

2202-1

SWITCHES

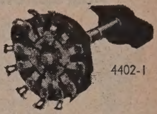
SINGLE AND MULTI-GANG CIRCUIT SELECTOR SWITCHES

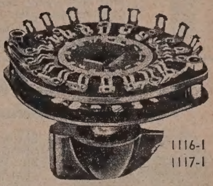
This Selector Switch line is the result of several years' search for an ideal switch for all users. It has withstood the most severe tests, both electrically and mechanically. Breakdown tests show this switch will withstand voltages from 2700 between contacts and shaft to 4600 between adjacent clips.

The indexing of the Selector Switch is positive at all times. On the multiple position switches an adjustable stop is provided so that the user can adjust his switch to utilize only the number of positions required in his application.

Each switch is supplied with bar knob and all shafts are slotted in three positions, 1½", ¾" and ⅜" from the base of the bushing. The shaft can be placed in a vise next to the desired groove, and by tapping the end of the shaft with a hammer it will break off easily. No sawing is necessary. All switches are packed in individual boxes.

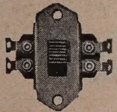
1103-1	1 Pole	1 Circuit at a time	3 Positions
1112-1	1 "	1 " " " "	11 "
1114-1	1 "	1 " " " "	4 "
1116-1	6 "	6 " " " "	2 "
1117-1	1 "	1 " " " "	17 "
2202-1	2 "	2 " " " "	2 "
2203-1	2 "	2 " " " "	3 "
2405-2	4 "	4 " " " "	5 " 2 Gang
4402-1	4 "	4 " " " "	2 "


4402-1


1116-1
1117-1

1103-1
1114-1

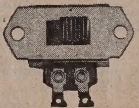
SLIDE TYPE SWITCHES

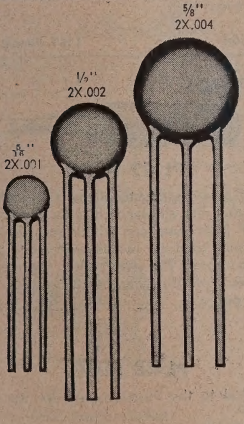

1012
1021

All material is the same as used on the Selector Switch.

The Slide Type Switch is particularly adapted for use in tone control circuits and similar applications. It is available in four circuit combinations, **single pole single throw, single pole double throw, double pole single throw, and double pole double throw.**

Cat. No.	Type
1011	1PST
1012	1PDT
1021	2PST
1022	2PDT


1011



RMC DISCAP CERAMIC CONDENSERS

THE NEWEST DEVELOPMENT IN CERAMIC BY-PASS CONDENSERS

Type B Series DISCAPS are the smallest disc ceramics available. 1000 mmf. and 1500 mmf. DISCAPS are actually less than one-half the size of competitive condensers. Their low self inductance, low power factor and moisture impervious characteristics place them in a class alone. Approved by leading makers of TV sets and tuners as well as manufacturers of specialized high frequency equipment is proof of their superiority.

TWICE TESTED FOR BREAKDOWN

SPECIFICATIONS TYPE B BY-PASS SERIES GUARANTEED MINIMUM VALUE TYPE

POWER FACTOR: 1.5% @ 1 K C (INITIAL)

POWER FACTOR: 2.5% @ 1 K C, AFTER HUMIDITY

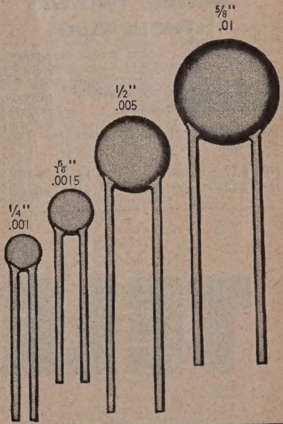
WORKING VOLTAGE: 600 V.D.C. — TEST VOLTAGE: 1200 V.D.C.

LEADS: #22 TINNED COPPER (.026 DIA.)

INSULATION: DUREZ PHENOLIC—VACUUM WAXED

LEAKAGE RESISTANCE: INITIAL 5000 MEG OHMS

LEAKAGE RESISTANCE: 1000 MEG OHMS AFTER HUMIDITY



Part No.	B800	B1000	B1500	B5000	B10,000	BD1000	BD1500	BD4000
GMV Capacity	.0008	.001	.0015	.005	.01	2x1000	2x1500	2X4000
Body Size	¼"	¼"	5/16"	½"	⅝"	5/16"	½"	⅝"
Lead Length	1"	1"	1"	1½"	1½"	1"	1¼"	1½"

PRODUCTS OF RADIO MATERIALS CORPORATION

PLUGS—MICROPHONE CONNECTORS

Single Contact Female Microphone Connector

This microphone connector assures a completely shielded connection. All metal parts are chrome plated brass except spring. Used extensively for making connections from microphone to amplifier. When used with our part No. 505 and 500, any combination of connection can be arranged. Equipped with coupling ring.

No. 506 **LIST PRICE 50c**

Single Contact Male Microphone Connector

Similar to microphone connector No. 506 above except that it has a male thread ⅝-27 and no coupling ring.

No. 505 **LIST PRICE 40c**

PHONE PLUG ADAPTER

For use with the connector 506 shown at the top. Fits any standard phone jacks. No wiring or soldering necessary to make connection. Made of nickel plated brass.

No. 223 **LIST PRICE 45c**

DOUBLE PHONE PLUG

A two way phone plug. Will accommodate 2 sets headphone tips or lugs. Fits all standard jacks. Handle is molded bakelite. Metal parts are nickel plated brass. Available in red and black.

No. 211 **LIST PRICE 50c**
No. 224—Barrel only **LIST PRICE 20c**

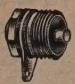
SHIELDED TWO-WAY PHONE PLUG

Identical to our part No. 211 phone plug except that barrel is made of nickel plated brass for shielding purposes.

No. 221—Plug **LIST PRICE 85c**
No. 222—Barrel only **LIST PRICE 50c**

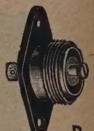
MALE CHASSIS CONNECTORS

A



B

C



D

No. 500. This mike connector is used on the chassis or in the mike. It is the open circuit type. Mounts in a ⅜″ hole. Supplied with insulating washers, solderless lug and nut. Fits ⅝-27 connections.

No. 501. Similar to above, except for shortening feature when disconnected. Ideal for use with multiple mixer amplifier. Supplied with insulating washers, lug and nuts.

No. 502. Is an open circuit pressure connector, similar to No. 500 except the spring contact protrudes to make pressure contact. Supplied with insulating washers, solderless lug and nuts.

No. 507. Similar to No. 500 except equipped with a linen base bakelite plate for mounting centers, 1-5/32″.

No. 508. Similar to No. 500 except equipped with mounting plate for mounting centers 1-5/32″.

No. 509. Similar to No. 502 except equipped with mounting plate for mounting centers 1-5/32″.

No.	Contact Action	Mounting	Fig.	List Price
500	Open	Locknut	A	**30c**
501	Shorting	Locknut	B	**40c**
502	Pressure	Locknut	B	**40c**
507	Open	Bakelite Plate	C	**30c**
508	Shorting	Bakelite Plate	D	**40c**
509	Pressure	Bakelite Plate	D	**40c**

SHIELDED PHONE PLUG

A newly designed shielded 2 conductor miniature phone plug that fits all standard jacks. One conductor is brought through the entire plug to the tip where the connection is soldered to a tinned insert. The other conductor is connected to a lug under the shell. The ¼ inch shank is ground to very exacting tolerances. Supplied with an internal rubber cord grip.

No. 231 **LIST PRICE 55c**

SHIELDED CAP

Used with our No. 500, 505 and 507 for shielding purposes. Equipped with ball chain to prevent loss.

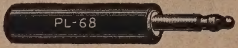
No. 504 **LIST PRICE 55c**

SIGNAL CORP PLUGS

PL-55 PLUG

PL-55 plug is a standard 2 conductor phone plug used by the U. S. Army, Signal Corps and U. S. Navy. It fits the standard Signal Corps JK-34A and JK-24 jacks. Supplied with solderless lugs.

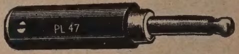
LIST PRICE **$1.35**



PL-68 PLUG

PL-68 plug is a 3 conductor microphone plug. It is designed for use with the JK-33 Signal Corps and Navy type jacks. Supplied with soldeerless lugs.

LIST PRICE **$1.75**



PL-47 PLUG

PL-47 is a 2 conductor Signal Corps phone plug that fits all standard jacks and Signal Corps jacks numbers JK-24 and JK-34A. Generally used in switchboard work with braided cords. For strain relief the cord is threaded into the plug. Black handle.

LIST PRICE **$2.00**

PL-48 PLUG

Identical to the PL-47 except for the red handle.

LIST PRICE **$2.00**

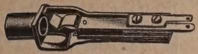
TELEGRAPH Apparatus Co.

412 SOUTH GREEN ST. **CHICAGO 7, ILLINOIS**

PLUGS • JACKS • CLIPS • SWITCHES • KNOBS

TELEGRAPH APPARATUS CO.

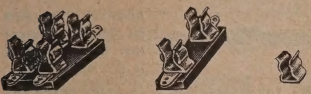
JK-24 JACK



JK-24 jack is a Signal Corps jack of distinctive design. Its construction assures an unvarying distance from the front of the sleeve to the jack springs. This jack is used generally in switch board work. The Signal Corps PL-55, PL-47 and PL-48 plugs are used in conjunction with this jack.

LIST PRICE **$1.75**

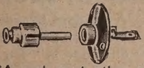
3AG FUSE MOUNTINGS



Very sturdily constructed on 3/16" black bakelite. Bottom rivets are recessed to permit mounting on metal. Clips are made of spring tempered nickel plated brass. Have center holes for mounting.

No.	Type	LIST PRICE
700	Single	20c
701	Double	30c
702	Clips Only Per C	$1.75

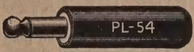
RCA TYPE PIN PLUG AND JACK



Used on RCA and most other receivers for a shielded phono connection. Can also be used as a shielded auto antenna connection.

No.	Des.	LIST PRICE
400	Pin Plug	9c
401	Shielded Jack	15c

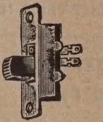
PL-54 PLUG



PL-54 plug is designed to fit only the Signal Corps and Navy type JK-26 jack. Supplied with solderless lugs.

LIST PRICE **$1.35**

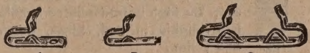
SLIDE SNAP SWITCH



A very popular switch used in many radio circuits—tone — B.F.O. — phono, etc. Ribbed black bakelite handle. Housing is cadmium plated steel. High quality insulating material. Mounting centers 1⅛".

No.	Type	LIST PRICE
601	SPST	26c
602	SPDT	33c
603	DPST	38c
604	DPDT	49c

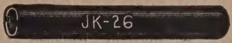
FAHNESTOCK CLIPS



Millions of these spring binding posts clips have already been used. Grips wire with just enough pressure for good electrical contact. Made of spring tempered brass.
*Bronze

No.	Fig.	Length	Width	Max. Wire	Mtg. Hole	List Price Per C
3	A	1 1/16	3/8	10	8	$2.00
10	A	3/4	5/16	14	6	1.65
*15	B	1/2	7/32	16	4	1.55
9	C	2 1/16	3/8	10	8	10.00
18	C	1 1/2	5/16	14	6	9.00

JK-26 JACK



JK-26 jack is a Signal Corps cable type jack. It is used on the end of a cord as a 2 conductor connection and is used only in connection with the PL-54 plug.

LIST PRICE **$1.25**

BANTAM OPEN AND CLOSED CIRCUIT JACKS

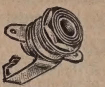


Fig. A

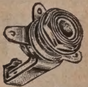
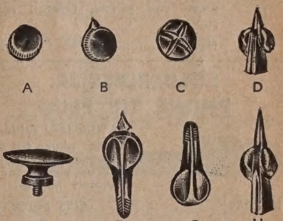


Fig. B

Small sized jacks that fit all standard phone plugs. The contact material is spring tempered nickel silver which will retain its resiliency permanently assuring good contact. Fits 3/8" hole in panels up to 3/16" thick. Supplied with nut and metal washer. Solder terminals tinned for easy soldering. Available in open and closed circuit.

No.	Fig.	Type	LIST PRICE
102	A	Open	40c
103	B	Closed	45c

BAKELITE KNOBS

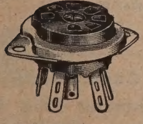


These knobs are all made of a very high grade bakelite and are available in various colors as listed below. All are for 1/4" shafts and are set screw type, except for telegraph knob.

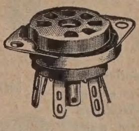
No.	Fig.	Color	Length	Dia.	List Price
1500	A	Black	13/32"	11/16"	12c
1501	A	Walnut	13/32"	11/16"	12c
1502	A	Red	13/32"	11/16"	12c
1503	A	Ivory	13/32"	11/16"	13c
1504	B	Black	13/32"	11/16"	12c
1505	B	Walnut	13/32"	11/16"	12c
1506	B	Red	13/32"	11/16"	12c
1507	B	Ivory	13/32"	11/16"	13c
1508	C	Black	3/4"	3/4"	12c
1509	C	Walnut	3/4"	3/4"	12c
1510	C	Red	3/4"	3/4"	13c
1512	D	Black	1 1/4"		15c
1513	D	Walnut	1 1/4"		15c
1514	D	Red	1 1/4"		21c
1515	D	Ivory	1 1/4"		21c
1516	E	Black	Telegraph Knob		40c
1517	F	Black	2"		22c
1518	F	Walnut	2"		22c
1519	G	Black	1 5/8"	3/4"	15c
1520	G	Walnut	1 5/8"	3/4"	15c
1521	H	Black	2"		19c
1522	H	Walnut	2"		19c
1523	H	Red	2"		24c
1524	H	Ivory	2"		24c

MINIATURE BAKELITE 7 PIN TUBE SOCKETS

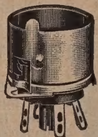
SADDLE MOUNTING



Bottom Mount With Center Shield



Top Mount With Center Shield



Top Mount Base and Center Shield

No.	Insulation	Mounting	List Price
1100	Black Bakelite	Bottom	$0.20
1105	Mica Filled Bakelite	Bottom	.25
1107	Black Bakelite	Top	.20
1108	Mica Filled Bakelite	Top	.25
1150	Black Bakelite	Top	.30
1151	Mica Filled Bakelite	Top	.40

BLANK WALL PLATES

SINGLE WALL PLATE made of chrome plated steel. Supplied with two oval mounting screws.

No. 1201 ....List Price **30c**

2 GANG WALL PLATE identical to above except mounted with four mounting screws. Fits larger outlet box.

No. 1202 ....List Price **60c**

PLUGS · JACKS · CONNECTORS

TELEGRAPH APPARATUS CO.

INSULATED SOLDERLESS PHONE TIP PLUG

A standard insulated solderless phone tip plug which fits our parts 101, 106, 108 phone tip jacks. Metal parts are nickel plated brass. Overall length 2-3/16". The high lustre insulated handle is 1" long. Available in red, black, green and yellow.

No. 202................LIST PRICE 18c

SOLDERLESS PHONE TIP PLUG

A standard solderless phone tip plug. Identical to No. 202 above, except for insulated handle.

No. 203 LIST PRICE 10c

INSULATED SOLDERLESS JR. PHONE TIP PLUG

A standard insulated solderless junior phone tip plug made to fit our parts #101 and 106 phone tip jacks. Metal parts are nickel plated brass. The high lustre insulated handle is 1" long. Available in black, red, green and yellow. Overall length 1⅞".

No. 204................LIST PRICE 18c

SOLDERLESS JR. PHONE TIP PLUG

A standard solderless junior phone tip plug identical to No. 204 above except for insulated handle.

No. 205 LIST PRICE 10c

Insulated Solderless SPRING BANANA PLUG

This insulated non-collapsible solderless spring banana plug is designed to give the greatest area of contact. Connection is made by a side set screw.

Metal parts are nickel plated brass except the four leaf banana spring which is nickel plated phosphor bronze. The high lustre insulated handle is 1" long. Available in red, black, green and yellow. Overall length 1-11/16".

No. 208 LIST PRICE 20c

Giant Banana Plug & Jack

Designed to handle heavy high frequency currents. Made of nickel plated spring brass.

No.	LIST PRICE
225—Jack	30c
226—Plug with threaded shank	35c
227—Plug with 10-32 hole with screw	35c

SPRING BANANA PLUG INSULATED

In this spring banana plug no metal parts are exposed around the insulated handle. Connection is made by soldering to special type tubular lug which is an integral part of metal body. Non-collapsible four leaf banana spring gives maximum area of contact. Metal parts are nickel plated brass except banana spring which is nickel plated phosphor bronze. The high lustre insulated handle is 1" long. Available in red, black, green and yellow.

No. 209...............................LIST PRICE 18c

INSULATED SOLDERLESS SPRING BANANA PLUG

(INTERNAL SOLDERLESS FASTENER)

An insulated spring banana plug identical in appearance to our part No. 209 except that connection is made to an internal solderless fastener. The high lustre insulated handle is available in red, black, green and yellow.

No. 210................LIST PRICE 20c

Insulated Phone Tip Jack

An insulated phone tip jack which makes very positive contact. Contact springs are made of phosphor bronze. Metal parts are nickel plated brass. The high lustre insulated head is ⅜" in diameter. Available in red, black, green and yellow.

Fits ¼" hole in panels up to ¼" thick.

Supplied with nut and insulating washer.

No. 101 LIST PRICE 15c

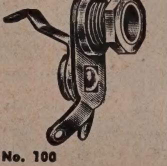
.. PHONE TIP JACK

A phone tip jack identical to our part No. 101 above except that it has a non-insulated 5/16" hex head. Metal parts are nickel plated brass.

Fits ¼" hole in panels up to ⅜" thick.

No. 106 LIST PRICE 10c

Open Circuit Phone Jack



Made to fit all standphone plugs. Contact spring made of nickel plated phosphor bronze and body made of nickel plated brass. Highest quality insulating material used. Fits ⅜" hole in panels up to 3/16" thick. Supplied with one metal washer.

No. 100 LIST PRICE 30c

SPRING BANANA PLUG

This spring banana plug is used extensively for plug-in coils, etc. Greater surface contact gives low RF resistance. Threaded shank is 6-32 thread, ⅜" long. Overall length 1-3/16". All metal parts are nickel plated brass except the four leaf banana spring which is nickel plated phosphor bronze. Supplied with soldering lug.

No. 206................LIST PRICE 11c

SPRING BANANA PLUG

Identical to our part No. 206 above except that threaded shank is ¾" long.

No. 207...............................LIST PRICE 12c

SPRING BANANA PLUG

Identical to No. 206 spring banana plug except that instead of threaded shank it has a female 6-32 thread. Supplied with soldering lug and 6-32 screw.

No. 212...............................LIST PRICE 12c

BANANA JACK

A standard banana jack made of nickel plated brass. Overall length ⅝". Fits ¼" hole in panel. Supplied with solder lug and nut.

No. 105............LIST PRICE 9c

INSULATED BANANA JACK

All metal parts are nickel plated brass. The high lustre insulated head is available in red, black, green and yellow. Fits ¼" hole in panels up to ⅜" thick. Supplied with solder lug, insulated washer and nut.

No. 107....LIST PRICE 15c

Insulated Combination Banana Plug & Phone Tip Jack

An insulated combination banana plug and phone tip jack made to fit our parts Nos. 206, 207, 202, 203, 208, 209, 210, 212, and 220. The phosphor bronze contact springs assure positive contact. Fits ¼" hole in panels up to ⅝" thick. The high lustre insulated head is available in red, black, green and yellow.

No. 108 LIST PRICE 20c

STANDARD PHONE TIP

A standard phone tip made of nickel plated brass. Used extensively for connections on head phone cords.

No. 220...........LIST PRICE, PER 100 $2.00

TEST PRODS • SHAFT COUPLINGS • CLIPS

TELEGRAPH APPARATUS CO.

AUTO ANTENNA CONNECTOR

Instantly Detachable

Comes apart by slight twist. Makes an ideal single contact shielded connector.

No. 402 **LIST PRICE 10c**

AUTO FUSE CONNECTOR

Used in the battery lead of auto radio for protection. Fits a 3AG type fuse.

No. 403 **LIST PRICE 14c**

Insulated Alligator Clips

Sturdy clips made with thin jaws, fine meshing teeth and strong spring to assure hard bite. Handles 1" long.

No. 333—Red **LIST PRICE 20c**

No. 334—Black **LIST PRICE 20c**

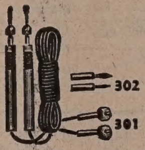
PANEL BEARING ASSEMBLY

The accurately reamed hole in bearing assures smooth, non-binding operation. Equipped with bowed spring washer which eliminates sliding forward and backward. Shaft is ¼" in diameter. Fits ⅜" hole in panels up to $\frac{1}{16}$" thick. Made of brass.

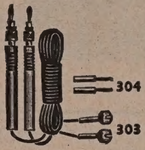
No. 1022—3" Shaft **LIST PRICE 35c**

No. 1023—6" Shaft **LIST PRICE 50c**

DE LUXE FINGER GRIP PHONO-NEEDLE AND PHONE TIP TEST LEADS



Needle Point

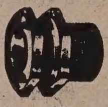


Phone Tip Point

A deluxe test lead set with a ribbed finger grip will eliminate fatigue and slipping. Made of high quality insulating material 6½" long, one each red and black. Supplied with a good grade of true kinkless wire 48" long. Available with phone tips or spade lugs on end as illustrated.

No.	Type	LIST PRICE PER SET
301	Spade lugs	$1.20
302	Phone tips	1.20
303	Spade lugs	1.20
304	Phone tips	1.20

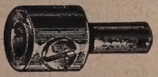
PANEL BEARING



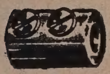
Accurately machined bearing made to fit ¼" shafts. Fits ⅜" hole in panels up to $\frac{1}{16}$" thick. Supplied with one mounting nut. Body made of brass.

No. 1021 **LIST PRICE 15c**

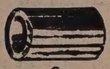
SHAFT EXTENDERS, COUPLINGS AND REDUCERS



A



B



C

EXTENDER FIG. A

Brass No.	Insulated No.	Hole Dia.	Shaft Dia.	Overall Length	List Price
1014	914	⅜	¼	1⅛	18c
1015	915	¼	¼	1⅛	18c
1017	917	¼	⅜	1⅛	18c

EXTRA LENGTH EXTENDER

1016		¼	¼	1¾	25c

COUPLING FIG. B

Brass No.	Insulated No.	Hole Dia.		Hole Dia.	Overall Length	List Price
1011	911	¼	to	⅜	¾	18c
1012	912	¼	to	¼	¾	18c

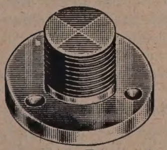
REDUCER FIG C.

No. 1009—Reduces a ⅜" hole to ¼" hole **LIST PRICE 10c**

BRASS AND FIBRE ¼" SHAFTING

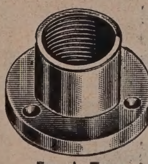
No. 1018—Brass 6" Long ¼" Dia. **LIST PRICE 20c**
No. 1019—Brass 12" Long ¼" Dia. **LIST PRICE 40c**
No. 1024—Fibre 6" Long ¼" Dia. **LIST PRICE 25c**
No. 1025—Fibre 12" Long ¼" Dia. **LIST PRICE 50c**

Microphone Base Flanges & Extension Rods



Male Type

New mike stand items for which there has long been a demand. With the male type Base Flange the microphone can be attached directly to the desk, table, pulpit, etc.



Female Type

	List Price
No. 515—Male Flange	**$0.75**
No. 516—Female Flange	**.75**

No. 517—6" Extension Rod	**$0.75**
No. 518—12" Extension Rod	**1.00**

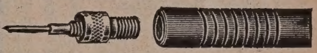
DE LUXE FINGER GRIP PHONO-TIP TEST PROD

REMOVABLE PHONO-NEEDLE CHUCK

A ribbed finger grip phono-tip test prod identical to the prod used in the De Luxe test lead at the left.

No.	Color	Length	LIST PRICE
311	Red	4½"	45c
312	Red	6½"	50c
313	Black	4½"	45c
314	Black	6½"	50c

DE LUXE FINGER GRIP SOLDERLESS TIP TEST PROD



Indentical to the above except prods are equipped with solderless phone tips.

No.	Color	Length	LIST PRICE
319	Red	4½"	45c
320	Red	6½"	50c
321	Black	4½"	45c
322	Black	6½"	50c

NEEDLE POINT TEST PRODS

REMOVABLE PHONO-NEEDLE CHUCK

Test prods are made of non-breakable extruded plastic and available in red and black. Chuck can be removed from prod as well as phono-needle from chuck. All brass parts are nickel plated.

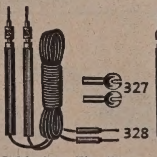
No.	Color	Length	List Price
315	Red	4"	35c
316	Red	6"	40c
317	Black	4"	35c
318	Black	6"	40c

SOLDERLESS TIP TEST PRODS

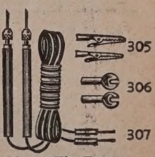
Identical to above except that test prods are equipped with solderless phone tips.

No.	Color	Length	List Price
323	Red	4"	35c
324	Red	6"	40c
325	Black	4"	35c
326	Black	6"	40c

PHONO-NEEDLE AND PHONE TIP TEST LEADS



Solderless Tip Type



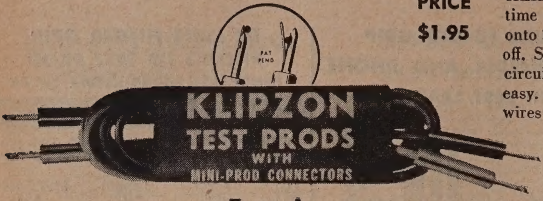
Phono Tip Type

Prods are made of non-breakable extruded plastic, 4" long, one each red and black. Supplied with rubber covered kinkless wire 48" long. Insulated for high voltage. Available with non-insulated phone tips, spade lugs or alligator clips as illustrated.

No.	Type	List Price
305	Alligator Clips	$1.10
306	Spade Lugs	1.00
307	Phone Tips	1.00
327	Spade Lugs	1.00
328	Phone Tips	1.00

UNITED TECHNICAL LABORATORIES
MORRISTOWN, N. J.

KLIPZON Products
SELF HOLDING PRODS
PROBES • ADAPTORS • MINI-PROD CONNECTORS

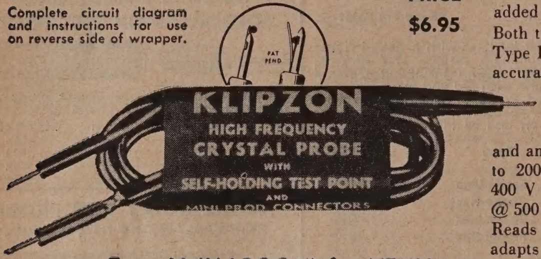


Type A

PRICE
$1.95

KLIPZON Type A Test Prods are designed for maximum time saving, convenience and safety. Self-holding jaws slip onto wires, lugs, terminals, and grip test points until pulled off. Streamlined, modern design adds minimum capacity to circuit; makes contact with inaccessible wires and terminals easy. Points fit into pin-jacks, sockets, binding posts; grip wires from finest to #12 B&S gauge. Points are needle sharp stainless steel in Duralumin holders. Handles, red and black, 4¾" long, of glossy Tenite. 4 ft., super-flexible rubber covered leads. With Type B Mini-prod Connectors as terminals. Solderless connection in handles.

Complete circuit diagram and instructions for use on reverse side of wrapper.

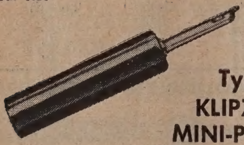


Type V (MAROON) for VTVM
Type C (BLACK) for VOM

PRICE
$6.95

KLIPZON Type V&C High Frequency Crystal Probes bring added versatility to laboratory and service test equipment. Both types include Self Holding KLIPZON Test Points and Type B Mini-prod Connectors as terminals. Type V provides accurate means of measuring V.H.F. voltages with a vacuum tube voltmeter. Germanium crystal in low capacity. high impedance circuit, supplies rectified voltage to DC input. Complete shielding reduces hand capacity and antenna effect to minimum. Completely insulated. Reads to 200 Mc with 10% accuracy. Input capacity 3.5 Mmf, 400 V DC rating. Input resistance (approx.) .25 Meg-ohms @ 500 Kc, 150,000 Ohms @ 10 Mc, 25,000 Ohms @ 100 Mc. Reads .707 × positive peak of sinusoidal voltage. Type C adapts volt-ohm-milliammeters for indication and comparison of V.H.F. voltages. Has Gernanium crystal and suitable network of resistance and capacity for connection to DC circuit of VOM, with at least 200 Micro-amp. sensitivity.

Actual Size



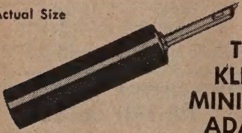
Type B
KLIPZON
MINI-PROD
CONNECTOR

PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type B Mini-prod Connectors, with self-holding points are designed for laboratory or service use where quick, easy to make, temporary test connections are needed. Equipped with various lead lengths they make handy test connectors that can be easily changed without shutting off power. Insures maximum safety in testing. Wiring made easy by solderless connection inside Tenite handle. Needle sharp points for piercing insulation and protective coatings.

Actual Size



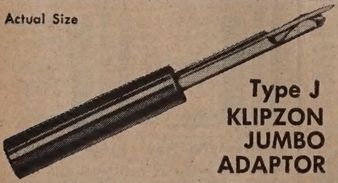
Type M
KLIPZON
MINI-PROD
ADAPTOR

PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type M Mini-prod Adaptors are designed to fit over old style test points and thereby convert them to New Style Self Holding Prods. Fits over usual R.M.A. standard test point directly, or over phonograph needle type with special insert supplied. Size is same as that of KLIPZON Mini-prod Connector.

Actual Size



Type J
KLIPZON
JUMBO
ADAPTOR

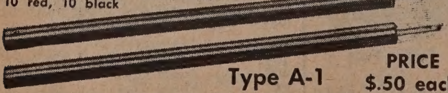
PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type J Jumbo Adaptors are designed to make the self-holding feature available for use on larger wires and terminals. Fits over regular KLIPZON Self Holding Point of Types A, V, or C. Will also fit over standard R.M.A. test points or phonograph needle type with special insert supplied. Suitable for wires up to #4 B&S ga., #12 machine screws and equivalent sized lugs and terminals.

In boxes of 20
10 red, 10 black

4¾" long



Type A-1
KLIPZON TEST PROD HANDLES

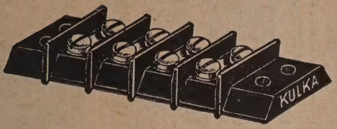
PRICE
$.50 each

KLIPZON Type A1 Test Prod Handles of glossy Tenite with self-holding points and solderless connection in handles, same as supplied with Type A Test Prods. Hole in handle accommodates up to .140" Dia. wire, 4¾" long. Designed for those who wish to wire up their own test prods.

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

HEAVY DUTY BAKELITE BARRIER TERMINAL STRIPS

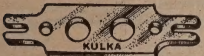


This latest type of construction of bakelite strip is made of molded bakelite of very high tensile strength. The barriers between each terminal prevent any possibility of short circuits and leakage between terminals. The terminals and screws are brass, nickel plated. The strips are manufactured by the KULKA ELECTRIC MFG. CO. INC., Design Patent No. 136, 762 and are exclusively distributed by us to the Radio Parts Distributors.

COLUMN A

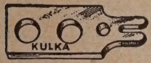
All the Barrier Terminal Strips enumerated in this column for the 600, 601, 602 and 603 series are made with the screw type terminals exactly as shown in the illustration at top of the page.

COLUMN B



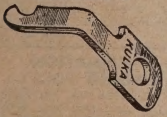
All the Barrier Strips enumerated in this column 600, 601, 602 and 603 series are supplied with the two-solder connection lug illustrated above.

COLUMN C



All the Barrier Strips enumerated in this column 600, 601, 602 and 603 series are supplied with the one-solder connection lug illustrated above.

COLUMN D



All the Barrier Strips enumerated in this column for the 600, 601 and 602 series are supplied with the bottom type connection lug illustrated above.

The 603 series of Barrier Strips not shown here are heavy duty strips with thick barriers and cross sections. They will take up to 35 amps of current and are ideal for heavy duty electrical control units such as spot welding machines, molding equipment, etc., or any place where a rugged heavy duty terminal block is needed for heavy amperage. Height: ¾″, Width: 1 13/16″ (incl. barrier), Terminals on Center: 11/16″, Base (thickness): 7/16″, Mounting Hole Spacing ⅝″ (has 3 holes), Screws: 10-32 x ⅜″ long with binding head.

No. 600 SERIES

Height 11/32″, Width ⅞″, Thickness ¼″. Terminals are ⅜″ on centers. Screws 5-40x¼″ long, Binding Head.

COL. A			COL. B			COL. C			COL. D		
No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
600-1	1	$0.15	600-ST-1	1	$0.19	600¾ST-1	1	$0.19	600-Y-1	1	$0.19
600-2	2	.24	600-ST-2	2	.32	600¾ST-2	2	.32	600-Y-2	2	.32
600-3	3	.33	600-ST-3	3	.44	600¾ST-3	3	.44	600-Y-3	3	.44
600-4	4	.42	600-ST-4	4	.57	600¾ST-4	4	.57	600-Y-4	4	.57
600-5	5	.51	600-ST-5	5	.69	600¾ST-5	5	.69	600-Y-5	5	.69
600-6	6	.59	600-ST-6	6	.83	600¾ST-6	6	.83	600-Y-6	6	.83
600-7	7	.68	600-ST-7	7	.95	600¾ST-7	7	.95	600-Y-7	7	.95
600-8	8	.77	600-ST-8	8	1.08	600¾ST-8	8	1.08	600-Y-8	8	1.08
600-9	9	.86	600-ST-9	9	1.21	600¾ST-9	9	1.21	600-Y-9	9	1.21
600-10	10	.95	600-ST-10	10	1.33	600¾ST-10	10	1.33	600-Y-10	10	1.33
600-11	11	1.03	600-ST-11	11	1.45	600¾ST-11	11	1.45	600-Y-11	11	1.45
600-12	12	1.12	600-ST-12	12	1.58	600¾ST-12	12	1.58	600-Y-12	12	1.58
600-13	13	1.21	600-ST-13	13	1.71	600¾ST-13	13	1.71	600-Y-13	13	1.71
600-14	14	1.31	600-ST-14	14	1.84	600¾ST-14	14	1.84	600-Y-14	14	1.84
600-15	15	1.40	600-ST-15	15	1.96	600¾ST-15	15	1.96	600-Y-15	15	1.96
600-16	16	1.49	600-ST-16	16	2.09	600¾ST-16	16	2.09	600-Y-16	16	2.09
600-17	17	1.57	600-ST-17	17	2.21	600¾ST-17	17	2.21	600-Y-17	17	2.21
600-18	18	1.66	600-ST-18	18	2.34	600¾ST-18	18	2.34	600-Y-18	18	2.34
600-19	19	1.75	600-ST-19	19	2.46	600¾ST-19	19	2.46	600-Y-19	19	2.46
600-20	20	1.84	600-ST-20	20	2.60	600¾ST-20	20	2.60	600-Y-20	20	2.60
600-21	21	1.93	600-ST-21	21	2.72	600¾ST-21	21	2.72	600-Y-21	21	2.72
600-22	22	2.02	600-ST-22	22	2.85	600¾ST-22	22	2.86	600-Y-22	22	2.86

No. 601 SERIES

Height ½″, Width 1⅛″, Thickness 5/16″. Terminals are 7/16″ on centers. Screws 6-32x¼″ long, Binding Head.

No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
601-1	1	$0.20	601-ST-1	1	$0.24	601¾ST-1	1	$0.24	601-Y-1	1	$0.24
601-2	2	.31	601-ST-2	2	.41	601¾ST-2	2	.41	601-Y-2	2	.41
601-3	3	.42	601-ST-3	3	.57	601¾ST-3	3	.57	601-Y-3	3	.57
601-4	4	.54	601-ST-4	4	.74	601¾ST-4	4	.74	601-Y-4	4	.74
601-5	5	.64	601-ST-5	5	.90	601¾ST-5	5	.90	601-Y-5	5	.90
601-6	6	.75	601-ST-6	6	1.07	601¾ST-6	6	1.07	601-Y-6	6	1.07
601-7	7	.88	601-ST-7	7	1.23	601¾ST-7	7	1.23	601-Y-7	7	1.23
601-8	8	.99	601-ST-8	8	1.40	601¾ST-8	8	1.40	601-Y-8	8	1.40
601-9	9	1.10	601-ST-9	9	1.56	601¾ST-9	9	1.56	601-Y-9	9	1.56
601-10	10	1.22	601-ST-10	10	1.73	601¾ST-10	10	1.73	601-Y-10	10	1.73
601-11	11	1.33	601-ST-11	11	1.89	601¾ST-11	11	1.89	601-Y-11	11	1.89
601-12	12	1.44	601-ST-12	12	2.06	601¾ST-12	12	2.06	601-Y-12	12	2.06
601-13	13	1.56	601-ST-13	13	2.22	601¾ST-13	13	2.22	601-Y-13	13	2.22
601-14	14	1.67	601-ST-14	14	2.39	601¾ST-14	14	2.39	601 Y-14	14	2.39
601-15	15	1.78	601-ST-15	15	2.55	601¾ST-15	15	2.55	601-Y-15	15	2.55
601-16	16	1.90	601-ST-16	16	2.72	601¾ST-16	16	2.72	601-Y-16	16	2.72
601-17	17	2.01	601-ST-17	17	2.88	601¾ST-17	17	2.88	601-Y-17	17	2.88
601-18	18	2.12	601-ST-18	18	3.05	601¾ST-18	18	3.05	601-Y-18	18	3.05
601-19	19	2.24	601-ST-19	19	3.21	601¾ST-19	19	3.21	601-Y-19	19	3.21
601-20	20	2.35	601-ST-20	20	3.38	601¾ST-20	20	3.38	601-Y-20	20	3.38
601-21	21	2.47	601-ST-21	21	3.55	601¾ST-21	21	3.55	601-Y-21	21	3.55
601-22	22	2.59	601-ST-22	22	3.72	601¾ST-22	22	3.72	601-Y-22	22	3.72
601-23	23	2.71	601-ST-23	23	3.89	601¾ST-23	23	3.89	601-Y-23	23	3.89

No. 602 SERIES

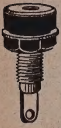
Height ⅝″, Width 1 5/16″, Thickness ⅜″. Terminals are 9/16″ on centers. Screws 8-32x5/16″ long, Binding Head.

No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
602-1	1	$0.23	602-ST-1	1	$0.30	602¾ST-1	1	$0.30	602-Y-1	1	$0.30
602-2	2	.36	602-ST-2	2	.50	602¾ST-2	2	.50	602-Y-2	2	.50
602-3	3	.51	602-ST-3	3	.70	602¾ST-3	3	.70	602-Y-3	3	.70
602-4	4	.65	602-ST-4	4	.90	602¾ST-4	4	.90	602-Y-4	4	.90
602-5	5	.78	602-ST-5	5	1.11	602¾ST-5	5	1.11	602-Y-5	5	1.11
602-6	6	.92	602-ST-6	6	1.31	602¾ST-6	6	1.31	602-Y-6	6	1.31
602-7	7	1.07	602-ST-7	7	1.52	602¾ST-7	7	1.52	602-Y-7	7	1.52
602-8	8	1.20	602-ST-8	8	1.72	602¾ST-8	8	1.72	602-Y-8	8	1.72
602-9	9	1.34	602-ST-9	9	1.93	602¾ST-9	9	1.93	602-Y-9	9	1.93
602-10	10	1.49	602-ST-10	10	2.12	602¾ST-10	10	2.12	602-Y-10	10	2.12
602-11	11	1.62	602-ST-11	11	2.33	602¾ST-11	11	2.33	602-Y-11	11	2.33
602-12	12	1.76	602-ST-12	12	2.53	602¾ST-12	12	2.53	602-Y-12	12	2.53
602-13	13	1.90	602-ST-13	13	2.74	602¾ST-13	13	2.74	602-Y-13	13	2.74
602-14	14	2.04	602-ST-14	14	2.94	602¾ST-14	14	2.94	602-Y-14	14	2.94
602-15	15	2.18	602-ST-15	15	3.15	602¾ST-15	15	3.15	602-Y-15	15	3.15
602-16	16	2.32	602-ST-16	16	3.34	602¾ST-16	16	3.34	602-Y-16	16	3.34
602-17	17	2.45	602-ST-17	17	3.54	602¾ST-17	17	3.54	602-Y-17	17	3.54
602-18	18	2.58	602-ST-18	18	3.74	602¾ST-18	18	3.74	602-Y-18	18	3.74
602-19	19	2.76	602-ST-19	19	3.99	602¾ST-19	19	3.99	602-Y-19	19	3.99
602-20	20	2.90	602-ST-20	20	4.20	602¾ST-20	20	4.20	602-Y-20	20	4.20
602-21	21	3.04	602-ST-21	21	4.41	602¾ST-21	21	4.41	602-Y-21	21	4.41
602-22	22	3.19	602-ST-22	22	4.62	602¾ST-22	22	4.62	602-Y-22	22	4.62
602-23	23	3.33	602-ST-23	23	4.83	602¾ST-23	23	4.83	602-Y-23	23	4.83
602-24	24	3.48	602-ST-24	24	5.04	602¾ST-24	24	5.04	602-Y-24	24	5.04
602-25	25	3.62	602-ST-25	25	5.25	602¾ST-25	25	5.25	602-Y-25	25	5.25
602-26	26	3.76	602-ST-26	26	5.46	602¾ST-26	26	5.46	602-Y-26	26	5.46

SMITH *Electronic Components*

HERMAN H SMITH, INC.

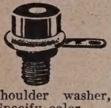
INSULATED PHONE TIP JACK



Accommodates all standard insulated and non-insulated phone tip plugs. Recommended for use with our Nos. 200 and 201 phone tip plugs. Available in Black, Red, Yellow and Green. Mounts in a 5/16" hole. Complete with insulating shoulder washer and nut. Specify color.

No.	Head Dia.	per C
202	7/16"	$20.00
223	½"	35.00

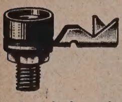
INSULATED BANANA JACK



Accommodates all standard banana type plugs. Mounts in a 5/16" hole in panels up to ⅜" thick. Insulated head 7/16" dia. available in Black, Red, Yellow and Green. Complete with insulated shoulder washer, soldering lug, and nut. Specify color.

No. 205 ....**$20.00 per C**

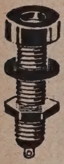
INSTRUMENT BANANA JACK



Made of brass, nickel plated. Jack receptacle countersunk to accept all standard Banana type plugs for a snug and positive contact. Insulated head ½" diameter, supplied complete with insulating washer, lock washer, heavy duty soldering lug and nut. Available in Black, Red, Yellow and Green. Specify color.

No. 219 ....**$22.00 per C**

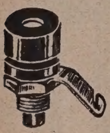
INSULATED COMBINATION JACK



This combination jack accommodates all standard plugs, of the phone tip type or banana type construction. Mounts in a 5/16" hole in panels up to ½" thick. Overall length 1⅜". Complete with insulating shoulder washer and nut. Insulated head available in Black, Red, Yellow and Green. Specify color.

No. 206 ....**$25.00 per C**

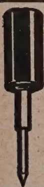
INSULATED MIDGET BANANA JACK



Accommodates all standard banana type plugs. Mounts in a 5/16" hole in panels up to ¼" thick. Supplied with soldering lug; overall length 13/16". The insulated head as well as the washer insulates the body of the jack from the panel to prevent possibility of shock or grounding. Insulated head ⅜" diameter. Available in Black, Red, Yellow and Green colors. Specify color.

No. 221 ....**$30.00 per C**

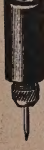
INSULATED PHONE TIP PLUG



Insulated sleeve ¾" long, overall length 1¾", cable opening 3/16". Available in Black, Red, Yellow and Green. Phone tip plugs into all standard phone tip jacks, and insulated sleeve so designed to accommodate all standard banana type plugs.

No. 215 ....**$25.00 per C**
No. 125 .... **13.00 per C**
(Tip Only)

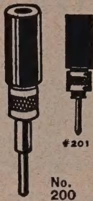
INSULATED NEEDLE TIP PLUG



Insulated sleeve ¾" long, overall length 2⅛", cable opening 3/16". Availebl in Black and Red. Body of plug accommodates all standard banana type plugs. The sharp needle point phone tip will pierce through corrosion for positive contact.

No. 216 ....**$25.00 per C**

INSULATED SOLDERLESS TIP PLUGS



Insulated sleeve ¾" long, cable opening 3/16". Available in Black, Red, Yellow and Green. Fits all standard phone tip jacks. Wire fits through sleeve of plug, and is wrapped around screw portion, then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

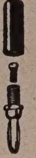
No.	Length	Per C
200	1 15/16"	$23.00
201	1⅝"	23.00

FIBRE HANDLE SOLDERLESS PLUGS

Same as above except handles are of Vulcanized Fibre.

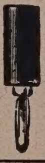
No.	Length	Per C
230	1 15/16"	$23.00
231	1⅝"	23.00

INSULATED SOLDERLESS BANANA PLUGS



Spring type construction designed to fit all types of banana jacks. Plug portion made of Hexagon brass, designed to set into our No. 219 Banana Jack described above. Small machine screw stud screws into rear of plug so that wire can be wrapped around and tightened without soldering. All external set screws removed to prevent possibility of shock or grounding. Insulated handle 1" long, overall length 1 15/16", cable opening 9/16". Available in Black, Red, Yellow and Green. Specify color.

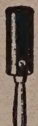
No. 212 ....**$30.00 per C**



Spring type construction with machine screw stud. Same as described above except that plug portion is not Hexagon but made of round brass. Insulated handle ¾" long, overall length 1½", cable opening 3/16". Available in Black, Red, Yellow and Green. Specify color.

No. 211 ....**$25.00 per C**

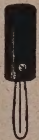
INSULATED BANANA PLUG
Spring Type



Fits all standard banana type jacks. Set screw provided in side of plug to secure wire to plug without soldering. Insulated sleeve ⅞" long available in Black, Red, Yellow and Green. Overall length 1⅝", cable opening 3/16". Specify color.

No. 204 ....**$25.00 per C**

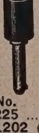
INSULATED BANANA PLUG
Split Type



Banana plug is of split type construction. Insulated handle ⅞" long. Set screw provided in side of plug, to secure wire to plug without soldering. Overall length 1½", cable opening 3/16". Available in Black, Red, Yellow and Green, Specify color.

No. 213 .... **$20.00 per C**

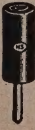
INSULATED PHONO PIN PLUG



The pin of this plug is the type normally used on phono combinations and this plug is used where grounding of plug is not required. Plug is brass nickel plated and is hollow for easy soldering. Handle 1" long, overall length 1 1/16".

No.		Per C
225		$15.00
1202	(Pin Only)	4.00

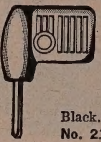
INSULATED SHORT PHONE TIP



Fits all standard phone tip jacks of the insulated or non-insulated types. Insulated sleeve ¾" long, overall length 1¼", cable opening 3/16". Available in Black, Red, Yellow and Green. Specify color.

No. 203 ....**$20.00 per C**

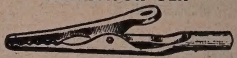
MODED METER TIP PLUG



Molded Meter Type Plug molded in two halves for easy assembling with screw and nut. Brass nickle plated tip fits in all standard tip jacks. Available in Red and Black. Specify color.

No. 235..........................**$0.55 Each**

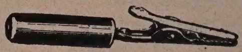
ALLIGATOR CLIP



Clips are made so that the jaws match accurately, permitting them to grip all sizes wire securely. The barrel of clip will accommodate all standard banana type plugs. Made of steel, cadmium plated. Overall length 2".

No. 300 ....**$10.00 per C**

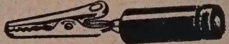
INSULATED ALLIGATOR CLIP



Embodies our No. 300 Alligator Clip. Insulated handle ¾" long and will accommodate all standard banana type plugs. Insulated handle available in Black and Red colors. Specify color required.

No. 301 ....**$25.00 per C**

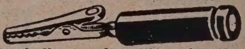
ALLIGATOR CLIP PHONE TIP JACK



Insulated alligator clip with phone tip jack in rear of handle. The jack portion will accommodate all standard phone tip plugs. Handle 1" long, overall length 2⅝". Available in Black and Red colors. Specify color.

No. 304 ....**$50.00 per C**

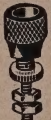
ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip with combination jack in rear of handle. Jack will accommodate standard phone tip plugs or banana plugs. Handle 1 9/16" long, overall length 3". Available in Black and Red colors. Specify color.

No. 305 ....**$60.00 per C**

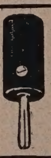
COMBINATION BINDING POST



Knurled insulated head binding post. Top of post accommodates standard banana plugs. Hole in side of stud accommodates any standard phone tips. Length 1⅜" overall with head open, 1¼" with head closed, 6-32 x ½" long stud supplied with 2 hex nuts. Black and Red. Specify color.

No. 220 ....**$40.00 per C**

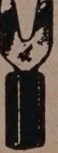
INSULATED BANANA PLUG



Insulated handle ½" O.D. x 1" long. Set screw provided in side of plug to secure wire to plug without soldering. Overall length 1 9/16", cable opening 9/32". Available in Black and Red. Specify color.

No.	Desc.	Per C
233	Split Type	$75.00
234	Spring Type	75.00

INSULATED SPADE LUG



Insulated sleeve ⅜" diameter, ¾" long, overall length 1⅝", cable opening 3/16". Available in Black and Red. Barrel of the insulated sleeve accommodates all standard type banana plugs.

No.	Type	Per C
218	Insulated Lug	$18.00
129	Lug only	2.00

SMITH *Electronic Components*

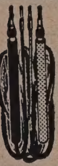
HERMAN H SMITH, INC.

INTERCHANGE KIT

Laboratory and Serviceman's inter-change kit converts any standard banana plug to a phone tip, and standard phone tip to a banana plug and enables the use of an alligator clip or a spade lug when required. Consists of one red and black each insulated solderless phone tips, spade lugs, combination alligator clip jack and combination banana plug. The jack in the rear of the insulated alligator clip will accommodate either a banana plug or a phone tip. The jack in the rear of the banana plug accommodates a phone tip. The solderless phone tips are so constructed that the rear will accommodate a banana plug. The rear of the insulated spade lug will also accommodate a banana plug.

No. 640 ....**$3.25 each**

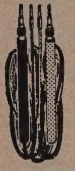
TEST LEADS WITH SOLDERLESS TIPS



Fibre handles colored Red and Black, 4″ long x ⅜″ diameter. Flexible rubber covered wire leads 50″ long also colored Red and Black. Available with standard phone tips, spade lugs or alligator clips.

No.	Type	Per Pr.
600	Phone Tips	$1.30
601	Spade Lugs	1.30
602	Alligator Clips	1.40

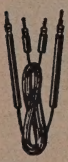
PHONO NEEDLE TEST LEADS



Fibre handles colored Red and Black, 4″ long x ⅜″ diameter Tips are very sharp phonograph needles. Flexible rubber covered wires 50″ long also colored Red and Black. Available with standard phone tips, spade lugs, or alligator clips.

No.	Type	Per Pr.
613	Phone Tips	$1.30
614	Spade Lugs	1.30
615	Alligator Clips	1.40

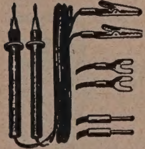
ALL SOLDERLESS TEST LEADS



The insulated handles and the insulated plugs are both of the solderless type construction. Insulated handles, Red and Black, are our No. 302, and the plugs are our No. 200. Flexible rubber covered wire leads 50″ long.

No. 603 ....**$1.95 per pr.**

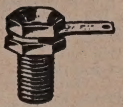
HIGH TENSION TEST LEADS



Sturdy, attractive test leads with heavy duty probes, and 48″ of quality high tension kinkless rubber-covered test lead wire with heavy insulation, .248 outside diameter. Supplied with insulated solderless type phone tips, insulated spade lugs or insulated alligator clips. Voltage breakdown (60 cycles), 22,000 volts.

No.	Type	Per Pr.
620	Phone Tips	$3.00
621	Spade Lugs	3.00
622	Alligator Clips	3.60

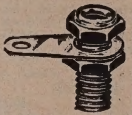
BANANA PLUG JACK



Recommended as the mate for the No. 100 Banana type plug, but will accommodate all standard banana type plugs. Jack is made of brass, heavily nickel plated overall. Mounts in a ¼″ hole and will fit in panels up to ⅞″ thick. Jack is furnished with ¼-32 nut and soldering lug.

No. 101......................................**$15.00 per C**

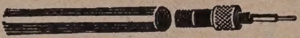
BANANA PLUG JACK



Will accommodate all standard banana type plugs and specially recommended as the mate for Nos. 103 and 104 banana plugs. Made of brass, nickel plated, and mounts in ¼″ hole in panels up to ⅜″ thick. Supplied with nut and soldering lug.

No. 109 ....**$15.00 per C**

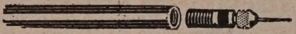
SOLDERLESS TEST PRODS



Insulated handles, available in Black and Red colors. The wire is fed through the insulated handle and is wrapped around the screw portion of the plug and then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

No.	Overall Length	Each
302	5¼″	$0.45
303	6¾″	.50

PHONO NEEDLE TEST PRODS



Insulated handles available in Black and Red colors. Wires can be assembled to the metal tip by unscrewing the tip from the prod handle. Removable chuck for replacing broken needles. Specify color.

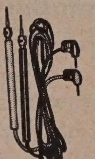
No.	Overall Length	Each
317	5″	$0.45
318	6⅜″	.50

FIBRE TEST PRODS

Handles are made of fibre ⅜″ O.D. x 4″ long and can be obtained with either solderless tips or phono needle tips. The fibre handles are available in black or red. Specify color.

No.	Type	Each
323	Solderless Tip	$0.35
324	Needle Point	.35

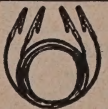
METER TIP TEST LEAD



Test Leads with 50″ rubber covered kinkless test lead wire. Molded Plastic fingertip tips on one end and 5″ plastic test prod handles on other end. Supplied in two types, solderless tip or needle tip prod handles.

No.	Type	Per Pr.
625	Solderless Prods	$2.25
626	Needle Tip Prods	2.25

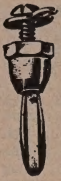
ALLIGATOR CLIP TEST LEADS



Made of very flexible Red and Black wire with alligator clips at each end.

No.	Wire Length	Per Pr.
604	12″	$0.85
605	24″	.95
606	36″	1.10
607	48″	1.20

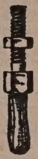
BANANA TYPE PLUG



This plug is hexed brass, nickel plated. The spring is made of phosphor bronze assuring positive and lasting contact. Plug is constructed with a 6-32 female thread inside and is supplied with a 6-32 screw and soldering lug.

No. 100 ....**$20.00 per C**

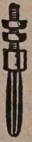
SPLIT TYPE BANANA PLUG



Made of hexed brass, heavily nickel plated overall. Will fit all standard banana type jacks. Overall length 1¼″. Threaded portion 6-32 x ½″ long. Supplied with two 6-32 hexagon nuts.

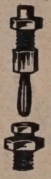
No. 104 ....**$20.00 per C**

BANANA TYPE PLUG
Spring Type



Plug and spring are made of brass, nickel plated. The spring type of construction assures positive and lasting contact. Plug is threaded 6-32 and the threaded portion is ½″ long. Supplied with two 6-32 hexagon nuts.

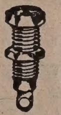
MIDGET PLUGS AND JACKS
Banana Type



Midget banana type lugs and jacks, for use where a minimum amount of space is available. Both plugs and jacks made of brass, nickel plated. A hexagon nut is provided with each plug and jack.

No.	Item	Per C
111	Plug	$15.00
112	Jack	12.00

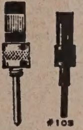
PHONE TIP JACK



Will accommodate all standard phone tip plugs of insulated and non-insulated types. Made of brass, nickel plated. Mounts in a ¼″ dia. hole in panels up to ⅜″ thick, and is supplied with hexagon nut.

No. 107 ....**$15.00 per C**

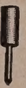
SOLDERLESS PHONE TIPS



These tips are constructed so that the wire fits through the body of the tip, and is wrapped around the screw portion, and tightened with the knurled nut provided, making soldering unnecessary.

No.	Length	Per C
105	1⅝″	$16.00
106	1⅛″	16.00

SOLDER TYPE PHONE TIPS



Made of brass, nickel plated. Overall length 1″. Dia. of tip will fit all standard phone tip jacks.

No. 108 ....**$30.00 per M**

LARGE DIAMETER PHONE TIP

Material of Brass and Nickel-plated finish. The barrel is drilled extra large to accommodate heavy wire. Diameter hole ⅛″ — length of barrel ½″ and overall length 1″.

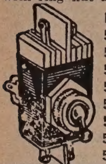
No. 123 ....**$40.00 per M**

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

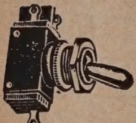
TEAR DROP TOGGLE SWITCHES

Laminated type. Made by H & H, rated at 1 amp. 250 volts, 3 amps. 125 volts. SPST switches rated at 3 amps. 250 volts, 6 amps. 125 volts. Switches nickel plated; supplied with ring nut and mounting nut.



No.	Type	Shaft	Each
500	SPST	15/32″	$0.75
501	SPST	1″	1.00
502	SPDT	15/32″	1.00
503	SPDT	1″	1.20
504	DPST	15/32″	1.40
505	DPST	1″	1.60
506	DPDT	15/32″	1.60
507	DPDT	1″	1.85

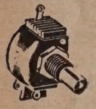
BAT HANDLE TOGGLE SWITCHES



Laminated type. Made by H & H, rated at 1 amp. 250 volts, 3 amps. 125 volts. SPST switches rated at 3 amps. 250 volts, 6 amps. 125 volts. Switches nickel plated; supplied with ring nut and mounting nut.

No.	Type	Shaft	Each
510	SPST	15/32″	$0.75
511	SPDT	15/32″	1.00
512	DPST	15/32″	1.40
513	DPDT	15/32″	1.60

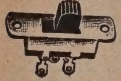
ROTARY TOGGLE SWITCHES



Made by H & H, rated at 1 amp., 250 volts, 3 amps. 125 volts. Switches nickel plated; supplied with mounting nut. Threaded shank ⅜″ O.D. x ⅜″ long. Overall length of shaft 1½″.

No.	Type	Each
570	SPST	$1.00
571	SPDT	1.20
572	DPST	1.50
573	DPDT	1.85

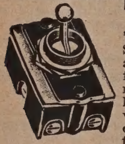
SLIDE LEVER SWITCHES



Rated 1½ amps. 110 volts. Size 1⅜″ x ½″. Mounting centers 1⅛″.

No.	Type	Each
515	SPST	$0.35
516	SPDT	.40
517	DPST	.50
518	DPDT	.55

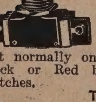
HEAVY DUTY POWER SWITCHES



These Heavy Duty Power Switches made by H & H and specially recommended for use in amplifiers, transmitters, motors and all heavy current circuits where heavy current is carried. Available in 3 types with neutral off in center position. Rated at 10 amps, 125 volts; 5 amps., 250 volts. Measures 2″ long, 1″ high, 2¼″ wide, mounting sleeve diameter ¾″.

No.	Type	Each
574	DPDT	$6.25
575	TPDT	8.25
576	4PDT	12.00

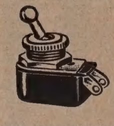
PUSH BUTTON MOMENTARY SWITCH



Slow make and break switch made by H & H. Laminated type, solder lug. Circuit normally "OFF," push to make. 9/16″ slotted sleeve, rated at 1 amp., 125 volts. The two circuit switch has one circuit normally on, one circuit normally off. Black or Red buttons available for both switches.

No.	Type	Each
579	SPST	$0.90
580	Two Circuit	1.40
581	Button only	.35

SMALL MOLDED TOGGLE SWITCH

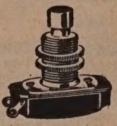


Small molded toggle switch made by H & H rated at 3 amps., 250 volts, 15/32″ shank. Solder lugs; supplied with hex mounting nut and ring nut.

590 SPST Ball Handle Each $0.60

591 SPST Bat Handle Each $0.60

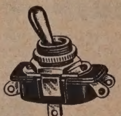
MOMENTARY PUSH BUTTON SWITCH



Momentary contact A.C. Push Button Switches. Molded type with soldering lug. Rated at 1 amp. 125 volts. Normally "OFF," push to make, release to break. 15/32″ shank.

No.	Type	Each
540	SPST	$0.80
541	SPDT	.85
542	DPST	.90
543	DPDT	1.30

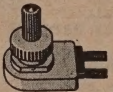
DPDT CENTER OFF SWITCH



Bat handle toggle switch rated at 1 amp. — 125 volts with center "OFF" position. Lug terminals, 15/32″ brass nickle plated shaft. Can be used for switching to either high or low frequency antenna on TV receivers.

No. 565 $1.45 each

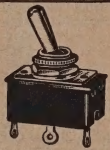
CANOPY SWITCH



Rated at 3 amps. 125 volts, 1 amp. 250 volts. Supplied with 6″ leads. C.S.A. approved.

No. 585 $0.45 each

MOLDED BAKELITE SWITCHES



Made by H & H, rated at 3 amps. 250 volts, 6 amps. 125 volts, with bat handle. Back connected silver plated contacts. Slotted sleeve.

No.	Type	Shaft	Each
520	SPST	15/32″	$1.10
521	SPDT	15/32″	1.25
522	DPST	15/32″	1.70
523	DPDT	15/32″	2.00

MOLDED BAKELITE MOMENTARY SWITCHES

Same as above except switches are momentary type with circuit normally "OFF."

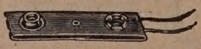
No.	Type	Shaft	Each
524	SPST	15/32″	$1.60
525	DPDT	15/32″	2.50

NAME PLATES

Brass nickel plated name plates to fit all standard 15/32″ sleeves.

No.	Type	Per C
508	ON-OFF	$5.50
509	HI-LOW	5.50

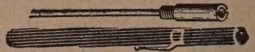
MINI-MAX CONNECTING STRIP



This fastening connecting strip is spaced so that it will snap into all 67½ volt mini-max "B" batteries such as Eveready Nos. 455, 466 and Burgess Nos. XX30, XX45.

No. 1205 ....$30.00 per C

NEUTRALIZING AND ALIGNMENT TOOL

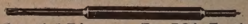


A complete, fully insulated neutralizing tool, screw driver and wrench combination. The fibre wrench portion has a ¼″ hexed socket on one end and a 5/16″ hexed socket on the other end. A ¼″ metal screw driver nib on the inside portion of the tool fits into the fibre tube itself.

No. 320 ....$1.00 each

No. 700—Display of 12 No. 320 Tools $12.00 each

ALIGNING TOOL



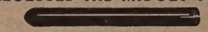
For Peanut I.F.'s For RCA Front End For "K" Tran. Transformers

Slender, yet sturdy, this tool is specially adapted for aligning peanut I.F.'s and the difficult-to-get-at front end of some receivers. Available in bulk or on attractive display card.

No. 326 ....$0.90 each

No. 778—Display of 24 No. 326 Tools $21.60 each

RECESSED NIB MIDGET TOOL

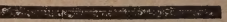


This recessed nib aligning tool is another essential for television servicing. Constructed from fibre with thin recessed nib for slug tuning. Only 2½″ long, it makes those hard-to-get-at slugs accessible while chassis is still in cabinet. Available in bulk or on attractive display card.

No. 327 ....$0.60 each

No. 779—Display of 48 No. 327 Tools $28.80 each

METAL NIB ALIGNING TOOL

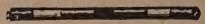


Fibre handle 7/32″ dia. x 6″ long, and fitted with a screw driver nib for aligning of coils, padding condensers, etc.

No. 321 ....$0.45 each

No. 776—Display of 24 No. 321 Drivers $10.80 each

DOUBLE NIB ALIGNING TOOL

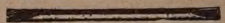


This tool is especially designed for aligning push-button receivers and for adjusting iron core I.F. transformers and R.F. coils. There is a recessed screw driver nib on one end and a screw driver blade on the other. Both ends knurled for easy grip.

No. 325 ....$0.90 each

No. 777—Display of 24 No. 325 Tools $21.60 each

FIBRE ALIGNMENT SCREW DRIVERS



Made of bone hard fibre 7/32″ O.D. x 7″ long.

No. 307 ....$0.45 each

No. 701—Display of 24 No. 307 Drivers $10.80 each

"VERI-THIN" ALIGNING TOOL

Fibre aligning tool 7″ long x ⅛″ O.D. with screw driver on each end. Because of its "Veri-Thin" O.D. this tool can make adjustments on all TV receivers.

No. 328 ....$0.40 each

No. 782—Display of 36 No. 328 Tools $12.60 each

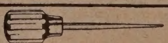
"LONG REACH" ALIGNING TOOL

Aligning tool 9″ long x .165 O.D. with screw driver on each end. Long enough and thin enough to make adjustment on any TV receiver. Material of treated clear lucite.

No. 330 ....$0.60 each

No. 783—Display of 36 No. 330 Tools $21.60 each

SCRATCH AWL



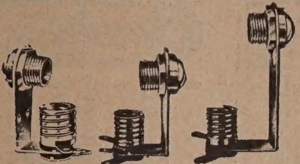
Scratch awl with unbreakable amber handle. Overall length 5″. A "must in a serviceman's tool kit"

No. 814 ....$0.55 each

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

PANEL INDICATOR ½ INCH JEWEL



These panel indicator assemblies are available in candelabra, miniature screw, or bayonet base sockets. Jewel holder made of brass, nickel plated. Jewel mounts in a single 7/16″ dia. hole. Candelabra and bayonet base types can also be secured with a universal adjustable bracket for use where more accurate focus of the jewel to lamp filament is required. Facetted jewel available in Red, Green, Amber, Blue, Opal and Clear colors.

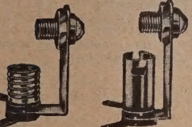
No.	Type	Each
1900	Miniature Screw Socket	$0.45
1901	Candelabra 110 Volt	.55
1902	Candelabra 110 Volt with Universal Bracket	.58
1903	Bayonet Base	.45
1904	Bayonet Base with Universal Bracket	.50

PANEL INDICATOR ¾ INCH JEWEL

Available with candelabra, miniature bayonet base, and miniature screw type sockets. Jewel holder is made of brass, nickel plated. Jewel mounts in a single 11/16″ dia. hole. Facetted jewels available in Red, Green, Amber, Blue, Opal and Clear colors.

No.	Type	Each
1905	Miniature Screw Socket	$0.95
1906	Miniature Bayonet Base	1.00
1907	Candelabra Socket	1.00

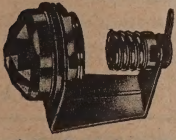
PANEL INDICATOR ⅜ INCH JEWEL



Available with miniature screw, min. bayonet base, or candelabra type sockets. Jewel holder made of brass, nickel plated. Jewel mounts in a single 5/16″ dia. hole. Facetted jewels available in Red, Green, Amber, Blue, Opal and Clear colors.

No.	Type	Each
1908	Miniature Screw Socket	$0.50
1909	Miniature Bayonet Base	.50

1 INCH OPEN TYPE PANEL INDICATOR

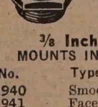


Jewel Removable from Front of Panel

This type of panel indicator has the added feature of being able to remove bulb from front of panel. Jewel holder made of brass, chromium plated finish. Jewel mounts in single 1″ dia. hole. The embossed rib in center of bracket supplies additional strength, assuring perfect alignment. Available in three types: Miniature screw, Miniature bayonet and Candelabra type sockets. Facetted jewels available in the following colors: Red, Green, Amber, Blue, Opal, and clear colors.

No.	Type	Each
1917	Miniature Screw Socket	$1.60
1918	Miniature Bayonet Base	1.60
1919	Candelabra	1.70

GLASS JEWELS



Jewels are available in Red, Green, Amber, Blue, Opal and Clear colors in smooth or facetted types.
Jewel holders are brass, nickel plated, and are supplied with mounting nut.

⅜ Inch Jewel
MOUNTS IN 5/16″ HOLE

No.	Type	Each
1940	Smooth	$0.25
1941	Facetted	.25

½ Inch Jewel
MOUNTS IN 7/16″ HOLE

No.	Type	Each
1911	Smooth	$0.30
1912	Facetted	.30

¾ Inch Jewel
MOUNTS IN 11/16″ HOLE

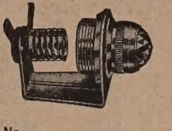
No.	Type	Each
1913	Smooth	$0.70
1914	Facetted	.70

1 Inch Jewel
MOUNTS IN 1″ HOLE

No.	Type	Each
1915	Smooth	$1.25
1916	Facetted	1.25

½ INCH OPEN TYPE PANEL INDICATOR

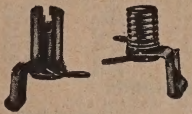
Jewel Removable from Front of Panel



Jewel holder made of brass, nickel plated. Mounts in a single 11/16″ dia. hole. The embossed rib in center of bracket gives additional strength and assures perfect alignment. The bulb is easily removable from front of panel. Available in Miniature screw or Miniature bayonet base sockets, with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors.

No.	Type	Each
1920	Miniature Screw Socket	$0.70
1921	Miniature Bayonet Base Socket	.70

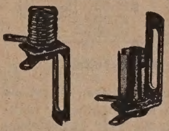
CLIP-ON TYPE PILOT LIGHT SOCKETS



This type of socket is available with clip up or down, and can be used by clipping on to variable condenser or chassis. This design socket is made with miniature screw base, miniature bayonet base, or candelabra 110 V. types. All brackets are cadmium plated.

No.	Type	Per C
1922	Miniature Screw Up Clip	$14.50
1923	Miniature Screw Down Clip	14.50
1924	Miniature Bayonet Up Clip	16.50
1925	Miniature Bayonet Down Clip	16.50
1926	Candelabra Up Clip	18.75
1927	Candelabra Down Clip	18.75

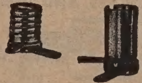
BRACKET TYPE PILOT LIGHT SOCKETS



Available with an up or down type of bracket for miniature screw type, miniature bayonet base, and candelabra 110 Volt type sockets. Brackets are steel, cadmium plated.

No.	Type	Per C
1928	Miniature Screw Up Bracket	$14.50
1929	Miniature Screw Down Bracket	14.50
1930	Miniature Bayonet Up Bracket	16.50
1931	Miniature Bayonet Down Bracket	16.50
1932	Candelabra Up Bracket	18.75
1933	Candelabra Down Bracket	18.75

UNMOUNTED TYPE SOCKETS



These unmounted sockets can be secured for the miniature screw shell, miniature bayonet base or for the candelabra 110 Volt types of sockets.

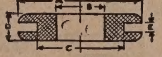
No.	Type	Per C
1934	Miniature Screw Base	$14.50
1935	Miniature Bayonet Base	13.50
1936	Candelabra 110 Volt	15.50

CLIP-IN SOCKET

This clip-in socket is of the bayonet base type construction, and is assembled with two solder lugs. The special clip in bracket is steel, cadmium plated, and is designed to clip into the dial directly.

No. 1938..$15.50 per C

RUBBER GROMMETS

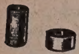


A: Outside Dia.; B: Inside Dia.; C: Panel Hole; D: Thickness Over-all; E: Panel Thickness.

No.	A	B	C	D	E	Per C
2185	5/16″	⅛″	¼″	3/16″	1/16″	$2.20
2171	⅜″	11/64″	5/16″	¼″	1/16″	2.35
2172	7/16″	3/16″	5/16″	3/16″	1/16″	3.30
2176	½″	7/32″	⅜″	3/16″	1/16″	3.30
2170	⅝″	¼″	⅜″	⅜″	1/16″	3.85
2173	5/16″	9/32″	11/32″	¼″	1/16″	3.30
2174	⅝″	5/16″	7/16″	¼″	1/16″	3.60
2175	11/16″	5/16″	½″	¼″	1/16″	3.85
2177	¾″	7/16″	9/16″	¼″	1/16″	3.60
2186	1 1/16″	½″	¾″	5/16″	1/16″	4.95
2187	1 ⅛″	⅝″	⅞″	5/16″	1/16″	5.20
2188	1 1/16″	9/16″	13/16″	5/16″	1/16″	5.50
2189	1″	¾″	⅞″	5/32″	1/32″	5.50

SMITH *Electronic Components*

HERMAN H. SMITH, INC.



BRASS BUSHINGS

These brass bushings art ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a No. 6 or No. 8 screw.

For No. 6			For No. 8	
No.	Per C	Length	No.	Per C
		¼″ O.D.		
2100	$5.00	¼″	2105	$5.00
2101	6.50	⅜″	2106	6.50
2102	8.00	½″	2107	8.00
2103	9.50	¾″	2108	9.50
2104	11.00	1″	2109	11.00
		⅜″ O.D.		
2110	$8.00	¼″	2115	$8.00
2111	9.50	⅜″	2116	9.50
2112	11.00	½″	2117	11.00
2113	12.50	¾″	2118	12.50
2114	14.00	1″	2119	14.00

INSULATED BUSHINGS

For No. 6		¼″ O.D.	For No. 8	
No.	Per C	Length	No.	Per C
2130	$6.00	¼″	2140	$6.00
2131	6.75	⅜″	2141	6.75
2132	7.00	½″	2142	7.00
2133	9.00	¾″	2143	9.00
2134	10.75	1″	2144	10.75

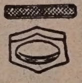
THREADED BRASS BUSHINGS

Brass bushings ¼″ O.D. Threaded 6-32 and 8-32.

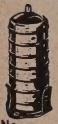
Threaded 6-32			Threaded 8-32	
No.	Per C	Length	No.	Per C
2120	$6.00	¼″	2125	$6.00
2121	7.50	⅜″	2126	7.50
2122	9.00	½″	2127	9.00
2123	11.00	¾″	2128	11.00
2224	12.50	1″	2129	12.50

VOLUME CONTROL AND TOGGLE NUTS

Brass Nickel Plated



No.	Type	Dimensions	Per M
1195	Volume Control	⅜-32 x ½ x 3/32	$21.00
1196	Toggle Switch	15-32 x 9/16 x 5/64	30.00
1197	Toggle Ring Nut	15-32 x ⅝ x 1/16	30.00

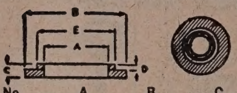


MINI-SHIELDS FOR MINI-TUBES

These Mini-Shields fit snugly on all Mini-Tubes. Serrations in base clip prevent shielded tube from joggling or working loose. Available in two sizes for 1½″ and 2″ long tubes.

No.	Type	Over-all Length	Per C
550	For 2″ Tube	1¾″	$13.00
551	For 1½″ Tube	1¼″	11.00
553	3-Prong Base Clip		5.50
554	Single Clips		3.30

FIBRE SHOULDER WASHERS



A. Inside Diameter
B. Outside Diameter
C. Thickness Over-all
D. Height of Shoulder
E. Diameter of Shoulder

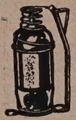
No.	A	B	C	D	E	Per M
2150	.140	.375	.098	.031	.237	$11.50
2151	.110	.250	.062	.031	.187	9.50
2152	.136	.250	.093	.031	.187	10.00
2153	.136	.312	.093	.031	.187	11.00
2154	.250	.500	.068	.028	.312	12.00
2155	.172	.375	.093	.031	.246	11.00
2156	.196	.375	.093	.031	.308	11.00
2157	.375	.750	.093	.031	.500	14.50
2158	.385	.625	.093	.031	.500	14.00

FLAT FIBRE WASHERS

No.	I.D.	O.D.	Thickness	Per M
2160	.136	.250	1/16	$9.50
2161	.110	.250	1/16	9.50
2162	.140	.375	1/16	9.50
2163	.172	.375	1/16	8.50
2164	.196	.375	1/16	8.50
2165	.250	.500	1/16	8.50
2166	.250	.500	3/32	9.00
2167	.312	.500	1/16	9.50
2168	.385	.625	1/16	9.00
2169	.375	.750	1/16	14.00

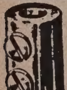
MINI-SPRING FOR MINI-TUBES

For Table Radios • Electronic Equipment Radio Receivers



The Mini-Tube guard gives support to the Mini-Tube in two ways. It maintains a direct axial pressure downward plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently.

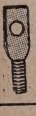
No.	Type	Per C
560	Short	$13.50
561	Medium	13.50
562	Long	13.50
563	9-Prong	13.50



BRASS AND INSULATED COUPLINGS

Available in both brass and insulated material. Overall length ¾″. O.D. 7/16″. Set screws are provided in coupling for tightening to shaft.

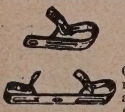
No.	Type	Material	Each
120	¼″-¼″	Brass	$0.25
140	¼″-¼″	Insulated	.25
131	⅜″-¼″	Brass	.25
141	⅜″-¼″	Insulated	.25
133	⅜″-⅜″	Brass	.25
142	⅜″-⅜″	Insulated	.25



STEEL SPADE BOLTS

Steel, cadmium plated finish, threaded 6-32, thread length 5/16″, length overall ¾″.

No. 15000......................**$11.00 per M**

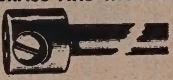


FAHNESTOCK SPRING BATTERY CLIPS

Clips are made of brass, nickel plated and are available in the single and double clip types.

No.	Type	Length	Per C
533	Single	¾″	$1.80
534	Single	1″	2.20
535	Double	1½″	10.00
536	Double	2 1/16″	11.00

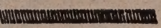
BRASS AND INSULATED EXTENDERS



Extra long extenders in either brass or insulated material. Suitable for use on amplifiers, television receivers, radio receivers or wherever a ¼″ shaft extender is required. Shaft length 1⅜″. Overall length 1¾″.

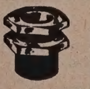
No.	Type	Material	Each
150	¼″-¼″	Brass	$0.30
130	¼″-¼″	Insulated	.30
132	⅜″-¼″	Brass	.30
134	⅜″-¼″	Insulated	.30

THREADED BRASS RODS



Rods ordinarily supplied in 2-foot lengths; if one-foot length is required, please specify.

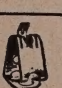
No.	Size	Per Foot
1400	6-32	$0.35
1401	8-32	.35
1402	10-32	.45
1403	¼″-20	.50



BEARING FOR PANEL ASSEMBLY

Made of brass, and fits in ⅜″ diameter hole in panels up to 5/16″ thick. Bearing is made to accommodate ¼″ shafts. Overall length ½″.

No. 119 ....**$0.25 each**

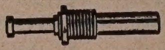


FAHNESTOCK CLIP

A speedy and positive contact spring clip. Especially useful for clipping to ammeter screws on auto radios. Supplied in phosphor bronze.

No. 538...................**$11.00 per C**

PANEL BEARING ASSEMBLY

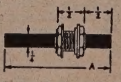


This panel bearing is accurately machined and is specially recommended for use as dial drives, or for mounting volume controls, switches, etc. Over-all length 1⅞″. Supplied with nut. Drive shaft ¼″ O.D.

No. 126.....................................**$30.00 per C**

BRASS AND INSULATED RODS

No.	Type	Length	Dia.	Each
1404	Brass	6ff	¼″	$0.30
1405	Brass	12″	¼″	.60
1406	Insulated	6″	¼″	.25
1407	Insulated	12″	¼″	.50



PANEL BEARING ASSEMBLY

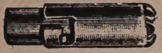
This assembly combines either 3″ or 6″ brass rod, ¼″ O.D. with our standard No. 119 Panel Bearing. Completely assembled so that panel bearing is held rigidly in place. Will fit on panels up to 5/16″ thick and can be used with either rigid or flexible couplings.

No.	A	Each
148	3″	$0.50
149	6″	.60

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver.

No. 1300....................................**$12.00 Per C**

FUSE RETAINER

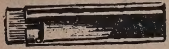
Recommended for use in auto radio power supply cables.

No. 1301 ....**$20.00 Per C**

PARTS FOR CONNECTOR AND RETAINER

No.	Type	Per C
1305	Male Cap for #1300 & #1301	$3.00
1306	Female Shell for #1300	3.50
1307	Contact for #1300 & #1301	5.00
1308	Spring for #1300 & #1301	1.00
1309	Washer for #1300 & #1301	.50
1310	Insulating Tube for #1301	.90
1311	Female Shell for #1301	5.00

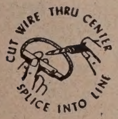
JUMBO FUSE HOLDERS



These jumbo fuse holders are for use with various types of auto receivers. All parts comprising bushings, springs, contacts, etc., are furnished unassembled, packed in individual envelopes.

No.	Size	Fuse Size	Each
1302	½" x 2⅛"	9 amp.	$0.32
1303	½" x 2⅝"	14 amp.	.32

WIRED FUSE RETAINER

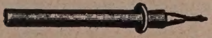


Wired fuse retainer saves the soldering operation necessary when replacing retainer. Simply cut wire, strip and put in line. Will accommodate either 3 A.G. 20 amp. or SFE 14 amp. fuse.

No.		Each
1304		$0.45
786	Display of 24	10.80

TEST PROD

"MAKE YOUR OWN R. F. PROBE"

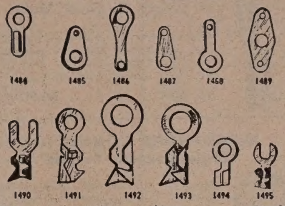


An exceptionally sturdy fibre prod with rear of prod designed to accommodate IN-34 crystal and condensers, necessary for use as an R.F. Probe. Heavy duty removable screw type tip for easy soldering.

No. 630 .... **$1.20 each**
No. 781—Display of 12 No. 630 Prods **$14.40 each**

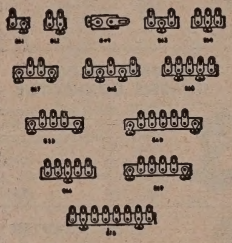
SOLDER TYPE LUGS

Brass Hot Tinned



No.	Length	Hole	Per M
1484	⅝"	No. 6	$ 7.70
1485	⅝"	No. 6	8.00
1486	⅞"	No. 6 & No. 8	8.00
1487	⅝"	No. 6	8.00
1488	¾"	No. 6	6.60
1489	⅞"	No. 8	9.00
1490	1"	No. 10	10.00
1491	$\frac{15}{16}$"	No. 10	11.00
1492	1-⅛"	¼"	20.00
1493	1"	¼"	20.00
1494	⅝"	No. 6 & No. 8	8.30
1495	⅝"	No. 8	7.70

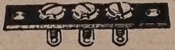
TIE DOWN TERMINAL STRIPS



No.	Per C	No.	Per C
849	$3.10	864	$4.40
853	6.10	865	6.10
860	9.10	866	6.20
861	2.80	867	5.10
862	2.90	868	6.50
863	3.90	869	7.50
		870	9.20

TERMINAL BOARDS

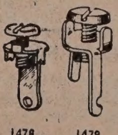
Screw Type



Brass hot tinned lugs mounted on $\frac{1}{16}$" bakelite. Lugs are spaced $\frac{7}{16}$" center to center.

No.	Terminals	Mounting Center	Per C
872	2	1$\frac{5}{16}$"	$10.00
873	3	1¾"	15.00
874	4	2$\frac{3}{16}$"	20.00
875	5	2⅝"	25.00
876	6	3$\frac{1}{16}$"	30.00
877	7	3½"	35.00

TERMINAL LUGS AND SCREWS

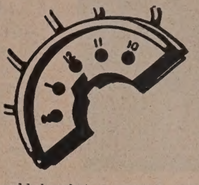


Recommended for heavy duty terminal strips. Lugs are tapped with screw inserted. No. 1478 lug, brass cadmium plated and No. 1479, lug, brass hot tinned.

No.	Per C
1478	$3.50
1479	6.00

TELEVISION SOCKET

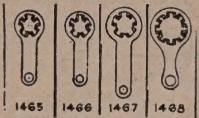
Half Moon Type



Bakelite molded socket. 5 contacts, wired with 5 leads, 18" long No. 20 coil. Wired from emergence.

No. 1295..**$1.00 Each**

LOCKING TYPE TERMINAL LUGS

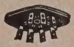


BRASS ELECTRO PLATED

No.	Hole Size	Thick	Per M
1465	No. 4	.020	$14.00
1466	No. 6	.020	14.00
1467	No. 8	.020	14.00
1468	¼"	.020	14.00

MINIATURE WAFER SOCKETS

Seven Pin



Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate $\frac{1}{16}$" thick, bottom plate $\frac{3}{64}$" thick; high grade spring brass cadmium plated contact; .095 dia. mounting holes.

No.	Description	MTG. Cen.	Per C
880	Eyelet only	⅞"	$12.00
881	Eyelet and Shield	⅞"	12.50
882	Grid Strap and Shield	⅞"	13.00
840	Eyelet only	1"	13.25
841	Eyelet and Shield	1"	14.50
842	Grd Strap and Shield	1"	15.25

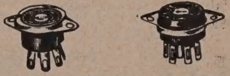
Nine Pin

Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate $\frac{1}{16}$" thick, bottom plated $\frac{3}{64}$" thick; high grade spring brass cadmium plated contact; .095 diameter mounting holes.

No.	Description	MTG. Cen.	Per C
890	Eyelet only	1⅛"	$14.25
891	Eyelet and Shield	1⅛"	14.75
892	Grd Strap and Shield	1⅛"	15.50

MOLDED MINIATURE SOCKETS

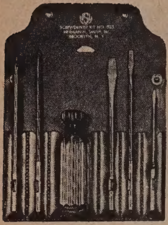
Seven Pin — Saddle Type



Molded of general purpose black bakelite-saddle steel cadmium plated, .015 thick; contacts high quality spring brass, cadmium plated; .098 mtg. holes, 7/82 mtg. centers. Supplied with center shield.

No.	Type	Per C
895	Bottom Mount	$15.40
896	Top Mount	15.40

SMITH *Electronic Components*
HERMAN H. SMITH, INC.

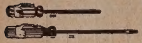


SCREW DRIVER KIT

Attractive Vinyl plastic kit with special pockets. Kit folds quickly and easily for carrying in tool box and has two eyeleted holes for hanging over work bench. Snap-In-Chuck provided in unbreakable amber handle for quick interchanging of blades. Kit contains three tempered steel screw driver blades of the Midget Cabinet and all purpose type and two Phillips drivers, #1 and #2.

No. 825 .... **$2.75 each**

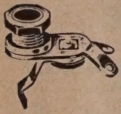
POCKET SCREW DRIVERS



Especially high grade pocket screw driver with unbreakable amber handles supplied with pocket clips. Tempered ground steel blades.

No.	Description	Per C
801	2 3/8″ Blade x 4″ Overall	$21.00
812	3 1/2″ Blade x 5″ Overall	35.00

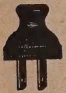
MIDGET PHONE JACK



Signal Corps type J 670 — Single open circuit midget phone jack. Mounts in 3/8″ hole in panels up to 1/4″ thick. Bushing is brass, nickel plated. Springs made of phosphor bronze, and the springs are insulated from the frame by heavy duty bakelite washers.

No. 122 .... **$35.00 per C**

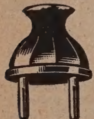
RUBBER ATTACHMENT PLUG



Rubber handle attachment plug: Cord Hole 3/8″ (.375). Rated at 15 amps., 125 volts. Blades are made of Brass.

No. 850 .... **$20.00 per C**

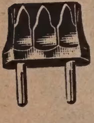
BAKELITE HANDLE PLUG
Foreign Type



Moulded bakelite handle foreign type plug. Blades are made of brass, and of the Continental Type spacing.

No. 851 .... **$25.00 per C**

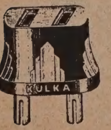
AMERICAN-FOREIGN PLUG ADAPTER
Continental Type



Streamlined bakelite plug adapter, which adapts from American to foreign type plugs. The plugs will fit snugly into the adapter. The foreign type plugs are made of brass, and are of Continental type spacing.

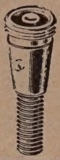
No. 852 .... **$30.00 per C**

British Type



Streamlined bakelite plug adapter, which adapts from American to foreign type plugs. The plugs will fit snugly into the adapter. Prongs are made of brass and are of the British type spacing.

No. 856 .... **$30.00 per C**

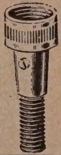


MICROPHONE CONNECTOR
Single Contact Male

A completely shielded single contact connector. Made of brass and heavily chrome plated. Mate for No. 116 female connector.

No. 115 .... **$0.55 each**

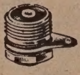
MICROPHONE CONNECTOR
Single Contact Female



Mate for our No. 117 chassis connector. This connector is used extensively for making connections from microphone to amplifier. Comes equipped with coupling ring. All metal parts are made of brass, heavily chrome plated, except the spring.

No. 116 .... **$0.58 each**

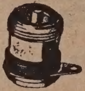
CHASSIS CONNECTOR
Single Contact Male



This type connector is recommended for use on the chassis or in the microphone. Made of brass, heavily nickel plated. Threaded 3/8″-27, and mounts in a 3/8″ hole. Supplied complete with washers, soldering lug and nut.

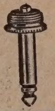
No. 117 .... **$0.38 each**

CLOSED CIRCUIT CHASSIS CONNECTOR



Same as No. 117 Connector except that circuit closes when female microphone connector (our No. 116) is removed. Supplied complete with washers, soldering lug and nut.

No. 114 .... **$0.55 each**

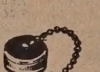


PLUG ADAPTER

For use with No. 116 female connector. Fits any standard phono jack. No soldering or wiring necessary. Brass, nickel plated.

No. 113 .... **$0.55 each**

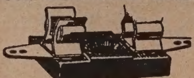
CAP AND CHAIN



Made of brass, heavily nickel plated. The cap seals open end units against dust, eliminating noisy connections. Used with any threaded one or two conductor chassis unit.

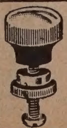
No. 118 .... **$0.60 each**

FUSE MOUNTING BASES



Black bakelite, panel mount type. Will accommodate the 3 A G Auto type cartirdge fuse.

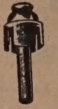
No.	Type	Per C
530	Single	$25.00
531	Double	40.00
532	Clip Only	2.50



METAL BINDING POST

Made of brass, heavily nickel plated overall. Supplied complete with screw and lockwasher.

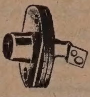
No. 110 .... **$35.00 per C**



PHONO ADAPTER ATTACHMENT PLUG

R.C.A. type phono plug. For use with record players, recording and reproducing equipment, etc. Extra long pin for new type jacks and large hole in cap for coaxial cable.

No. 1201 .... **$10.00 per C**

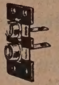


PHONO JACK

Female for No. 1201 plug. Single prong positive grip jack mounted on 1/16″ bakelite with 11/16″ mounting centers.

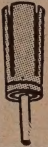
No. 1203 .... **$14.00 per C**

DUAL PHONO JACK



Two positive grip jacks mounted on 1/16″ bakelite. Double mounting holes spaced 1/2″ x 1 3/16″. Jacks are 9/16″ center to center. Used on recording units and phono players, etc., where dual application is necesssary.

No. 1214 .... **$20.00 per C**

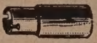


MOTOROLA TYPE PLUG

Attachment plug for all Motorola auto radio receivers and many other types of auto radios.

No. 1200 .... **$14.00 per C**

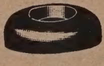
LEAD-IN ADAPTER



Lead-in adapter converts Motorola pin plug to Delco type plug.

No. 1204 .... **$11.00 per C**

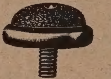
RUBBER FEET BUMPER



Rubber Bumper — 5/8″ diameter x 9/32″ thick. Recessed to accommodate a self-tapping screw, machine screw, wood screw or a tack.

No. 2184 .... **$4.00 per C**

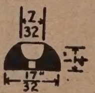
FELT FEET

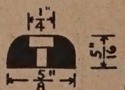


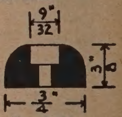
Available in two types, either with a 6-32 x 3/8″ machine screw or with an "Anchor Fast" nail, which will stay in place, and will not back up, pull out, or "pop."

No.	Type	Pre C
2181	With Machine Screw	$8.00
2182	With Stronghold Nail	8.50

RECESS RUBBER BUMPERS

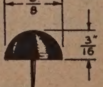


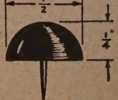




No. 2192	No. 2193	No. 2194
$2.00 C	$2.75 C	$4.40 C

RUBBER TACK BUMPERS





No. 2190	No. 2191
$2.40 C	$2.65 C

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

STEEL MACHINE SCREWS
Round Head, Cadmium Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1000	$5.90	6-32 x ¼″	1018	$1.00
1001	6.30	6-32 x ⅜″	1019	1.10
1002	6.80	6-32 x ½″	1020	1.15
1006	7.60	8-32 x ¼″	1024	1.25
1007	8.30	8-32 x ⅜″	1025	1.35
1008	8.80	8-32 x ½″	1026	1.40

BRASS MACHINE SCREWS
Round Head, Nickel Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1044	$6.50	4-36 x ¼″	1036	$1.00
1045	8.10	4-36 x ⅜″	1037	1.05
1046	10.00	4-36 x ½″	1038	1.10
1047	6.50	4-40 x ¼″	1039	1.00
1048	8.10	4-40 x ⅜″	1040	1.05
1049	10.00	4-40 x ½″	1041	1.10
1050	9.30	6-32 x ¼″	1070	1.55
1051	10.90	6-32 x ⅜″	1071	1.80
1052	12.50	6-32 x ½″	1072	2.10
1056	13.70	8-32 x ¼″	1076	2.30
1057	15.60	8-32 x ⅜″	1077	2.65
1058	17.60	8-32 x ½″	1078	2.95

HEXAGON NUTS
Brass, Nickel Plated

No.	Per M	Size	No.	Gross
1188	$9.00	4-36 x ¼″	1182	$1.55
1168	9.00	4-40 x ¼″	1169	1.55
1189	12.90	6-32 x ¼″	1183	2.10
1190	12.90	6-32 x $\frac{5}{16}$″	1184	2.10
1191	14.10	8-32 x ¼″	1185	2.30
1192	14.10	8-32 x $\frac{5}{16}$″	1186	2.30
1193	15.90	10-32 x $\frac{5}{16}$″	1187	2.65

Steel, Cadmium Plated

No.	Per M	Size	No.	Gross
1179	$7.10	6-32 x ¼″	1176	$1.10
1180	7.10	6-32 x $\frac{5}{16}$″	1177	1.30
1181	7.90	8-32 x $\frac{5}{16}$″	1178	1.30

PARKER KALON SELF TAPPING SCREWS
Round Head — Cadmium Plated

TYPE A Sharp Point			TYPE Z Blunt Point	
No.	Gross	Size	No.	Gross
1801	$1.45	4 x ½	1807	$1.45
1802	1.35	6 x ¼	1808	1.35
1803	1.40	6 x ⅜	1809	1.40
1804	1.45	6 x ½	1810	1.45
1805	1.55	8 x ⅜	1811	1.55
1806	1.65	8 x ½	1812	1.65

SLOTTED HEX HEAD — CADMIUM PLATED
Type Z — Blunt Point

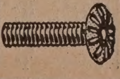
No.	Size	Gross
1830	6 x ¼	$1.35
1831	6 x ⅜	1.40
1832	6 x ½	1.45
1833	8 x ⅜	1.55
1834	8 x ½	1.65

FLAT AND SHAKEPROOF WASHERS

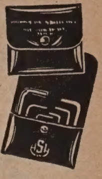
No.	Per M	Type	No.	Gross
1149	$4.80	No. 4 Brass N.P.	1153	$0.70
1150	4.80	No. 6 Brass N.P.	1146	.70
1151	4.80	No. 8 Brass N.P.	1147	.70
1152	4.80	No. 10 Brass N.P.	1148	.70
1127	4.50	No. 4 Shakeproof Int. Teeth	1121	.65
1128	4.80	No. 6 Shakeproof Int. Teeth	1122	.75
1129	4.80	No. 8 Shakeproof Int. Teeth	1123	.75
1130	5.40	No. 10 Shakeproof Int. Teeth	1124	.80
1132	7.20	¼″ Shakeproof Int. Tetth	1126	1.10
1131	9.00	⅜″ Shakeproof Int. Teeth	1125	1.45
1139	4.50	No. 4 Shakeproof Ext. Teeth	1133	.65
1140	4.80	No. 6 Shakeproof Ext. Teeth	1134	.75
1141	4.80	No. 8 Shakeproof Ext. Teeth	1135	.75
1142	5.40	No. 10 Shakeproof Ext. Teeth	1136	.80
1144	7.20	¼″ Shakeproof Ext. Teeth	1138	1.10
1143	9.00	⅜″ Shakeproof Ext. Teeth	1137	1.45

FANCY HEAD BRONZE FINISH SCREWS

No.	Size	Per M
1160	6-32 x ¾″	$10.70
1161	6-32 x 1″	11.40
1162	6-32 x 1¼″	12.50



KEY KITS

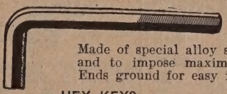


Attractive tear proof Vinyl plastic kit with individual pocket for each of six keys in kit. Hex kit for screws from 3 to $\frac{5}{16}$″; Spline kit for screws for No. 5 to $\frac{5}{16}$″; combination kit for Nos. 6, 8 and 10 hex and spline screws.

No.	Description	Per C
355	Hex Key Kit	$85.00
385	Spline Key Kit	85.00
390	Combination Key Kit	85.00
395	Combination Key Kit	180.00

DISPLAY CARDS

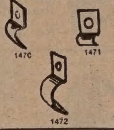
No.	Description	Each
785	Display of 24 Hex Kits	$20.40
784	Display of 24 Spline Kits	20.40
787	Display of 24 Combination Kits	20.40



HEX AND SPLINE KEYS

Made of special alloy steel, tempered to avoid brittleness and to impose maximum resistance to torsional strain. Ends ground for easy insertion.

HEX KEYS			SPLINE KEYS		
No.	Screw Size	Per C	No.	Screw Size	Per C
340	No. 2	$11.00	370	No. 4	$11.00
341	No. 3, 4	11.00	371	No. 5	11.00
342	No. 5, 6	11.00	372	No. 6	11.00
343	No. 8	11.00	373	No. 8	11.00
344	No. 10	13.20	374	No. 10	13.20
345	¼″	13.20	375	¼″	13.20
346	$\frac{5}{16}$″	13.20	376	$\frac{5}{16}$″	13.20



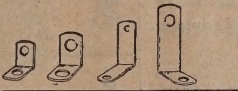
CABLE CLAMPS

1470—Steel, Cadmium plated, No. 8 hole, l. ¾″, w. ⅜″. Fits ¼″ cable....$1.50

1471—Steel, Cadmium plated. No. 8 hole, l. ⅝″, w. ⅜″. Fits ⅛-¼″ cable 1.50

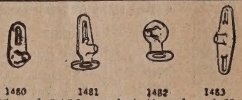
1472—Steel, Cadmium plated. No. 8 hole, l. 1″, w. ⅜″. Fits over ½″ cable 1.80

BRASS AND STEEL ANGLES



No.	Material	Size	Per C
1474	Brass N.P.	½″x½″	$2.80
1475	Brass N.P.	⅝″x⅝″	5.50
1476	Steel H.T.	¾″x¾″	2.20
1477	Steel H.T.	⅝″x1⅛″	2.20

EYELET TYPE SOLDER LUGS

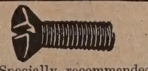


Made of brass. Nos. 1480, 1481 and 1482 are hot tinned and No. 1483 cadmium plated. Specially recommended for mounting on terminal strips.

No.	Length	Hole	Per M
1480	⅝″	$\frac{5}{64}$ slot	$ 4.50
1481	⅝″	No. 8	10.00
1482	¼″	No. 8	7.50
1483	$\frac{15}{16}$″		7.50

BINDING HEAD SCREWS
Steel Nickel Plated

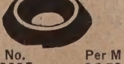
No.	Per M	Size	No.	Gross
1425	$5.90	6-32 x ¼″	1450	$1.00
1426	6.30	6-32 x ⅜″	1451	1.10
1427	6.80	6-32 x ½″	1452	1.15
1428	7.60	8-32 x ¼″	1453	1.25
1429	8.30	8-32 x ⅜″	1454	1.35
1430	8.80	8-32 x ½″	1455	1.40



RACK SCREWS
Oval Head, Steel, Nickel Plated

Specially recommended for mounting panels in racks and cabinets. Available in gross packages or packed 1000 to the box.

No.	Per M	Size	No.	Gross
1111	9.20	10-32 x ½″	1099	$1.55
1112	10.40	10-32 x ¾″	1100	1.60



COUNTERSUNK WASHERS
Brass, Nickel Plated

Recommended for use with Rack Screws designated above.

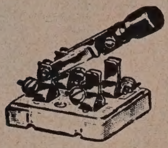
No.	Per M	Size	No.	Gross
1115	$6.80	6	1118	$1.05
1116	7.20	8	1119	1.10
1117	7.20	10	1120	1.10

SMITH *Electronic Components*

HERMAN H. SMITH, INC

TELEVISION ANTENNA ACCESSORIES

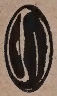
MIDGET KNIFE SWITCHES



Midget knife switches ideal for use in rear of television receiver where two antennas are used. Screw terminals placed for easy connection and two holes in each type base for mounting.

No.	Type	Type Base	Each
1241	SPST	Porcelain	$0.45
1242	SPDT	Bakelite	.55
1243	DPST	Porcelain	.77
1244	DPDT	Bakelite	.88
1245	DPDT	Porcelain	.88

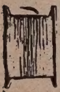
AIRPLANE INSULATOR



White glazed low absorption porcelain insulator 2″ long.

No. 1283 ....$13.00 Per C

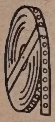
ANTENNA HANK



Cotton covered copper antenna hank.

No. 1222 ....$35.00 Per C

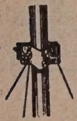
PERFORATED HANGER STRAPPING



Flexible yet tough galvanized steel strapping, ¾″ wide x .023 thick with ¼″ holes evenly spaced. Coiled tight for easy handling.

No.	Coil	Each
1369	12 feet	$0.90
1368	25 feet	1.50
1370	100 feet	6.00

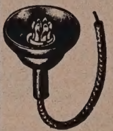
GUY WIRE CLAMP



Universal guy wire clamp will fit on any mast up to 1½″ O.D. Heavy gauge steel cadmium plated brackets drilled to accommodate up to 6 guy wires.

No. 1365 ....$0.50 ea.

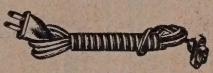
SECOND ANODE CONNECTOR



For television tubes. Silver plated snap button plug insulated by 1½″ diameter rubber cap. Snaps into opening on side of tube. Supplied with 15″ or 23″ long wire lead.

No.	Lead	Each
1380	15″	$0.65
1381	23″	.75

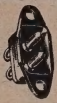
TV SAFETY CORD



Servicemen's "Cheater" Cord. Standard A.C. plug on one end and safety plug on other end which disconnects power when back of receiver is removed. Cord is brown, 6 ft. long and hanked. Underwriters approved.

No. 1209 ....$0.20 Eeach

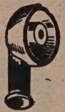
INTERLOCK PLUG



Male plug which is mate for TV Safety Cord as described above. Brass nickel plated prongs.

No. 1208 ....$0.20 Each

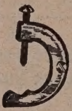
SECOND ANODE CONNECTOR



For Diheptal tubes. Cadmium plated contacts with rubber insulator ¾″ wide by 1 5/16″ long. Snaps over prong on side of diheptal tubes.

No. 1375 ....$0.60 Each

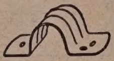
PIPE CLAMP



Clamps on pipes from ⅜″ to 1⅜″ O.D. Will not bend or lap over when applied to a pipe. The point of the screw will cut through rust, paint or corrosion insuring a good contact.

No. 1386 ....$20.00 Per C

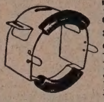
PIPE STRAPS



These pipe straps are made of galvanized iron and are available in two sizes to fit over 1″ and 1¼″ pipes.

No.	Size	Per C
1211	1″	$ 9.00
1212	1¼″	12.00

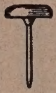
MOUNTING HOOD



This metal bracket supports deflection yoke mounting coil and is furnished with rubber cushions and ground springs. Elongated slots in ears for adjustment. Ears are serrated to prevent sliding when hood is tightened to "U" bracket. For 10″ and 12″ tube.

No. 1385 ....$1.25 Each

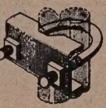
INSULATED WIRING NAILS



Fully insulated wiring nails which will not interfere with TV reception when used for securing twin lead indoors. Nails are brown, ⅝″ long and are packed 100 per box.

No. 1364 ....$7.50 Per M

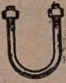
MAST JOINER



"U" Bolt mast coupler. 4″ galvanized "U" bolt with galvanized steel bracket. Bracket "cradles" mast with sufficient "bite" for secure coupling. Accommodates up to two 1½″ masts.

No. 1360 ....$0.30 ea.

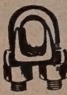
"U" BOLT



4″ galvanized steel "U" bolt supplied complete with two nuts and two lock washers. Threaded portion enables securing together two masts from 1″ to 1½″ O.D.

No. 1361 ....$12.00 Per C

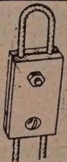
WIRE ROPE CLIP



Sturdy galvanized clip of high grade tough steel. Ample margin of strength for use with either standard No. 20 or heavier No. 18 guy wire. Vise tightening operation insures permanent grip.

No. 1366 ....$25.00 Per C

GUY WIRE CLAMP

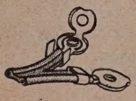


Stamped steel zinc plated clamps for standard No. 18 and No. 20 guy wire. Two screws in clamp for holding guy wire. Specially useful for anchoring tall masts and towers.

No. 1389......................$0.28 each

TV ANTENNA LUG

Solderless Type

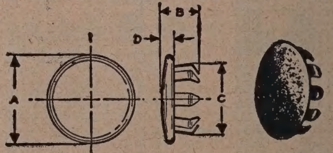


A secure, swift, positive and permanent method of connecting TV wire to antenna. Simply strip wire, coil around groove and fold over. Insures positive contact, is virbation proof and requires no tools.

Available packed 100 per box or 25 per envelope. When ordering specify "E" after catalog number for envelope of 25.

No.	Type	Length	Hole	Per C	Per 25
1459	Double Cup	9/16″	No. 8	$2.80	$0.75
1460	Double Cup	13/16″	No. 10	3.00	.80
1461	Double Cup	15/16″	¼″	3.20	.85
1462	Single Cup	¼″	No. 6	1.50	.45
1463	Single Cup	⅜″	No. 8	1.75	.50

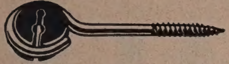
SNAP BUTTON HOLE PLUGS



Metal plugs for covering punched or drilled holes in metal, plastic or wood. Firm grip spring action prongs, yet easily removed if necessary. Supplied in steel, nickel plated. No. 656 is a vent plug.

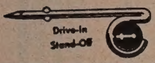
No.	Hol Dia.	A	B	C	D	Prongs	Per C
650	¼″	13/32	¼	17/64	5/64	6	$2.90
651	5/16″	7/16	¼	21/64	1/16	6	2.90
652	⅜″	17/64	⅜	25/64	5/64	6	2.90
653	½″	21/32	17/64	17/32	5/64	8	4.20
654	⅝″	51/64	9/32	41/64	5/64	8	4.20
655	¾″	15/16	19/64	49/64	3/32	12	4.20
656	1″	1 5/32	19/64	1 1/32	5/64	12	16.50

TELEVISION ANTENNA ACCESSORIES



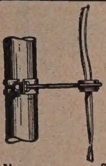
SCREW EYE STAND OFF

No.	Size	Thread	Per C
1265	3½"	Wood Screw	6.25
1280	7½"	Wood Screw	9.00
1276	3½"	Machine Screw	8.00
1290	7½"	Machine Screw	11.00



DRIVE IN STAND OFF

No. 1371 ....**$7.00 Per C**

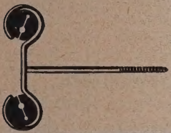


MAST STAND OFF

- No tools needed—Clamp tightened by simply turning screw eye.
- Secures antenna down the mast.
- Thirty seconds and the operation is complete.
- Available in two sizes with 3½ ft. screw eye.
- Completely pre-assembled.

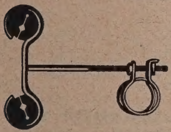
No.	Size	Type	Per C
1266	3½"	For 1" Masts	$15.00
1268	7½"	For 1" Masts	25.00
1267	3½"	For 1¼" Masts	15.00
1269	7½"	For 1¼" Masts	25.00

DUAL STAND OFF



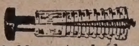
No.	Size	Thread	Per C
1320	3½"	Wood Screw	$24.00
1325	7½"	Wood Screw	29.00
1340	3½"	Machine Screw	24.00
1345	7½"	Machine Screw	29.00

DUAL MAST STAND OFF



No.	Size	Type	Per C
1330	3½"	For 1" Mast	$35.00
1335	7½"	For 1" Mast	40.00
1350	3½"	For 1¼" Mast	35.00
1355	7½"	For 1¼" Mast	40.00

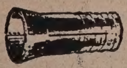
LAG SCREW EXPANSION SHIELD



Newly designed threads hold greater load and external corrugations (ribs) give additional strength on masonry. This shield is 1" long x ½" O.D. and takes our standard ¼" x 1¼" lag screw. Rust proof.

No. 1230 ....**$20.00 per C**

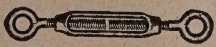
LEAD ANCHORS FOR WOOD SCREWS



This anchor has a larger range of holding power through various sizes of hole diameters. These anchors are 3/16" or ¼" hole.

No.	Length	Per C
1231	1"	$ 9.50
1239	1½"	13.50

MIDGET TURNBUCKLES

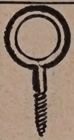


No.	Diameter of Bolt	Over-all Length Closed	Over-all Length Extended	Per C Each
1215	5/32"	3⅜"	4⅝"	$23.00
1216	3/16"	4"	5⅝"	25.00
1217	7/32"	4½"	6⅜"	27.50
1218	¼"	5½"	7⅝"	33.00
1219	5/16"	6¾"	9¼"	55.00
1220	⅜"	7½"	10½"	85.00

GUY WIRE

An exceptionally high grade of steel galvanized guy wire for anchoring antenna masts. STANDARD—6 strands of No. 20.

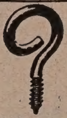
No.	Length	Each
1250	50-ft. Coil	$ 0.90
1251	100-ft. Coil	1.70
1252	500-ft. Spool	8.50
1253	1000-ft. Spool	16.00



EYE BOLT

Sturdy steel eye bolt for use where guy wire is necessary for T.V. mast installation. Inside diameter 23/32", shank length 1⅜", thread length 1 1/16", overall length 2½".

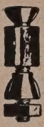
No. 1249 ....**$7.00 per C**



BRIDLE RING

Heavy duty steel bridle ring 2" long, threaded portion ¾" long. Another essential item where guy wire is used in T.V. mast installation.

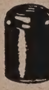
No. 1238 ....**$9.00 per C**



ANCHOR BOLTS

Rust-proofed anchor designed for lasting and permanent anchorage for fastening wall mounts and pipe straps to masonry.

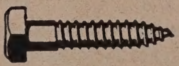
No.	Bolt Length	Per C
1246	2"	$16.50
1247	3"	20.00
1248	4"	25.00



WOOD SCREW ANCHOR

Especially designed to give permanent anchorage in any kind of masonry for 300-ohm and coaxial stand-offs. Tapped for wood screw.

No. 1226 ....**$12.00 per C**



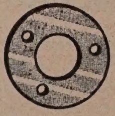
LAG BOLTS

No.	Size	Per C
1213	¼" x 1¼"	$8.50
1257	¼" x 2"	9.50
1258	¼" x 3"	10.80

300 OHM SPLICE

A handy connector for splicing 300 ohm line. Will not cause mismatch. Easy to use and makes a secure connection. By using dope to seal ends can be used outdoors.

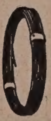
No. 1225 ....**$25.00 Per C**



"FLOATING" GUY RING

Made of heavy gage galvanized steel. Free floating, permitting placement at any point on the mast by use of a clamp underneath.

No.	Size	Per C
1390	1" I.D.	$20.00
1391	1¼" I.D.	20.00
1392	1⅜" I.D.	20.00
1393	1½" I.D.	20.00

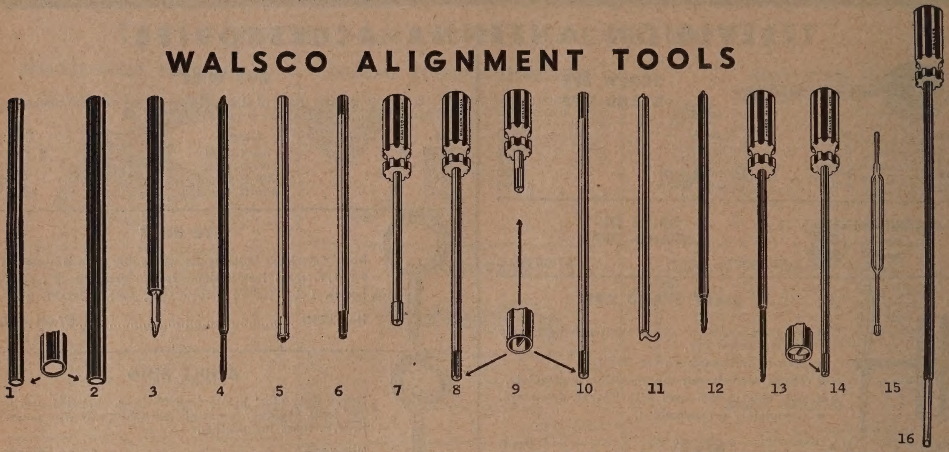


ALUMINUM GROUND WIRE

Number 8 (⅛" O.D.) soft drawn aluminum ground wire used for grounding antenna against lightning and electrical disturbances.

No.	Length	Each
1378	100-foot Coil	$ 2.25
1377	500-foot Spool	11.25
1376	1000-foot Spool	22.50

WALSCO ALIGNMENT TOOLS



WALSCO ¼" HEX I. D. NEUTRALIZING WRENCH.

Very durable. Can be cut if corners become rounded from wear. Over-all length—7 ½", O.D.—⅜" round.

Cat. No.	Picture No.	List Price
§2503—Lo-loss Plastic Wrench	1	$0.45

WALSCO 5/16" HEX. I. D. NEUTRALIZING WRENCH.

Same construction as ¼" wrench listed above. Over-all length—7 ½". O.D.—$\frac{7}{16}$".

Cat. No.	Picture No.	List Price
§2508—Lo-loss Plastic Wrench	2	$0.45

WALSCO FIBRE HEX-WRENCH-AND-SCREW-DRIVER.

Standard ¼" hex wrench combined with a tough nylon screwdriver tip.

Cat. No.	Picture No.	List Price
°2510—Combination Tool	3	$0.65

WALSCO DUPLEX ALIGNMENT SCREWDRIVER.

Precision made. Ground or molded to fit large or small screws. Width of blade on large end—$\frac{7}{32}$"; on small end—$\frac{5}{32}$". Thickness to conform to standard slot dimensions. Over-all length—7".

Cat. No.	Picture No.	List Price
°2520—Fibre Screwdriver	4	$0.55

WALSCO METAL TIP ALIGNMENT SCREWDRIVER.

Butyrate handle. This tool combines the low capacity effect of an alignment tool with the mechanical strength of a metal screwdriver. Diameter—$\frac{7}{32}$"; over-all length—6".

Cat. No.	Picture No.	List Price
°2525—Alignment Screwdriver	5	$0.50

WALSCO TUNING WAND.

Made from Butyrate rod with inductance-increasing powdered iron core on one end and inductance-reducing brass piece on opposite end. Over-all length—6".

Cat. No.	Picture No.	List Price
°2540—Tuning Wand	6	$0.55

WALSCO TV OSCILLATOR ALIGNMENT TOOLS.

Cat. No.	Picture No.	List Price
°2518—For Philco Receivers	7	$1.75
°2522—For Receivers with "Standard Coil" Front Ends	13	1.10
§2523—Extra long (12"); with replaceable super-tough molded nylon tip, for general front-end alignment without removing from cabinet.....	Picture No. 16	1.80
°2523-1—Replacement Tip for tool No. 2523 (Standard Pack: 20 Tips)		0.30

WALSCO TV I.F. ALIGNMENT SCREWDRIVERS.

Standard Tools for all TV and FM sets. Made of new flexible low-loss plastic with thin precision screwdriver tips.

Cat. No.	Picture No.	List Price
°2516—8 ½" long, for No. 6 Studs	8	$1.10
°2517—2" long, for No. 6 Studs	9	0.70
°2519—7" long—1 end for No. 6 Studs; other end for No. 4 Studs	10	1.05
°2524—8 ½" long, Slotted Type, for No. 6 Studs	14	1.10
°2526—5" long, Molded-Nylon Tool, hex stud one end, very small screwdriver other end. For Zenith, Hoffman, Raytheon, and other sets..................	Picture No. 15	0.55

WALSCO WIRE DRESSING AND ALIGNMENT TOOL.

Made with thin ($\frac{7}{32}$") Butyrate handle, 7" long. Special tool on one end for dressing wires and finding loose connections or shorts. Other end has low capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2512—Wire Dressing and Alignment Tool	11	$0.60

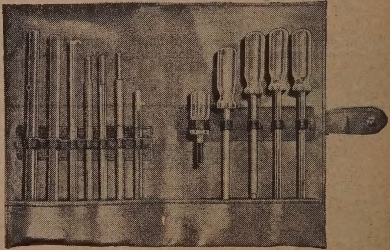
WALSCO "K-TRAN" ALIGNMENT TOOL.

For adjustment of all miniature (K-Tran) I.F. transformers. Made of tough bone fibre. One end is machined to fit "K-tran" slots; other end is equipped with low-capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2515—"K-Tran" Alignment Tool	12	$0.80

WALSCO TV-FM ALIGNMENT TOOL KITS

Handy TV-FM alignment tool kit or wall rack. Durable leatherette kit gives servicemen every tool necessary to align TV and FM sets. Handy wall rack for use above bench in shop. Provides proper place for each tool, and always handy.

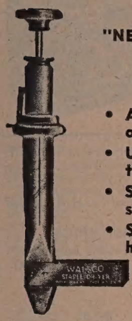


Cat. No.	List Price
580—12 Tools in leatherette case..	$12.65
581—12 Tools on wall rack..	12.65

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

§ Standard Package: Display Card of 12 Tools.
° Standard Package: Display Card of 20 Tools.

SPECIAL TOOLS
WIRE STRIPPERS



WALSCO STAPLE DRIVER

"NEW IMPROVED GUARANTEED MODEL"

Patent No. 2,285,384

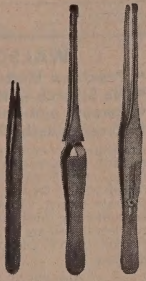
Pays for itself on the first job!

- **A sensational tool for installing wires and cables, that saves time and money.**
- **Used by Radio, Public Address and Intercom Technicians.**
- **Staples into corners and other inaccessible places.**
- **Staples on hard surfaces such as plaster, hardwood, etc.**
- **Can be loaded in 10 seconds.**

Cat. No.		List Price	Dealer's Net
500	Staple Driver Complete, including box of staples	$9.05	$5.43
507	Rubber Cap for Head of Staple Driver	0.40	0.24
550	Box of 250 Carbon Steel Staples	0.65	0.39
552	Box of 1000 Carbon Steel Staples	2.50	1.50

WALSCO SERVICE TWEEZERS

These handy holding tools are made of fine spring steel and are polished nickel-plated. They have numerous uses in the shop and laboratory, such as starting screws and nuts in difficult places, holding wires and small parts together when soldering, clamping cemented items, installing dial cord and record-changer springs, looping and untying knots on drive cord, etc.


572 570 571

Cat. No. **List Price**

570—Self - Closing Tweezer with cross-over action, 6½" long, serrated, blunt points $1.05
(Standard Package: Display card with 10 tweezers . . . Cat. No. 570D)

571—Heavy-Duty Tweezer with slide-lock feature. Length 6½", serrated, blunt points....................$1.30
(Standard Package: Display card with 10 tweezers . . . Cat. No. 571D)

572—Precision Tweezer with narrow, pointed ends especially suitable for delicate work. Over-all length 4½"..........$0.60
(Standard Package: Display card with 20 tweezers . . . Cat. No. 572-D)

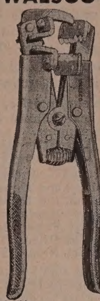
575—TWEEZER KIT, made of durable leatherette, containing one each of the above listed tweezers. Provides servicemen with necessary tweezers for every need. Neat, compact, handy $3.55
(Standard Package: Display of 12 kits . . . Cat. No. 575-D)

WALSCO WHIZ-SAW

Handy, lightweight (3½ oz.) hacksaw for cutting volume control shafts, TV antenna tubing, etc. Ideal for general shop use.

Cat. No.		List Price
556	Whiz Saw	$ 1,45
556D	Display of 12 No. 556	17.40
557	Replacement Blades	0.20

WALSCO ALL-PURPOSE WIRE STRIPPER



All these features in *ONE* model: • Strips all wires from 16 to 22-gauge • Strips 300-ohm twin lead • Has built-in wire cutter • Has automatic locking device which prevents crushing of stranded wire • Made entirely of steel and will last a lifetime.

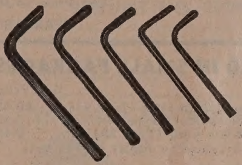
Strips insulation quickly and cleanly. Precision-ground blades will not nick or cut wire strands. Especially made for wire types and sizes used in electronic work, but equally applicable for automotive, aviation, and telephone trade.

Blades are hardened and precision-ground, and will last for thousands of stripping and cutting operations. Can readily be replaced when dulled.

Operation is extremely easy, requires no particular skill or experience. From 700 to 1000 wires can be stripped per hour. Equally adaptable for the production line or for use "on the job."

Cat. No.	Description	List Price	Dealer's Net
590	WALSCO All-Purpose Wire Stripper	$ 8.25	$ 4.95
590-1	Replacement Blade Set for No. 590	2.00	1.20
591	Special "Wide-Range" Model for Electrical Trade. Strips all wire gauges from No. 10 to No. 22	8.25	4.95
591-1	Replacement Blade Set for No. 591	2.00	1.20

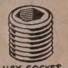
WALSCO KEY WRENCHES

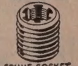


FOR HEX AND SPLINE SOCKET SCREWS

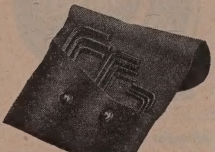
WALSCO features three sets of socket wrenches made of special alloy steel to fit all standard socket screws used in radio and electronic equipment.

Cat. No.	Description	List Price
†780	Assortment of 4 small HEX wrenches. Fits set screws No. 4 to No. 10 and cap screws No. 2 to 6.	$0.55
†781	Assortment of 3 medium HEX wrenches. Fits set screws ¼" to ⅜" and cap screws No. 8 to ¼".	0.55
†784	Assortment of 4 small SPLINE wrenches. Fits all set screws up to ¼" and cap screws up to No. 8.	0.55


HEX SOCKET


SPLINE SOCKET

WALSCO HEX & SPLINE WRENCH KIT



A handy kit containing a complete range of wrench sizes as used in the electronic trade. The case is made of durable leatherette with double snap button closure and contains both hex (Allen) and spline (Bristol) wrench keys for No. 2 to ⅜" screws.

Cat. No.		List Price	Dealer's Net
560	Wrench Kit	$1.80	$1.08

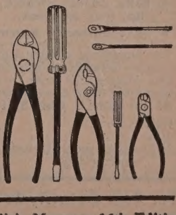
Standard Package — 25

WALSCO PROTECTO TUBE

A new synthetic tubing designed for insulating handles of pliers, screwdriver blades, etc. Highly abrasion-resistant. Will not crack or shatter. Expanding Solution "swells" tubing to permit easy application. Upon drying, tubing shrinks on tight.

Protecto-Tube Kit, containing approx. 12 ft. assorted sizes and colors of WALSCO Protecto-Tube, jar of Expanding Solution, and instructions.

Cat. No. K-18..........List Price $1.80



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*Std. Pack: Display Box of 20 Individual Packages. Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330,
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO DIAL CABLES AND CORDS

WALSCO Dial Cables and Cords are manufactured to meet the most rigid standards of the Government, Radio Industry and Engineering Laboratories. The finest raw materials are used and production is controlled to supply a uniform product with an absolute minimum stretch factor. All standard Cords are made with NYLON braid, known to have the highest abrasion resistance. These selected materials, plus special chemical treatment after fabrication, make WALSCO Cords the finest on the market. WALSCO Dial Cords are used by leading manufacturers as a standard component.

25-ft. and 100-ft. spools are packaged in clear plastic, re-usable storage boxes with sliding lids.

HEAVY CORD—Diameter .062"—Same as used on many Philco and Majestic sets. Very durable, and treated to prevent slipping.

No. 33	25 ft.	List Price $1.90
No. 33-1C	100 ft.	List Price 5.05

BRONZE CABLE—16-Strand Braided—Diameter .039"—Breaking Strength 50 lbs.—A braided cable with good flexibility and abrasion resistance. "Fiber-glass" is used as core material and the braid is constructed of special hard Cadmium bronze. Does not unravel.

No. 31	25 ft.	List Price $1.30
No. 31-1C	100 ft.	List Price 3.80
No. 31-5C	500 ft.	List Price 15.40

PHOSPHOR BRONZE CABLE—42-Strand—Diameter .032"—Breaking Strength 60 lbs.—A very flexible metal cable constructed of 42 strands of hard Phosphor bronze over a "Fiber-glass" core. Extremely durable. Used for replacement of dial cables and many special applications where a strong, stranded cable is required.

No. 30	25 ft.	List Price $1.65
No. 30-1C	100 ft.	List Price 5.50
No. 30-5C	500 ft.	List Price 22.00

SPECIAL THIN BRONZE CABLE—Diameter .022"—An extra-thin cable for dial drives, flexible connections, pigtails, and many other applications—wherever a thin, but strong cable is required.

No. 32	25 ft.	List Price $1.40
No. 32-1C	100 ft.	List Price 4.95
No. 32-5C	500 ft	List Price 14.30

The following cords cover over 80% of the replacement demand. With one spool of each kind on hand, the serviceman has the proper size for practically any set manufactured since 1934. Constructed with "Fiber-glass" or linen core and "pre-stretched," these are the most efficient cords available. The braided sleeves are made of Nylon.

Cat. No.	Diam.	Breaking Strength	LIST PRICES Feet Per Spool 25	100	500
		"SPECIAL THIN"			
35	.025"	15 lbs.	$1.40		
35-1C	.025"	15 lbs.		$4.95	
35-5C	.025"	15 lbs.			$14.30
		STANDARD			
39	.032"	20 lbs.	$1.40		
39-1C	.032"	20 lbs.		$4.95	
39-5C	.032"	20 lbs.			$14.30
		MEDIUM			
34	.040"	35 lbs.	$1.40		
34-1C	.040"	35 lbs.		$4.95	
34-5C	.040"	35 lbs.			$17.60

STANDARD PACKAGE—12

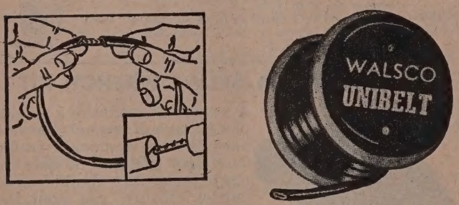
POPULAR DIAL CORD IN SMALL PACKAGES

Cat. No.		List Price
3070	Approximately 10 ft. Special Thin Cord (Type 35)	$0.45
3080	Approximately 8 ft. Medium Cord (Type 34)	0.45
3090	Approximately 8 ft. Standard Cord (Type 39)	0.45

(Standard Package . . . 20; available on display card or box)

WALSCO UNIBELT

A NEW UNIVERSAL DIAL-DRIVE BELT ADJUSTABLE TO FIT ANY DIAL DRIVE



Covered by Patent No. 2,300,706

- **Eliminates need for stocking 96 different sizes of belts.**
- **Unibelt gives the Radio Man the correct size belt for every make and model set.**
- **Easily installed in a few minutes. No need for taking dial mechanism apart.**
- **Put up on spools in continuous lengths which will make five or more average belt replacements.**
- **New patented construction incorporates special stainless steel core and pure latex covering.**
- **Belts cannot stretch, and when properly installed will not slip, fray or break.**
- **Unconditionally guaranteed.**

The ingenious construction of the New WALSCO Unibelt makes it possible to assemble any size belt by merely cutting the desired length and joining the ends with a simple "zipper-like" connector. The connected belt cannot stretch and has a breaking strength of over 60 lbs. ONLY ONE SIZE NEEDED for any belt replacement job.

Cat. No.		List Price	Dealer's Net
303	5-ft. spool Unibelt (with 10 connectors and instructions)	$3.00	$1.80

WALSCO DIAL DRIVE BELTS

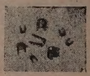
- **Precision Made.**
- **No Stretch — No Slip.**
- **Smooth and Uniform.**
- **Exceptionally Strong.**

Available for any type of radio set. Specially constructed to give long lasting, trouble-free service. Treated for maximum friction and to provide accurate tuning. WALSCO Dial Belts are uniformly thick throughout the entire length and are precision made and guaranteed to fit perfectly.

All Sizes .... List Price Each, $0.30

Also put up in Kits of 25, 50, 100 and 150 Belts

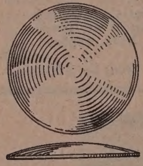
WALSCO DIAL CORD CLIPS



For fastening the end of dial drive cord. The assortment contains the proper sizes for all standard thicknesses of cord.

Cat. No.		List Price per pkg.
*2770	Approximately 35 Clips	$0.45

WALSCO PLASTIC DIAL CRYSTALS



Can be cut with scissors. Easily press-fitted or cemented in place. Solves the replacement problem on radio dials, instruments, etc.

Cat. No.	Size	List Price
990	6" Maximum Diameter	$1.20
992	9" Maximum Diameter	2.00
994	8" x 10" Flat Sheet	1.80

WALSCO SPEAKER ADJUSTMENT SHIMS

- Made of Non-magnetic Metal
- Strong and Flexible, Spring Temper
- Corrosion-Resistant

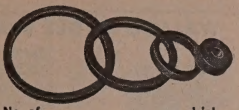
4 Shims of each of 4 sizes supplied in handy plastic case with screw top and pencil clip. As easy to carry as a fountain pen. Marked for easy identification. Sizes supplied—.004", .006", .008" and .010". Indispensable to the serviceman in adjusting voice coils.

Cat. No.		List Price
2550	16 Assorted Shims—4 of each size	$0.75

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

*Std. Pack: Display Box of 20 Individual Packages. Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO PHONO-MOTOR DRIVES



Precision made to assure constant uniform speed and made of abrasion-resistant synthetic rubber to assure long wear. For attaching, use WALSCO Rubber Cement.

Cat. No.	I.D.	O.D.	Thick	No. of Drives per pkg.	Used on	List Price per pkg.
†2560-16	2″	2⅜″	5/32″	2	Gen. Indust. Mod. LX & RX	$0.45
†2560-17	1½″	1¾″	3/16″	2	Alliance, Seeburg, G.E. V. M. 400	0.45
†2560-18	⅞″	1⅛″	3/16″	3	Seeburg, R.C.A., G.E.	0.40
†2560-19	⅛″	⅜″	¼″	4	Philco, R.C.A., etc.	0.45
†2560-20	5¾″	6″	3/16″	1	Detrola	0.45
*2560-22	1 7/32″	1 15/32″	3/16″	3	G.I. Recorder/Changer	0.45
*760-23	11/16″	1⅛″	¼″	2	R.C.A., RP-176, 177 and most pre-war R.C.A. Changers. Also on G.E. 809-J, etc.	0.45
761-23	4½″	5½″	5/16″	1	Same as #760-23	1.10
760-24	2⅞″	3⅜″	¼″	1	R.C.A. 960015, 960260, 960276. Also most Admiral and Crescent postwar changers	0.55
†760-25	Spring-Drive			1	Detrola - Utah	0.55

WALSCO STANDARD TEST RECORDS

FOR TESTING AND ADJUSTING RECORD PLAYERS, CHANGERS PICK-UPS, AND AMPLIFIERS

STAND
TEST REC

These records are designed to provide the electronic engineer and serviceman with a quick, inexpensive, and accurate means of checking the mechanical performance of record changers. They will also indicate any defects in pick-up, amplifier, or speaker, and may be used for accurate measurements of performance of these components. All records are made of long-wearing, plastic material, and are unbreakable in normal use.

Cat. No. 720-6—Set of six 10″ records consisting of one each of the following: Record No. 720, 721, 725, 726, 727, 728.
With this set, all mechanical and electrical performance characteristics of a phonograph system can be quickly and accurately checked. No laboratory or well-equipped service shop should be without this set.......... **List Price $10.90**

Cat. No. 720—10″ record with accelerated pitch. Playing time approximately 45 sec. Lead-in grooves modulated with 3 tones to indicate set-down position of pick-up. Proper tripping action indicated by tone signals at end of record. Both sides of record identical **List Price $1.80**

Cat. No. 721—10″ record. One side with accelerated pitch and without starting spiral for checking "feed-in" of pick-up. Other side same as No. 720.......... **List Price $1.80**

Cat. No. 725—10″ record. One side: Sweep Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. Cross-over to constant amplitude at 500 c.p.s. Other side same as No. 720. **List Price $2.10**

Cat. No. 726—10″ record. One side: Test Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. in 16 steps. Other side same as No. 720.......... **List Price $2.10**

Cat. No. 727—10″ record. One side contains 1000 and 400-cycle tone for 1 min. each. Especially designed for testing irregular turntable speed ("WOW"). Other side same as No. 720.......... **List Price $2.10**

Cat. No. 728—10″ record. One side contains silent (unmodulated) groove for checking turn-table rumble. Other side same as No. 720. **List Price $1.80**

Cat. No. 730-4—Set of four 12″ records of same design as No. 720. Designed for use in connection with set No. 720-6 in checking performance of intermix changers.......... **List Price $10.90**

WALSCO STROBOSCOPE DISK

WALSCO
STROBOSCOPE DISK

For checking proper speed of turntables. Lines on disk appear to be stationary on correct speed when observed under 60-cycle AC lighting (preferably fluorescent). For checking 78, 45, and 33⅓ rpm. speeds.

Cat. No.		List Price
949	Stroboscope Disk	$0.17

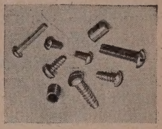
Standard Packing: 25

WALSCO PHONOGRAPH PICKUP SET SCREWS

Precision knurled head steel screws, antique bronze finished for all popular pickups and recording heads. The assortment contains several each of the popular numbers and one each of the other sizes.

Cat. No.	Approx. No. Units per pkg.	Used On	Size	List Price per pkg.
†2570	10	Assorted	Assorted sizes	$0.45
*2571	10	Shure and others	2-56 x ⅝″	0.45
*2572	10	Most Astatic & Webster	2-64 x ¾″	0.45
*2576	4	Most RCA, etc.	1-72 x 1″	0.45

WALSCO PICKUP CARTRIDGE MOUNTING SCREWS



An assortment containing small machine and self-tapping screws of various lengths, sizes and styles as required in fastening cartridge to pick-up arm. Especially useful when threads are stripped or replacement of different cartridge requires longer screws.

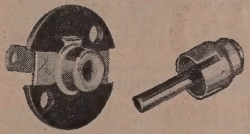
Cat. No.	List Price
*3365—Apprx. 30 Screws & Spacers	$0.45

WALSCO PHONO PANEL MOUNTING SPRINGS

An assortment of various sizes of conical springs as used in mounting record changer units.

Cat. No.	List Price per pkg.
*3385—8 Assorted Springs	$0.45

WALSCO PHONO PLUGS AND JACKS



Standard plugs and jacks as used for connecting record players or pick-ups; also used on auto radio antennas. Used for all single conductor, shielded cable connections.

Cat. No.	List Price per pkg.
†2580—Package of 4 Plugs	$0.45
†2585—Package of 2 Jacks	0.45

WALSCO PHONE TIPS

Fit all standard tip jacks. Easy to solder. Made of brass, nickel-plated. These are the conventional tips so often needed by both experimenters and service men.

	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	THE 40 LINE $0.45 List Ea. Pkg. Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	THE 99 LINE $1.80 List Ea. Pkg. Approx. Quan.
Phone Tips	†2725	12	2725-99	60

WALSCO PHONO TURNTABLE FELTS

Made of high-quality brown felt, accurately die-cut with concentric center hole. Use WALSCO Radio Cement or WALSCO Fabric Cement for attaching.

Cat. No.		List Price
350-8	7⅞″ diameter	$0.50
350-9	8⅞″ diameter	0.65
350-10	9⅞″ diameter	0.70
350-12	11⅞″ diameter	0.85

WALSCO SPEAKER DUST FELTS

Special, thin felt disks to keep metal particles and dust out of voice coils. Use Walsco Radio Cement to attach to cone.

Cat. No.	List Price per Pkg
*2775—Approx. 25 assorted sizes	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

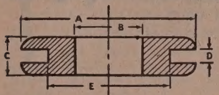
WALSCO ELECTRONIC HARDWARE

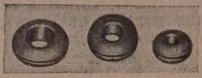
The **99** *Line*
IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

The **40** *Line*
PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO RUBBER GROMMETS

For protecting cables from abrasion when passing through chassis holes. Also used for vibrationless mounting of parts.





Dimensions					THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
A	B	C	D	E	Cat. No.	Approx. Quan. per pkg.	Cat. No.	Approx. Quan. per pkg.
$\frac{11}{32}$	⅛	$\frac{3}{16}$	$\frac{1}{16}$	¼	†3341	15	3341-99	85
$\frac{7}{16}$	$\frac{3}{16}$	$\frac{7}{32}$	$\frac{1}{16}$	$\frac{5}{16}$	†3342	12	3342-99	85
$\frac{9}{16}$	¼	¼	$\frac{1}{16}$	⅜	†3343	10	3343-99	65
⅝	⅜	¼	$\frac{1}{16}$	½	†3344	10	3344-99	55
$\frac{13}{16}$	½	$\frac{9}{32}$	$\frac{1}{16}$	⅝	†3345	6	3345-99	35
Assorted					†3340	12		

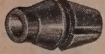
WALSCO RUBBER WASHER AND BUMPER ASSORTMENT

An assortment of the various kinds of rubber washers, bumpers, and spacers used in the electronic and radio industry for shockless, vibrationless mounting, for eliminating rattles and microphonics, etc.

Cat. No.	List Price
†3440—20 Assorted Washers and Bumpers	$0.45

WALSCO CORD STRAINRELIEFS

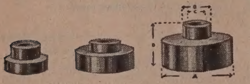
FOR POSJ WIRE



Provides a grommet and strain relief in one piece. For use on appliance cord sets. Use WALSCO Rubber Cement (Cat. No. 112) for attaching to cord. Prevents insulation of wire from being damaged by sharp-edged holes in metal chassis or cabinets.

Cat. No.	List Price per pkg.
*3348—4 Strainreliefs	$0.45

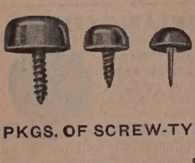
WALSCO CHASSIS MOUNTS



Made of resilient synthetic rubber to give chassis or other components a floating effect and to reduce "microphonics." Essential wherever vibration will affect operation.

Dimensions				THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
A	B	C	D	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
¾"	½"	¼"	⅜"	*2742	5	2742-99	25
1"	½"	¼"	$\frac{17}{32}$"	*2744	4	2744-99	20
Assorted				†2740	10		

WALSCO CABINET FEET



Made of oil resistant synthetic rubber. Wood screws are supplied with screw-type feet but machine or selftapping screws may be used. The rubber tack feet have steel tacks securely molded in.

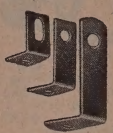
PKGS. OF SCREW-TYPE FEET, INDIVIDUAL SIZES

		THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Diam.	Height	Cat. No.	Quan.	Cat. No.	Quan.
⅜"	$\frac{7}{32}$	*3351	8	3351-99	55
½"	$\frac{9}{32}$	*3352	8	3352-99	50
¾"	⅜	*3353	6	3353-99	30
Assorted		†3350	8		

PKGS. OF RUBBER TACK FEET

½"				3355-99	55
⅜"				3356-99	50
Assorted		†3355	10		

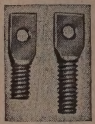
WALSCO ANGLE BRACKET ASSORTMENT



Handy brackets of various lengths and shapes as needed by every repairman, experimenter, "ham", etc. Precision made, of steel, or brass and plated.

Cat. No.	List Price, per pkg.
*2610—Approximately 14 Assorted Brackets	$0.45

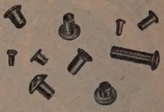
WALSCO SPADE BOLTS



Indispensable for attaching condensers, coils, cans, and similar items. For Experimenters, Servicemen and Manufacturers of electronic equipment. Stud size 6-32. Hole size for No. 6 screw.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Approx. Length	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
⅝"			3271-99	100
¾"			3272-99	100
Assorted	†3270	18		

WALSCO RIVET ASSORTMENT



Various sizes of hollow, solid and split rivets in brass, copper and aluminum as used in everyday repair and experimental work. Sizes range approximately from $\frac{1}{16}$" to $\frac{3}{16}$" in diam. and up to ¾" in length.

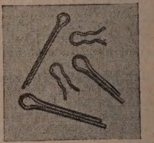
Cat. No.	List Price per pkg.
†2620—Approx. 60 asstd. Rivets	$0.45

WALSCO EYELET ASSORTMENT

Brass eyelets of various diameters and lengths. A handy item for every repair shop.

Cat. No.	List Price per pkg.
†2630—Approx. 55 Eyelets	$0.45

WALSCO SMALL COTTER & HAIR PINS



Package contains an assortment of most popular sizes of cotter and hair pins. A valuable aid in the repair of radios and phonograph mechanisms.

Cat. No.	List Price per pkg.
*2650—Approx. 50 Assorted Cotter and Hair Pins	$0.45

WALSCO HARDWARE ASSORTMENT

A wonderful assortment of screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. Only regular hardware included. Just the thing for the experimenter, ham and technician. In plastic box.

Cat. No.	List Price	Dealer's Net
K3003—"1000 Piece" Hardware Assortment	$1.80	$1.08

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

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†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The 99 *Line* IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● *The* 40 *Line* PACKED IN HANDY ECONOMICAL PLASTIC BAGS

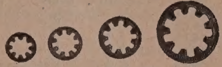
WALSCO METAL WASHERS

Precision steel washers, Cadmium plated, in standard small sizes for innumerable uses.

For Screw Size	Dimensions I.D.	Dimensions O.D.	Dimensions Thick.	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	THE 40 LINE Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	THE 99 LINE Approx. Quan.
#4	.125"	5/16"	1/32"	*3511	80		
#6	.149"	⅜"	1/32"	*3512	80	3512-99	500
#8	.175"	⅜"	1/32"	*3513	80	3513-99	500
#10	.203"	7/16"	1/32"	*3514	75	3514-99	300
¼"	.265"	½"	1/32"	*3515	60	3515-99	300
Assorted				†3510	80		

WALSCO LOCK WASHERS

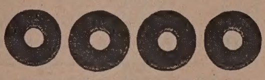
Made of special steel and rust-proofed. Sizes listed below are the most popular ones in the radio and electrical appliance field.



For Screw Size	The 40 LINE $0.45 List Ea. Pkg. Cat. No.	The 40 LINE Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	THE 99 LINE Approx. Quan.
#6	*3592	50	3592-99	300
#8	*3593	45	3593-99	275
#10	*3594	45	3594-99	275
¼"			3595-99	200
⅜"			3596-99	125
Assorted	†3590	45		

WALSCO KNOB FELT WASHERS

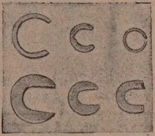
Keep cabinets from being scratched and make knobs turn smoothly. Made of tough brown felt with ¼" hole to fit standard control and condenser shafts. O.D. is approx. ¾" and thickness 1/32".



THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	THE 40 LINE Quan. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	THE 99 LINE Quan. per pkg.
†3490	45	3490-99	250

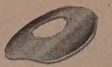
WALSCO RETAINING RINGS AND "C" WASHERS

A necessity in the servicing of volume controls, record changers, etc. The rings are tempered spring steel. The washers are annealed.



Cat. No.	Description	Approx. No. of units per pkg.	List Price per pkg.
†3420	Assorted Rings & Washers	25	$0.45
*3422	"C" Washers for ¼" Shaft	15	0.45
*3423	"C" Washers for 3/16" Shaft	18	0.45

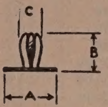
WALSCO SPRING (FRICTION) WASHERS



Used in record changers, automatic tuning assemblies, etc. Assortment contains many popular sizes of phosphor bronze and spring steel washers.

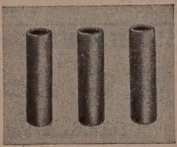
Cat. No.		List Price per pkg.
†3425	Approx. 15 Assorted Spring Washers	$0.45

WALSCO SNAP-IN TRIMOUNTS



Faster than screws. Use them on modern radio sets, back covers, dial scales, chassis, built-in antennae, etc., to speed assembly and repairs.

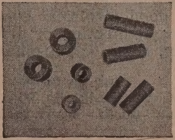
Dimensions A	Dimensions B	Dimensions C	For Hole	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	THE 40 LINE Quan. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	THE 99 LINE Quan. per pkg.
9/32"	13/64"	9/64"	⅛"	*3462	20	3462-99	125
23/64"	9/32"	3/16"	5/32"	*3464	18	3464-99	100
⅜"	⅝"	5/32"	5/32"	*3465	15	3465-99	85
Assorted				†3460	approx. 20		



WALSCO FUSE INSULATORS

Standard fibre insulators for use on automobile radios. Two lengths included fit all standard ¼" diameter fuses.

Cat. No.		List Price per pkg.
†2690	Approx. 16 Assorted Insulators	$0.45



WALSCO METAL AND INSULATING SPACERS

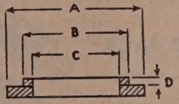
A popular assortment of spacers of various lengths, with hole size to accommodate #6 and #8 screws. Often used for mounting sockets, switches, and for raising panels, chassis, and condensers.

Cat. No.		List Price per pkg.
*2670	Approx. 12 Assorted Insulating Spacers	$0.45
*2680	Approx. 12 Assorted Metal Spacers	0.45

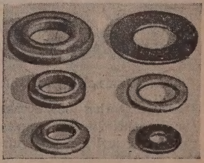
WALSCO INSULATING WASHERS

Precision made of high-grade vulcanized fibre or phenolic material. Used on electronic and electrical equipment to insulate parts from chassis, etc.

In the "99 LINE," WALSCO Insulating Washers come in packages of either flat or extruded washers. In the "40 LINE" the packages contain both flat and extruded washers.



Overall thickness of extruded washers is approximately 3/32" and of the flat washers 1/32".



Dimensions A	Dimensions B	Dimensions C	Dimensions D	Fits Screw Size	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	THE 40 LINE Quan. per pkg. Flat & Extruded	THE 99 LINE $1.80 List — Ea. Pkg. Cat. No.	THE 99 LINE Quan. Flat	THE 99 LINE — $1.80 List Cat. No.	THE 99 LINE Quan. Extruded
5/16	3/16	.136	1/32	#6	*3431	15 and 15	3431-F-99	250	3431-E-99	125
⅜	¼	.165	1/32	#8	*3432	15 and 15	3432-F-99	250	3432-E-99	125
⅜	.308	.195	1/32	#10	*3433	12 and 12	3433-F-99	250	3433-E-99	100
½	11/32	.255	1/32	¼"	*3434	12 and 12	3434-F-99	225	3434-E-99	100
⅝	½	.380	1/32	⅜"	*3435	10 and 10	3435-F-99	175	3435-E-99	85
Assorted					†3430	15 and 15				

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

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†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The **99** *Line*

IN PERMANENT *Transparent* PLASTIC
STORAGE BOXES with SLIDING TOPS

The **40** *Line*

PACKED IN HANDY
ECONOMICAL PLASTIC BAGS

WALSCO TERMINAL LUGS

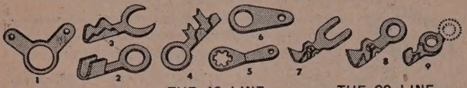
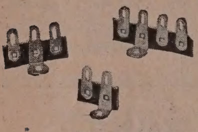


Figure No.	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Approx. Quan.
1	*3281	20	3281-99	125
2	*3282	20	3282-99	140
3	*3283	20	3283-99	115
4	*3284	20	3284-99	100
5	*3285	20	3285-99	100
6	*3286	40	3286-99	250
7	*3287-X	20	3287-X-99	140
8	*3287-Y	20	3287-Y-99	115
9			3287-Z-99	35
Assorted	†3280	30		

WALSCO TERMINAL STRIPS

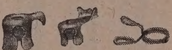


For mounting parts which are to be insulated from chassis, and for wire distribution. Made with high-grade phenolic insulation. Solder-coated terminals.

Cat. No.	List Price per pkg.
*2660—Assortment of various size Strips	$0.45

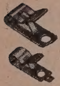
WALSCO GRID CAP ASSORTMENT

An assortment of Grid Caps for all standard metal and glass tubes. Includes clip for hi-voltage TV rectifier tubes.



Cat. No.	List Price, per pkg.
†2600—Approximately 10 Assorted Caps	$0.45

WALSCO SPRING CONNECTOR CLIPS
(FAHNESTOCK TYPE)

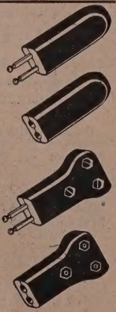


For fast connection and good electrical contact. No tools required for connecting or disconnecting. Made of spring brass or phosphor bronze.

For Wires	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Approx. Quan.
#16 gauge and smaller	*2731	18	2731-99	100
#12 to #18 gauge	*2732	12	2732-99	75
Assorted	*2730	12		

WALSCO MINIATURE PLUG AND JACK

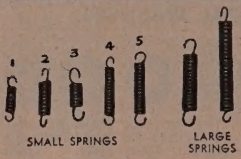
Meets Army, Navy and J.A.N. Specifications



Ideal for hearing aids, speaker extensions, microphone connections and wherever a very small precision plug and jack is required. Housing of Nos. 790 and 791 cement together. Nos. 792 and 793 use small screws. Illustration shown approx. half size.

Cat. No.	List Price
†790—Plug (Type PL291)	$0.60
†791—Jack (Type JK48)	0.80
*792—Plug (Type PL291A)	0.80
*793—Jack (Type JK55)	1.20

WALSCO DIAL DRIVE SPRINGS



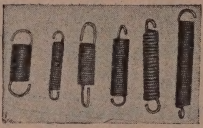
Made of fine music wire for greater flexibility. Available in all standard sizes. Carefully looped at each end, rust-proofed and cadmium plated.

Illustration Approximately two-thirds actual size

Springs	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Qun. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Qun. per pkg.
Assorted (Large and Small)	3400	10	3400-99	50
Assorted Small Springs	3410	10		

Cat. No.	Dimensions Overall Length	Diam.	Wire Thickness	Picture Number	No. of springs per pkg.	List Price
*3411	½"	⅛"	.016"	1	10	$0.45
*3412	⅝"	5/32"	.018"	2	10	0.45
*3413	9/16"	3/16"	.020"	3	10	0.45
*3414	¾"	⅛"	.016"	4	8	0.45
*3415	¾"	5/32"	.020"	5	8	0.45

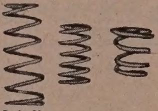
WALSCO EXPANSION SPRINGS



Very handy for radio and electrical shops, laboratories, etc. The assortments contain various sizes of springs for many applications: record changers—to name one of a thousand.

Cat. No.	List per pkg.
†3290—10 Assorted Large Springs	$0.45
†3390—10 Assorted Small Springs	0.45

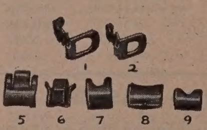
WALSCO COMPRESSION SPRINGS



A hard-to-get item. The Walsco assortments contain all of the springs often needed for repair work on radio and electronic equipment, motors, appliances, etc. Available in two assortments.

Cat. No.	List per pkg.
†3370—20 Assorted Small Springs	$0.45
†3380—15 Assorted Large Springs	0.45

WALSCO RADIO KNOB SPRiNGS

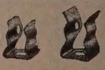


The modern method of fastening knobs to shafts. Available in all regular sizes and shapes. The assortment is complete and most useful to radio shops. Finest grade of selected steel is used.

Cat. No.	Picture No.	Approx. No. of Springs per pkg.	List per pkg.
†3450	Assorted	16	$0.45
*3451	1	8	0.45
*3452	2	10	0.45
*3455	5	10	0.45
*3456	6	18	0.45
*3457	7	20	0.45
*3458	8	25	0.45
*3459	9	25	0.45

WALSCO FUSE CLIPS

Made of spring brass, nickel plated for single hole mounting.



Cat. No.	List Price, per pkg.
*2720—10 Assorted Clips	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

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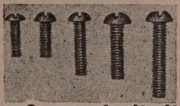
*Std. Pack; Display Box of 20 Individual Packages. Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The 99 *Line*
IN PERMANENT *Transparent* **PLASTIC STORAGE BOXES with SLIDING TOPS**

The 40 *Line*
PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO STEEL MACHINE SCREWS



Round head, cadmium-plated, steel machine screws. Available in assortments or individual sizes, conveniently packaged for experimenters, servicemen and amateurs.

WALSCO Standard Machine Screw Ass'tm't

All the standard sizes used in electronic and similar work are combined in this handy, inexpensive assortment. It contains Nos. 6, 8, 10 screws—¼ to 1″ long.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
Assorted Screws	†3560	40	3560-99	200

WALSCO Small Machine Screw & Nut Ass'tm't

A special assortment of extra small screws (Nos. 2 and 4), and nuts so often needed in electronic and experimental work for fastening small parts, to replace rivets, etc.

Cat. No.	List Price, per pkg.
†3360—Approximately 50 Assorted Screws and Nuts	$0.45

PACKAGES OF SCREWS — INDIVIDUAL SIZES

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#2-56 x 3/16″			3091-99	225
#2-56 x ⅜″	3093	35	3093-99	200
#2-56 x ½″	3094	35	3094-99	200
#4-40 x ¼″	3096	35	3096-99	225
#4-40 x ⅜″			3097-99	200
#4-40 x ½″	3098	35	3098-99	200
#6-32 x ¼″	†3100	40	3100-99	225
#6-32 x ⅜″	†3110	35	3110-99	225
#6-32 x ½″	†3120	35	3120-99	200
#6-32 x ¾″	*3130	30	3130-99	175
#6-32 x 1″			3132-99	150
#8-32 x ¼″	*3135	30	3135-99	200
#8-32 x ⅜″	†3140	30	3140-99	175
#8-32 x ½″	†3150	25	3150-99	160
#8-32 x ¾″	†3160	20	3160-99	140
#8-32 x 1″			3162-99	125
#10-32 x ½″	*3165	20	3165-99	140
#10-32 x ¾″	*3167	20	3167-99	115
#10-32 x 1″	*3169	15	3169-99	100

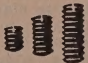
WALSCO THREADED STEEL RODS

These rods have many uses in service and repair work and are made from the finest cold rolled steel to give maximum strength. Each package contains one each of 6-32 and 8-32 threaded rod. Both 8 inches long.

Cat. No.	List Price
†2640—1 each 6-32 and 8-32 Threaded Rod	$0.45

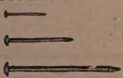
WALSCO STEEL SET SCREWS

Precision, hardened steel set screws in all popular sizes for radio knobs, record changers, home and automobile radios, or wherever set screws are needed.



	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#6-32 x 3/16″	†3210	15		
#8-32 x 3/16″	†3220	15	3220-99	55
#8-32 x ¼″	†3230	15		
#10-32 x ¼″	*3237	15		
Assorted	†3480	15	3480-99	55

WALSCO ESCUTCHEON PIN ASSORTMENT

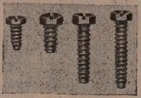


Brass finished pins in various sizes and lengths from ¼″ to ⅝″.

Cat. No.	List per pkg.
†3555—Approx. 100 Asstd. Pins	$0.45

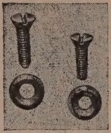
WALSCO SHEET METAL AND SELF-TAPPING SCREWS

These screws cut their own threads in either metal or plastic. Just drill a hole and drive in the screw—no nut or tapping required. Ideal for mounting parts to chassis, replacing rivets and eyelets, etc.



	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
Assorted	†3470	25	3470-99	125
#6 x ¼″	†2910	30	2910-99	150
#6 x ⅜″	*2911	25	2911-99	150
#6 x ½″	*2912	25	2912-99	150
#6 x ¾″	*2914	20	2914-99	125
#6 x 1″	*2916	20	2916-99	125
#8 x ¼″	*2919	20	2919-99	125
#8 x ⅜″	*2920	20	2920-99	125
#8 x ½″	*2922	20	2922-99	125
#8 x ¾″	*2924	15	2924-99	100
#8 x 1″	*2926	15	2926-99	100
#10 x ⅜″	*2930	20	2930-99	100
#10 x ½″	*2932	16	2932-99	100
#10 x ¾″	*2934	15	2934-99	100

WALSCO RACK SCREWS & CUP WASHERS



Oval head screws and cup washers for mounting panels in racks and cabinets, fastening record-players and recording chassis, etc. Enhances appearance of any assembly. Nickel plated.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#6-32 x ⅝″ Screws	*3543	30	3543-99	175
#8-32 x ⅝″ Screws	*3541	25	3541-99	150
#10-32 x ¾″ Screws	*3542	20	3542-99	100
#6 Washers (7/16″ O.D.)	*3544	40	3544-99	275
#8 Washers (½″ O.D.)	*3545	40	3545-99	250
#10 Washers (9/16″ O.D.)	*3546	30	3546-99	200
Asstd. Screws & Washers	†3540	12		

WALSCO ORNAMENTAL HEAD SCREWS

Antique bronze finished; rosette head. For mounting of speakers, etc.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
#6-32 x ¾″	*2951	20	2951-99	125
#6-32 x 1″	*2952	20	2952-99	125
#8-32 x 1¼″	*2953	12	2953-99	80
Assorted	†2950	15		

WALSCO Standard Wood Screw Assortment

Handy assortment for workshop or home. Contains round and flathead screws of popular sizes in brass and steel.

Cat. No.	List Price
†3553—Approx. 30 Screws, per pkg.	$0.45

WALSCO SMALL ESCUTCHEON AND WOOD SCREW ASSORTMENT

This assortment contains the extra small sizes of hard-to-get wood screws as needed by radio men, model builders, etc., for fastening name plates, escutcheons and numerous other devices.

Cat. No.	List Price
†3550—Approx. 30 Assorted Screws, per pkg.	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

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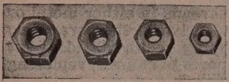
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The 99 *Line*
IN PERMANENT *Transparent* PLASTIC
STORAGE BOXES with SLIDING TOPS

The 40 *Line*
PACKED IN HANDY
ECONOMICAL PLASTIC BAGS

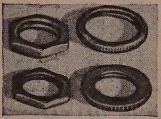
WALSCO MACHINE SCREW NUTS



Walsco nuts are "Small Pattern" as preferred in the electronic and electric trade. Precision made and plated.

	THE 40 LINE		THE 99 LINE			
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Size	Steel, Cadm.Pl. Cat. No.	Apprx. Quan.	Brass, Nickel Pl. Cat. No.	Apprx. Quan.	Steel, Cadm.Pl. Cat. No.	Apprx. Quan.
#2-56	3173	30			3173-99	200
#4-40	3175	30			3175-99	200
#6-32	†3180	35	3180-B-99	150	3180-99	200
#8-32	†3190	30	3190-B-99	125	3190-99	200
#10-32	*3195	25	3195-B-99	100	3195-99	175
Assorted	†3520	35			3520-99	175

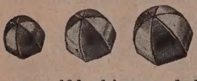
WALSCO SPECIAL MOUNTING NUTS



Various kinds of nuts used on volume controls, switches, jacks, potentiometers, etc. A "must" for every radioman and electrician. All nuts are cadmium or nickel plated.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Description	Cat. No.	Apprx. Quan.	Cat. No.	Apprx. Quan.
⅜" x 32 Vol. Control Hex Nut....	*3531	15	3531-99	85
15/32" x 32 Toggle Switch Hex Nut.	*3532	8	3532-99	50
15/32" x 32 Toggle Switch Ring Nut.	*3533	8	3533-99	50
Assorted..............................	†3530	12		

WALSCO ACORN NUTS



Greatly improves the appearance on panel assemblies, test instruments, cabinets, etc. These PAL type steel nuts are self-locking and bright cadmium plated.

Cat. No.	List per pkg.
*2960—12 Assorted Nuts..	$0.45

WALSCO KNURLED THUMB NUTS

Precision-made, Brass Nuts.

Cat. No.	List Price per pkg.
*2971—Approx. 8 Nuts, 6-32................	$0.45
*2972—Approx. 8 Nuts, 8-32................	0.45
*2973—Approx. 4 Nuts, 10-32...............	0.45

WALSCO WING NUTS

Handy for experimental work and hobby craft.

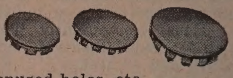
	List per Pkg.
*2975—12 Nuts, 6-32..	$0.45
*2976— 8 Nuts, 8-32..	0.45
*2977— 6 Nuts, 10-32..	0.45

WALSCO GLASS JARS AND PLASTIC BOXES

Handy for storing small hardware items to keep them clean and rust-free.

Cat. No.	List Price
997—Plastic Box with 4 compartments and telescoping lid. 4½" square, 1⅜" high. (Standard pack: 24)................	$0.70
998—Plastic Box with Sliding Lid. (Standard pack: 24)........	0.28
999—Glass Jar, 2 oz. size. (Standard pack: 36)......................	0.13

WALSCO SNAP-HOLE PLUGS



A round, polished nickel-plated flat head, metal button with spring flanges that snap right into the hole. Used to seal adjustments, cover unused holes, etc.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Description	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
For ¼" hole......	*3501	8	3501-99	50
For ⅜" hole......	*3502	8	3502-99	50
For ½" hole......	*3503	6	3503-99	40
For ⅝" hole......	*3504	6	3504-99	30
For ¾" hole......	*3505	5	3505-99	25
For 1" hole......	*3506	4	3506-99	20
Assorted............	†3500	8		

For additional sizes see Industrial and Bulk Price List

WALSCO VENTILATING HOLE PLUGS

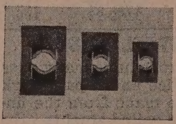
For amplifiers, transmitters, portable radios, amateur equipment, etc., wherever ventilation is required.

Cat. No.	List Price, per pkg.
†3320	$0.45

WALSCO CABLE CLAMPS

Heavy gauge steel, Cadmium plated, ⅜" wide. Perfectly punched and formed with No. 6 or No. 8 mounting holes. Available in 3 sizes for cables from ⅛" to 5/16" in diameter.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
For Cables	Cat. No.	Quan. Per pkg.	Cat. No.	Quan. per pkg.
⅛" to 3/16" Diam.	*3331	20	3331-99	125
3/16" to ¼" Diam.	*3332	18	3332-99	100
¼" to 5/16" Diam.	*3333	15	3333-99	75
Assorted............	†3330	20		

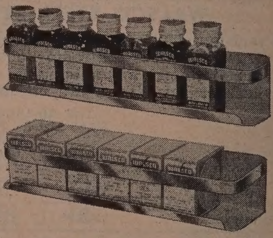


WALSCO SPEED NUTS

Self-locking and easy to install. Often required for replacement on many record changers, tuning units, etc.

Cat. No.	List Price per pkg.
*2980—Approx. 30 Assorted Speed Nuts................	$0.45

WALSCO WALL RACKS



Keeps loose hardware and chemicals in one place. Makes it easy to find and select the item you need. Helps to keep your workbench orderly. Can be fastened firmly to wall or cabinet door. Made of satin finished aluminum with polished edges.

Cat. No	List Price
995—Wall Racks for eight 2-oz. bottles....................................	$1.40
996—Wall Racks holding 7 Walsco 99 Line hardware, Walsco dial cord, or Cat. No. 998 plastic storage boxes............	1.40

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

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WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

CEMENTS — SOLVENTS SPECIAL RADIO CHEMICALS

WALSCO RADIO CEMENT

Vibration-Proof **Heat Resisting**
Unsurpassed Adhesive Power

An elastic cement especially made for the manufacture and repairing of speakers and for general radio work. Unaffected by vibration, dries fast and will not become brittle with age.

Walsco Radio Cement can also be used for repairing cabinets, loose tube bases, grid caps, etc. It will provide a strong bond between almost any materials and is not affected by high temperature, moisture or oil.

WALSCO
RADIO CEMENT

WALSCO
RADIO CEMENT

All bottles come with built-in brush and have an evaporation-proof cap liner.

Cat. No.	List Price
51—1¾ oz. tube	$0.60
52—2 oz. bottle	0.65
54—4 oz. bottle	1.10
58—8 oz. bottle	1.90
59—1 pt. bottle	3.65
50-GL—1 gal. can	11.35

Also available in 5 and 50 gal. containers.

WALSCO CEMENT SOLVENT AND THINNER

WALSCO
CEMENT SOLVENT AND THINNER

This Cement-Solvent is used for loosening cement on speaker cones, voice coils, and other parts where cement has been applied previously. Recommended also for thinning Walsco Radio Cement, Plastic Cement, and Fabric Cement.

Cat. No.	List Price
62—2 oz. bottle	$0.55
64—4 oz. bottle	0.95
68—8 oz. bottle	1 25
69—1 pt. bottle	1.80

WALSCO POLYSTYRENE CEMENT AND COIL DOPE

WALSCO
POLYSTYRENE CEMENT AND COIL DOPE

For Bonding Polystyrene Parts and Coil Coating in Radio and High Frequency Work

A Polystyrene solution with a high solid content. Can be brushed on or parts can be dipped. Renders coils or other parts moisture-proof. Holds windings firmly in place due to a certain amount of shrinkage upon drying. Electrical losses due to coating with this cement are negligible—even if used for high or ultra-high frequency work.

Cat. No.	List Price
152—2 oz. bottle	$0.65
154—4 oz. bottle	1.10

Larger Sizes on Request.

WALSCO Polystyrene Solvent and Thinner

This thinner is especially designed for use with Walsco Polystyrene Cement where regular thinner cannot be used.

Cat. No.	List Price
162—2 oz. bottle	$0.55
164—4 oz. bottle	$0.95

WALSCO IMPRECONE

An impregnating fluid which will render speaker cones moisture-repellent and impervious to fungus and mildew. Also prevents the drying out of cones under heat or adverse climatic conditions. Restores brittle cones to original texture.

Cat No.	List Price
98 —8 oz. bottle	$ 1.75
98-GL—1 gal. can	19.25

WALSCO FABRIC CEMENT

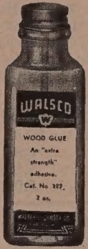
WALSCO
FABRIC CEMENT

Does Not Penetrate the Fabric

Especially made for attaching grille cloth, turntable felt, covering of portable radios, etc. Dries very fast; is unaffected by moisture, sunlight, and high temperature and does not become brittle. Indispensable to Radio Dealers and Servicemen—eliminates the danger of spoiling the outside of a grille cloth, turntable felt, or other fabrics, since it does not penetrate the material.

Cat. No.	List Price
21-A—2 oz. bottle	$0.65

WALSCO WOOD GLUE



An "extra strength" adhesive incorporating the latest chemical developments and resins. A "must" item for every repair shop. Bottle caps have non-sticking rubber gaskets.

Cat. No.	List Price
222—2 oz. bottle	$0.65
224—4 oz bottle	1.10

WALSCO ALL-PURPOSE RUBBER CEMENT

WALSCO
RUBBER CEMENT

For cementing rubber parts to metal or wood, rubber mounts to chassis, rubber cushions to lids, etc.—gives an especially strong bond. A Radio Serviceman should always have a bottle on his work bench.

Cat. No.	List Price
112—2 oz. bottle	$0.65
114—4 oz. bottle	1.20

WALSCO PLASTIC CEMENT

WALSCO
PLASTIC CEMENT

Especially made to repair broken plastic cabinets, knobs, etc. Waterproof, heat-resisting, and heavier in substance than Walsco Radio Cement. Unexcelled as "Household Cement," "Model Airplane Cement," etc. Cements Plastics, Metal, Wood, Glass, etc. Dries fast and forms an exceedingly strong bond.

Cat. No.	List Price
41—1¾ oz. tube	$0.60
42—2 oz. bottle	0.65
44—4 oz bottle	1.20
48—8 oz. bottle	1.90

WALSCO VINYLITE CEMENT

This adhesive uses the new Vinylite plastic resin as a base and has remarkable properties such as high tackiness, extreme flexibility when dry and excellent adhesion to metals, plastics, leather, cardboard and paper. Fast drying. Also an excellent thermoplastic cement for joining nonporous materials (e.g. metals).

Cat. No.	List Price
25—2 oz. bottle	$0.75

WALSCO "NO-SLIP"

Greatly increases the friction of pulleys, cords or belts. Contracts, "sets" and shrinks the fibres Stops instantly any slippage of Dial Belts, Dial Cords, etc. Easily applied with brush.

Cat. No.	List Price
401 —½ oz. bottle	$0.50
402 — 2 oz. bottle	0.80
401D—Display of 12 #401	6.00

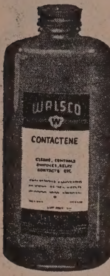
WALSCOFLUX

A non-corrosive soldering flux. Quick acting, easy to apply May be safely used for all electrical, radio and telephone work. Helps to keep the iron tip clean.

Cat. No.	List Price
220—2 oz. bottle with applicator	$0.65

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

CLEANING AND LUBRICATING COMPOUNDS — APPLICATORS



WALSCO "CONTACTENE"

New Improved "Contact Cleaning Fluid"

- Cleans contacts and controls.
- Keeps controls and contacts noise-free.
- Lubricates and reduces friction.

A fast-evaporating combination of special solvents affording greatest cleaning power without affecting insulating materials. Contains "No-Ox," which after evaporation of the solvents, forms a thin film that protects the contacts. Contactene is recommended for treating volume controls, band switches, tuning condensers, springs, etc., to eliminate noisy operation. Bottles come with built-in brushes.

Cat. No.	List Price
82—2 oz. bottle	$0.55
84—4 oz. bottle	0.95
88—8 oz. bottle	1.25
89—1 pt. bottle	2.00

WALSCOLUB - B

Counteracts oxidation, prevents corrosion of metals and eliminates noise on band switches, push buttons, tuners, volume and other controls, as well as air-exposed electrical contacts, attenuators, etc. Will not change electrical properties. It is superior to any graphite compound for this purpose. Ideal on metal surfaces to prevent rust. Large, handy applicator tube.

Cat. No.	List Price
22—1¾ oz. tube	$0.65

Available also in 1 lb., 5-lb. and 25-lb. containers for industrial users. Prices on request.

WALSCO "LUBRIPLATE"

The latest development in chemicals for lubricating purposes. Much superior to ordinary greases because of its higher lubricating and lasting qualities. Its viscosity does not appreciably change with temperature. Used on phonograph motors, record changers, switches, and all appliances that require a grease-type lubricant. In large handy "applicator" tube.

Cat. No.	List Price
23-A—2 oz. tube	$0.65

WALSCO "TUNERLUB"

A special lubricant for use on TV tuners and other high frequency switch contacts. Contains no zinc or other harmful metal oxides. Prevents oxidation and noisy operation.

Cat. No.	List Price
26—1¾ oz. tube	$0.75

WALSCO RADIO DIAL OIL

A light-bodied lubricating oil for all electronic and electrical appliances.

Cat. No.	List Price
72—2 oz. bottle	$0.50

WALSCO "NO-OX"*

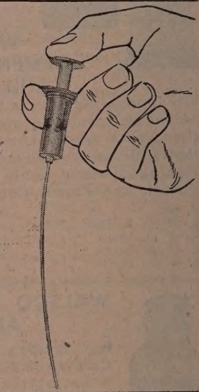
"The Miracle Electronic Contact Fluid"

Fast-acting liquid chemical formulated with a neutral, non-gumming special lubricating base. The answer to the radioman's need for an outstanding contact and control cleaner. Contains no solvents; its corrosion-dissolving action is entirely chemical. Cleans, lubricates and preserves. Proved in tens of thousands of applications by radio laboratories, service shops, broadcasting companies, motion picture, sound and recording studios, etc. "NO-OX" is highly recommended for treatment of volume and tone controls, attenuators, mixers, relay contacts and similar equipment.

Cat. No.	List Price
101—1 oz. bottle	$ 0.85
102—2 oz. bottle	1.60
100-16—1 pt. bottle	12.50

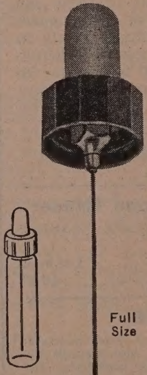
* Mfd. under exclusive licensing agreement with NO-OX Laboratories. Trade mark registered.

WALSCO "LUBRICATOR"



Very useful for applying light greases and oils, such as Walscolub B, Lubriplate, Tunerlub, etc. Designed to reach the many cramped and inaccessible points in radios, TV sets and record changers. Syringe-type pluger releases desired amount of lubricant.

Cat. No.	List Price
988—Lubricator	$0.80
988D—Display of 12 No. 988	9.60



WALSCO "CONTACTENE INJECTOR"

For applying WALSCO Contactene, NO-OX, Dial Oil, etc., to spots which are not accessible with ordinary applicators. "Injector Needle" will permit application of contact chemicals to most volume controls without unsoldering connections or taking control apart.

This tool is made with the highest quality surgical-grade needle, and an oil-resistant rubber bulb.

Comes complete with small glass vial. A handy, useful item for every radio and TV service kit.

Cat. No.	List Price
989 —Contactene Injector	$0.75
989D—Display of 12 No. 989	9.00

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

POLISHES, PAINTS, LACQUERS
SPECIAL CHEMICAL

WALSCO SCRATCH REMOVING POLISH

"Makes Scratches Disappear"

WALSCO
SCRATCH REMOVING POLISH

A blend of polishing and staining ingredients. Removes scratches from cabinets and polishes at the same time. Will not change shade of finish. Use "Dark" for walnut, mahogany, etc. "Light" for light maple, light oak, etc.

Cat. No. Dark	Cat. No. Light		List Price
414	434	4 oz. bottle	$0.55
416	438	8 oz. bottle	0.80

Std. Pkg.—4 oz. bots....1 doz.; 8 oz. bots.....2 doz.

WALSCO SUPER POLISH

"A Concentrated White Cream Wax Polish"

Forms a hard, dry and durable film that will protect the object for a long time, giving it a "brand new" appearance.

Cat. No.	List Price	Standard Package:
412—4 oz. bottle	$0.55	4 oz. bottles 1 doz.
418—8 oz. bottle	0.80	8 oz. bottles 2 doz.

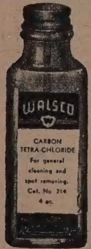
WALSCOCLEAR *(Formula 91)*

A scientific preparation for cleaning plastics such as television filters, lenses, optical systems, vinyl, LP records, etc. WALSCOCLEAR counteracts the dust-attracting electrostatic effect which usually interferes with proper polishing of plastic articles. Absolutely harmless to all plastics.

Cat. No.	List Price
91—4 oz. bottle	$0.55

Standard Package: 12

WALSCO CARBON TETRACHLORIDE



For general cleaning and spot removing. Dissolves dirt and grease instantly. May be used on most delicate parts. Chemically pure, rapid drying, non-explosive and non-inflammable. A safe cleaning fluid.

Cat. No.		List Price
214	4 oz. bottle	$0.80
219	16 oz. bottle	1.90
214-GL	1 gal. can	7.60

WALSCO INSULATING VARNISH

WALSCO
INSULATING VARNISH

A fast "air" drying varnish for radio coils, transformers, solenoids, motors, and all electrical appliances. Withstands heat and is extremely resistant to acid, oil, and grease. It is non-corrosive and moisture-proof. An all-around clear insulating varnish.

Cat. No.	List Price
192—2 oz. bottle	$ 0.65
193—1 pt. can	2.75
194—1 gal. can	15.00

ANTI-CORONA LACQUER

A special, fast-drying coating of very high dielectric strength (over 15,000 V. for a film thickness of 0.010"). Prevents corona discharge and arcing in high-voltage supply of TV sets, when applied to wiring, solder lugs, sharp corners and points on chassis, inside high-voltage cage, etc.

Cat. No.	List Price
195—2 oz. bottle	$1.20
196—1 pt. can	7.50

WALSCO AIR-DRY WRINKLE VARNISH

WALSCO
Air-Dry Wrinkle Varnish

Easy to apply in one coat. WALSCO Air-Dry Wrinkle Varnish provides a film that is hard, tough, and very resistant to wear. Repairs and replaces original wrinkle finish of manufactured equipment. No baking required. WALSCO Wrinkle Varnish will air-dry at room temperature.

Standard colors: grey and black. Other colors upon request.

Cat. No.		List Price
145—Gray	2 oz. jar	$0.65
145—Black	2 oz. jar	0.65
147—Gray	16 oz. jar	3.30
147—Black	16 oz. jar	3.30

WALSCO CRYSTALLIZING LACQUER

Easily applied to metal, wood, cardboard, etc. Brushed on, will dry in about thirty minutes. Identical to finish found on commercial chassis, panels, speakers and transformers. Use Walsco Lacquer Sealer, Cat. No. 142, as undercoat for porous materials or over other finishes.

Cat. No.	List Price
122—2 oz. jar	$0.65
129—16 oz. can	4.10
142—Sealer, 2 oz. jar	0.55

Available colors: Black, Green, Grey, Brown, Clear. Specify color when ordering.

WALSCO LIGHT BULB COLORING

WALSCO
LIGHT BULB COLORING

A transparent, heat and moisture-resisting dipping lacquer especially made for coloring bulbs such as used in radio dials, signal systems, auto dash lights, and fancy illumination. Big jars permit dipping of even larger bulbs.

Cat. No.	List Price
116 Red—2 oz. jar	$0.65
117 Blue—2 oz. jar	0.65
118 Green—2 oz. jar	0.65
119 Assorted—Kit of 3	1.75

WALSCO SATIN FINISH LACQUER
(TELEPHONE)

WALSCO
TELEPHONE BLACK

Made for commercial and amateur use on cabinets, chassis, panels, meters, racks, etc. This "satin finish" lacquer dries very fast and produces the "original finish" of most standard telephone and communication equipment. It air dries. May be brushed or sprayed.

Cat. No. Black	Cat. No. Grey		List Price
172	182	2 oz. jar	$0.65
179	189	1 pt. can	3.30

WALSCO FUNGUS LACQUER

Meets government specifications for moisture and fungus treating of electronic equipment. Applied by brush, dip or spray. Air-dries quickly.

Cat. No.	List Price
135—2 oz. bottle	$ 0.65
136—1 pint can	2.75
137—1 gal. can	16.50
THINNER FOR FUNGUS LACQUER	
138 —8 oz. can	$1.25
138-GL—1 gal. can	7.50

WALSCO "STRIPVAR"

Rapidly removes enamel, Formvar, Formex and similar insulation from magnet wires. Just dip wire in "Stripvar" and wipe off.

Cat. No.		List Price
130	2 oz. bottle	$ 0.75
131	1 pt. can	4.50
130-GL	1 gal. can	25.00

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

WALSCO *products*
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

REFINISHING and REPAIR KITS

WALSCO RADIO CABINET PATCHING OUTFIT

"The Most Popular Kit on the Market"

PLASTIC WOOD

A complete kit especially designed for radio men who have little experience in cabinet work. Over 95% of all cabinet-finish damages can be repaired with this kit. The kit contains two shades of Spirit Walnut Stain, Dark Brown Lacquer, Plastic Wood, two shades of Ivory Spirit Enamel, Patching Lacquer, Super Polish, Alcohol, Brushes, Garnet Finishing Paper, French Polishing Pad, and Steel Wool, together with complete Instruction Booklet.

Cat. No.	List	Dealer's Net
K-10—In sturdy box with hinged lid	$7.15	$4.29
K-10-W—In California redwood case	8.25	4.95

WALSCO RADIO CABINET REPAIR KIT

A very handy compact and inexpensive kit that fills the requirements of many shops and stores. Especially useful for the Dealer or Serviceman who has only occasional cabinet repairs. The kit contains one bottle each of the following: Ivory Spirit Enamel—light and dark; Lacquer Enamel—Dark Brown; Spirit Stain; Super Polish; French Varnish; Finishing Paper; Steel Wool; Polishing Cloth; Instruction Booklet.

Cat. No.	List	Dealer's Net
K-9	$3.30	$1.98

WALSCO STICK SHELLAC KIT

An inexpensive kit for servicemen who have some experience in cabinet refinishing. Combined with Radio Cabinet Patching Outfit (K-10) it makes a most economical and completely professional kit for repairing radio cabinets. The shellac sticks match in color almost any cabinet on the market. The Walsco shellac rubbing fluid makes it possible to smooth the patch without any effort or skill. Kit includes: six colors Stick Shellac, Alcohol Lamp, Burn-in Spatula, bottle of Shellac Rubbing Fluid, Felt, Steel Wool, Alcohol and Instructions.

Cat. No.	List	Dealer's Net
K-11	$3.85	$2.31

REFILLS OF POPULAR REFINISHING MATERIALS AS CONTAINED IN ABOVE KITS

Cat. No.	List Price
Stains	
287—Spirit Stain, 1 oz. (Walnut, Mahogany, Maple, Black)	$0.33
288—Spirit Stain, 8 oz.	1.55
289—Blending Stain (Lt. Brown, Med. Brown)	0.80
Patching Lacquer (Improved French Varnishing Materials)	
290—4 oz. bottle	1.30
291—16 oz. bottle	3.85
Stick Shellac Rubbing Fluid	
295—4 oz. bottle	0.80
296—16 oz. bottle	1.90
Stick Shellac	
299—Set of 8 assorted colors	1.95

WALSCO "SUPER-CHIEF" REFINISHING KIT

A "Must" Item

This is the most complete kit of its kind on the market. Designed by Walsco for radio dealers. It contains everything which is needed to make an old radio look like new—all handy in one box-type carrying case. Contents of kit can be used by either skilled or unskilled refinishers, to completely refinish old radios and trade-ins, or to quickly patch up scratches, mars, etc. This kit will pay for itself on the first or second job. Every first-class radio dealer should have one. Kit contains the following:

Spirit Stain Dark Walnut
Spirit Stain Black
Spirit Stain Mahogany
Spirit Stain Maple
Super Polish
Spirit Stain Light Walnut
Blending Stain Light Brown
Blending Stain Medium Brown
Lacquer Enamel Light Ivory
Lacquer Enamel Dark Brown
Lacquer Enamel Dark Ivory
Shellac Rubbing Fluid
Stick Shellac (8 asstd. shades)
Scratch Removing Polish (Dark)
Scratch Removing Polish (Light)
Patching Lacquer
Alcohol Lamp
Alcohol
Spatula
Felt
Polishing Cloth
Polishing Pad
Garnet Paper (8 sheets)
Instruction Book
Brushes (3 different sizes)

Cat. No.	List	Dealer's Net
K-26	$20.35	$12.21

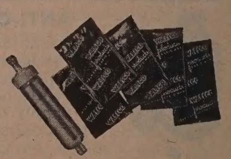
WALSCO FURNITURE REFINISHING KIT

Ideal for touch-up work on radios, furniture, pianos, etc. Scratches, mars, dents, broken edges can be repaired quickly. Contains: Super Polish, Patching Lacquer, Alcohol, Spirit Stains in Walnut, Mahogany, Maple and Black; Shellac Rubbing Fluid, Plastic Wood, six colors Stick Shellac, Alcohol Lamp, Spatula, Brushes, Garnet Finishing Paper, Complete Instruction Book. Kit furnished in California Redwood case with hinged lid.

Cat. No.	List	Dealer's Net
K-15	$8.80	$5.28

WALSCO TIRE STATIC NEUTRALIZING KIT

- **Reduces or Eliminates Automobile Radio Tire Static.**
- **Dissipates Body Contact Shock *(Door-handle Sparks).***



This kit contains a special injector gun and 5 packages of WALSCO Static Neutralizing Powder (one for each tire, including spare). The powder is blown into each tire in a very simple operation, which takes just a few minutes and lasts for the life of the tire.

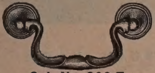
Cat. No.	List Price
980—Tire Static Neutralizing Kit, complete with injector, powder and instructions	$2.95
982—Injector gun only	1.80
985—Powder only (enough for 5 passenger-car tires)	1.10

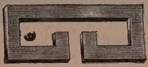
WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

CABINET HARDWARE SPEAKER ACCESSORIES

WALSCO KNOBS & PULLS

The most distinctive cabinet hardware available. Attractively finished. Rigid construction, will not rattle. Mounting screws included.


Cat. No. 330-7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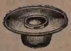
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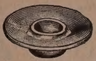
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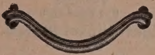
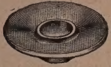
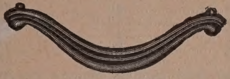

Cat. No. 330-5


Cat. No. 330-3

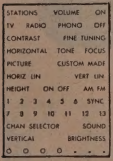

Cat. No. 330-6

Cat. No.	Size	Finish	List Price Each
330-1	1 ⅞″ diam.	Brass	$0.45
330-2	2⅝″ diam.	Brass	0.75
330-3	3″ diam.	Brass	0.90
330-4	3 ¾″ long	Brass	1.90
330-5	4 ¼″ long	Bronze	1.00
330-6	6 ⅛″ long	Bronze	1.45
330-7	4″ long	Bronze	1.05

WALSCO DRAWER SLIDES

Made of durable, heavy-gauge steel, with a corrosion-resistant finish. Will make drawers slide smoothly and easily—no sticking or drag. Furnished with screws.

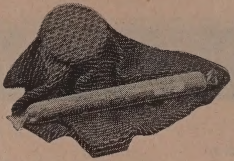
Cat. No.	Size	List Price, Per Pair
331-1	14″ long (Standard pack: 6 pairs)	$2.75



TV RECEIVER DECALS

Complete sets of markings in gold-colored, easy-to-read type, for custom-built sets or for replacement purposes. Over 40 markings per set, including: Tuning, Contrast, Focus, Sync., Brightness, etc.

Cat. No.	List Price, per package
2551—2 complete sets of Decals (Standard Pack: 20 packages No. 2551)	$0.45

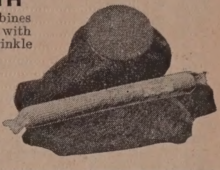


GRILLE CLOTH

Acoustically perfect cloth available to match walnut, mahogany or light wood finishes. For custom cabinets or renewing older sets.

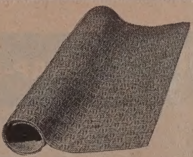
Cat. No.	Size	List Price
360	12″ x 12″	$0.70
361	18″ x 24″	1.80
362	1 yard x 50″ (packaged)	6.90

PLASTIC GRILLE CLOTH



The finest in grille covering. Combines the rich appearance of heavy silk with outstanding wearing qualities. Wrinkle or stain resistant. For use on high-grade radio and TV cabinets. Will give the quality look to any installation. Available in 6 standard patterns. Samples on request.

Cat. No.	List Price
365—1 yd. x approx. 44" packaged	$15.20

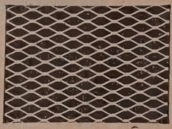


GRILLE SCREENING
(Flocked)

Galvanized, rayon-flock covered screening. Attractive, weather-proof and modern. For auto radios, P.A. and Intercom. speakers, etc.

Cat. No. Brown	Cat. No. Ivory	Size	List Price
374-1	374-3	8″ x 11″	$0.95
376-1	376-3	18″ x 24″	3.20
378-1	378-3	36″ x 36″	9.90

ORNAMENTAL METAL GRILLE



Heavy perforated grille, beautifully "brushed brass" plated and lacquered with gold finish effect. For use over cloth or screening in custom-built radios, high quality P.A. speakers, juke boxes, etc.

Cat. No.	Size	List Price
382	12″ x 18″	$ 3.00
384	18″ x 24″	5.50
386	24″ x 36″	10.45

WALSCO FLOCK FINISH SPRAY KIT

For flock finishing of radio cabinets, speaker grilles, interior of record and other cabinets, turntables, jewelry and gift boxes, toys, novelties and many automotive and hobby uses. This original WALSCO Flock Kit is very easy to use and requires no skill — anyone can obtain expert results. Contains everything to produce a colorful, velvet-like and durable flock finish. The kit includes patented felt flock spray gun, ivory and brown felt flock, undercoats to match, thinner, brushes and complete instructions.

Cat. No. K-50—Complete Flocking Kit.......List Price, $13.10

WALSCO FELT FLOCK MATERIALS

Felt Flock

Made of precision cut, lustrous rayon. Packed in 3¼ oz. containers (covers 7 to 10 square feet). List Price.......$1.80

Cat. No.	Color	Cat. No.	Color
470	Brown	475	Green
471	Ivory	476	Silver
472	Blue	477	White
473	Taupe	478	Black
474	Red	479	Canary
474-1	Maroon		

List Price
Flock per pound (specify color).......$6.05

Flock Undercoat

Provides proper adhesive and color base for felt flock. Packaged in halfpint cans (covers 10-15 square feet of non-porous surface). List Price.......$1.80

Cat. No.	Color	Cat. No.	Color
480	Brown	484-1	Maroon
481	Ivory	485	Green
482	Blue	486	Silver-White
483	Taupe	488	Black
484	Red	489	Canary

List Price
Undercoat per gal (specify color).......$15.85

WALSCO
WALSCO
WALSCO
WALSCO
WALSCO

Undercoat Thinner

For thinning of Undercoat, if necessary, and washing out brushes.

Cat. No.	List Price
468—Half-pint can	$0.60

Felt Flock Spray Gun

Same as contained in WALSCO Flock Finish Spray Kit.

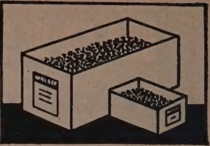
Cat. No.	List Price
455	$4.80

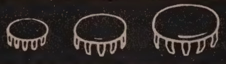
WALSCO ELECTRONIC HARDWARE

The 99 *Line*

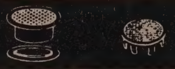
BULK PACK

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS





HOLE PLUGS



THE "99 LINE"

$1.08 Net, Ea. Pkg.

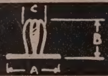
BULK PACK

SNAP-HOLE PLUGS, Steel, Bright Nickel-Plated

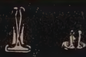
Description	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 250 to 4999	5M and up
Fits ⅛" hole			3501-1	$16.45	$12.65
Fits 3/16" hole			3501-1A	16.45	12.65
Fits ¼" hole	3501-99	50	3501-2	16.45	12.65
Fits ⅜" hole	3502-99	50	3501-3	16.45	12.65
Fits ½" hole	3503-99	40	3501-4	18.11	13.92
Fits ⅝" hole	3504-99	30	3501-5	23.00	17.71
Fits ¾" hole	3505-99	25	3501-6	23.00	17.71
Fits ⅞" hole			3501-7	27.95	21.51
Fits 1" hole	3506-99	20	3501-8	32.89	25.30
Fits 1⅛" hole			3501-9	36.17	27.83
Fits 1¼" hole			3501-10	39.45	30.36

VENTILATING HOLE PLUGS

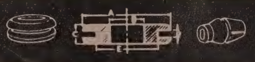
Description	Bulk Part No.	100 to 999	1M and up
Snap-fit for 1" hole, screen type	3320-1	$97.75	$75.90
Snap-fit for 1" hole, perforated type	3320-7	76.00	59.00
Eyelet-type for 13/32" hole	3320-2	28.12	21.62
Eyelet-type for ¾" hole	3320-3	32.95	25.36



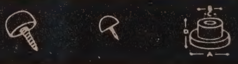
SNAP-IN TRIMOUNTS



Dimensions A	B	C	For Hole	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
9/32"	13/64"	9/64"	⅛"	3462-99	125	3460-2	$5.29	$4.03
23/64"	9/32"	3/16"	5/32"	3464-99	100	3460-4	6.27	4.83
⅜"	⅝"	5/32"	⅛"	3465-99	85	3460-5	8.22	6.33



GROMMETS, CABINET FEET AND CHASSIS MOUNTS



RUBBER GROMMETS

Dimensions, inches A	B	C	D	E	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
11/32	⅛	3/16	1/16	¼	3341-99	85	3340-1	$ 7.53	$ 5.81
7/16	3/16	7/32	1/16	5/16	3342-99	85	3340-2	8.28	6.38
9/16	¼	¼	1/16	⅜	3343-99	65	3340-3	10.35	7.99
⅝	⅜	¼	1/16	½	3344-99	55	3340-4	11.73	9.03
13/16	½	9/32	1/16	⅝	3345-99	35	3340-5	18.86	14.49

CORD STRAIN RELIEFS

Description	Bulk Part No.	500 to 9999	10M and up
For POSJ Wire	3340-9	30.13	23.17

RUBBER FEET

SCREW-TYPE:

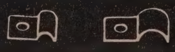
Diameter	Height	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
⅜"	7/32"	3351-99	55*	3350-1*	7.36	5.69
½"	9/32"	3352-99	50*	3350-2*	8.11	6.27
¾"	⅜"	3353-99	30*	3350-3*	16.04	12.36
		(*Wood screws included.)		(*No screws included.)		

TACK FEET:

Description	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
⅜" diameter	3355-99	55	3350-5	12.82	9.89
½" diameter	3356-99	50	3350-15	13.23	10.18

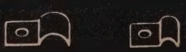
CHASSIS MOUNTS

Dimensions, inches A	B	C	D	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
¾	½	¼	⅜	2742-99	25	2740-2	24.09	18.52
1	½	¼	17/32	2744-99	20	2740-4	30.13	23.17



CABLE CLAMPS

Steel, cadmium plated



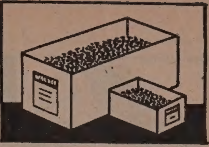
For Cables	Mounting Hole Size	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
⅛" to 3/16" diameter	#6	3331-99	125	3330-1	$5.06	$3.91
3/16" to ¼" diameter	#8	3332-99	100	3330-2	5.69	4.37
¼" to 5/16" diameter	#8	3333-99	75	3330-3	6.79	5.23

WALSCO ELECTRONIC HARDWARE

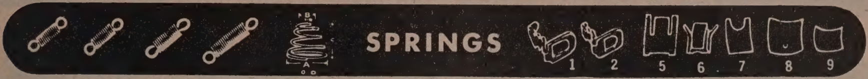
The 99 *Line*

BULK PACK

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



SPRINGS



THE "99 LINE"

$1.08 Net, Ea. Pkg.

BULK PACK

DIAL DRIVE SPRINGS, Steel, Cadmium-Plated

O/L	Diameter	Wire Size	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 250 to 4999	5M and up
½″	⅛″	.016″			3410-1	$13.51	$10.29
⅝″	5/32″	.018″			3410-2	13.51	10.29
9/16″	3/16″	.020″			3410-3	13.80	10.58
¾″	⅛″	.016″			3410-4	13.80	10.58
¾″	5/32″	.020″			3410-5	14.09	10.75
1″	13/64″	.022″			3400-1	15.81	12.13
1¼″	13/64″	.022″			3400-2	17.42	13.40
Assorted			3400-99	50			

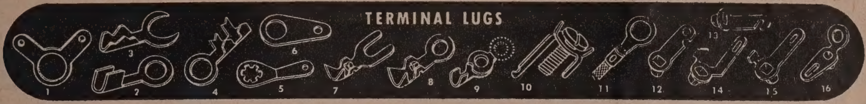
PHONO PANEL MOUNTING SPRINGS, Spring Steel, Cadmium-Plated

Dimensions A	B	C	Wire Thickness	Bulk Part No.	250 to 4999	5M and up
1″	⅜″	⅞″	.075″	3385-1	12.82	9.78
1 3/16″	11/32″	1″	.062″	3385-2	13.51	10.35
¾″	¼″	¾″	.047″	3385-3	12.65	9.55

KNOB SPRINGS

Description	Bulk Part No.	250 to 4999	5M and up
Style 1	3450-1	12.25	9.43
Style 2	3450-2	11.50	8.86
Style 5	3450-5	12.65	9.72
Style 6	3450-6	6.10	4.72
Style 7	3450-7	4.95	3.80
Style 8	3450-8	4.26	3.28
Style 9	3450-9	4.49	3.45

TERMINAL LUGS



SOLDER TYPE

Style	Available for Screw Numbers (Specify)	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
1	#6, #8, #10	3281-99	125	3280-1	$5.69	$4.37
2	#6, #8	3282-99	140	3280-2	4.77	3.68
3	#6, #8	3283-99	115	3280-3	5.87	4.49
4	#6, #8, #10	3284-99	100	3280-4	6.21	4.77
5	#6, #8	3285-99	100	3280-5	8.17	6.27
6	#6, #8, #10	3286-99	250	3280-6	2.59	2.01
7	#10	3287X-99	140	3280-7X	4.83	3.74
8	#10	3287Y-99	115	3280-7Y	5.87	4.49

SCREW TYPE

Description	Bulk Part No.	100 to 999	1M and up
10 with #8-32 x ⅜″ Screw	3288-3-1	$46.06	$35.42

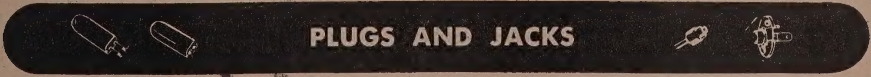
SOLDERLESS TYPE

Style	Fits Screw #	Fits Wire Gauge #	Part No.	Quantity per Package	Bulk Part No.	250 to 4999	5M and up
9 fits both #8 and #10			3287Z-99	35	3280-7Z	$18.57	$14.26
11	6	16 to 20			3288-1-6	21.39	16.45
11	8	16 to 20			3288-1-8	21.39	16.45
11	10	16 to 20			3288-1-10	21.39	16.45

EYELET TYPE

Style	Bulk Part No.	1000 to 9999	10M and up
12	3288-2-1	$3.28	$2.53
13	3288-2-2	4.60	3.57
14	3288-2-3	3.62	2.76
15	3288-2-4	4.60	3.57
16	3288-2-5	8.57	6.56

PLUGS AND JACKS



MINIATURE PLUGS AND JACKS, Not Assembled

Description	Bulk Part No.	100 to 999	1M and up
2-Conductor Plug (type PL-291)	2590 BU	$292.50	$225.00
2-Conductor Jack (type JK-48)	2591 BU	439.47	338.04
2-Conductor Plug (PL-291-A)	2592 BU	Prices on request	
2-Conductor Jack (JK-55)	2593 BU	Prices on request	

PHONO PLUGS AND JACKS

Description	Bulk Part No.	100 to 999	1M and up
Shielded, Single-Conductor Plug	2580-1	45.43	34.21
Shielded, Single-Conductor Jack	2580-6	71.30	54.63

WALSCO ELECTRONIC HARDWARE

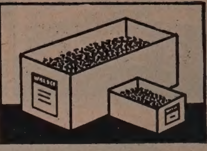
The 99 *Line*

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

●

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



MACHINE SCREWS

ROUND HEAD, Steel, Cadmium-Plated

Description	THE "99 LINE" $1.08 Net, Ea. Pkg. Part No.	Quantity per Package	BULK PACK Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up
Sizes Assorted	3560-99	200			
#2-56 x 3/16"			3561-2-1A	$2.36	$1.84
#2-56 x ⅜"			3561-2-3	2.47	1.90
#2-56 x ½"			3561-2-4	2.59	1.96
#4-40 x ¼"			3561-4-2	2.59	2.01
#4-40 x ⅜"			3561-4-3	2.70	2.13
#4-40 x ½"			3561-4-4	2.88	2.24
#4-40 x 1"			3561-4-8	3.74	2.88
#6-32 x ¼"	3100-99	225	3561-6-2	2.88	2.24
#6-32 x ⅜"	3110-99	225	3561-6-3	3.16	2.42
#6-32 x ½"	3120-99	200	3561-6-4	3.34	2.59
#6-32 x ¾"	3130-99	175	3561-6-6	3.91	2.99
#6-32 x 1"	3132-99	150	3561-6-8	4.43	3.39
#8-32 x ¼"	3135-99	200	3561-8-2	3.74	2.88
#8-32 x ⅜"	3140-99	175	3561-8-3	3.97	3.05
#8-32 x ½"	3150-99	160	3561-8-4	4.31	3.28
#8-32 x ¾"	3160-99	140	3561-8-6	4.89	3.80
#8-32 x 1"	3162-99	125	3561-8-8	5.64	4.37
#10-32 x ½"	3165-99	140	3561-10-4	5.00	3.85
#10-32 x ¾"	3167-99	115	3561-10-6	5.92	4.54
#10-32 x 1"	3169-99	100	3561-10-8	6.73	5.18

BINDING HEAD, Brass

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ¼"			3565-6-2	4.89	3.74
#6-32 x ⅜"			3565-6-3	5.58	4.31
#6-32 x ½"			3565-6-4	6.33	4.89
#8-32 x ¼"			3565-8-2	7.02	5.41
#8-32 x ⅜"			3565-8-3	7.94	6.15

SHEET METAL SCREWS

HEX HEAD, Slotted, Type "B" — Blunt Point

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
Sizes Assorted	3470-99	125			
#6 x ¼"	2910-99	150	3471-6-2	$3.97	$3.05
#6 x ⅜"	2911-99	150	3471-6-3	4.20	3.22
#6 x ½"	2912-99	150	3471-6-4	4.37	3.39
#6 x ¾"	2914-99	125	3471-6-6	4.95	3.80
#6 x 1"	2916-99	125	3471-6-8	5.41	4.14
#8 x ¼"	2919-99	125	3471-8-2	4.95	3.80
#8 x ⅜"	2920-99	125	3471-8-3	4.89	3.80
#8 x ½"	2922-99	125	3471-8-4	5.23	4.03
#8 x ¾"	2924-99	100	3471-8-6	6.04	4.66
#8 x 1"	2926-99	100	3471-8-8	6.90	5.29
#10 x ⅜"	2930-99	100	3471-10-3	6.04	4.66
#10 x ½"	2932-99	100	3471-10-4	6.33	4.89
#10 x ¾"	2934-99	100	3471-10-6	7.13	5.46

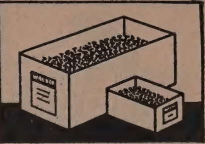
WALSCO ELECTRONIC HARDWARE

The 99 *Line*

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



SET SCREWS

Steel, hardened

THE "99 LINE"
$1.08 Net, Ea. Pkg.

BULK PACK

HEADLESS TYPE, Slotted, Cadmium-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 500 to 9999	10M and up
Assorted	3480-99	55			
#6-32 x ⅛"			3481-6-1	$13.28	$10.18
#6-32 x 3/16"			3481-6-1A	11.44	8.80
#6-32 x ¼"			3481-6-2	11.50	8.86
#8-32 x ⅛"			3481-8-1	13.28	10.18
#8-32 x 3/16"	3220-99	55	3481-8-1A	11.44	8.80
#8-32 x ¼"			3481-8-2	11.50	8.86
#10-32 x 3/16"			3481-10-1A	11.50	8.86
#10-32 x ¼"			3481-10-2	11.73	9.03

HEX — ALLEN-HEAD

Description	Bulk Part No.	100 to 999	1M and up
#4-40 x ⅛"	3482-4-1	$62.04	$47.73
#5-40 x ⅛"	3482-5-1	62.79	48.30
#6-32 x ⅛"	3482-6-1	63.54	48.88
#6-32 x 3/16"	3482-6-1A	64.29	49.45
#6-32 x ¼"	3482-6-2	64.29	49.45
#8-32 x ⅛"	3482-8-1	64.29	49.45
#8-32 x 3/16"	3482-8-1A	65.03	50.03
#8-32 x ¼"	3482-8-2	65.78	50.60
#10-32 x 3/16"	3482-10-1A	65.78	50.60
#10-32 x ¼"	3482-10-2	66.53	51.18
¼-20 x ¼"	3482-¼-2	68.02	52.33

MISC. SCREWS

WOOD SCREWS

Size	Head	Finish	Bulk Part No.	1000 to 9999	10M and up
#2 x ¼"	Oval Hd.	Statuary Bronze	3550-2-2	$4.49	$3.45
#2 x ⅜"	Oval Hd.	Statuary Bronze	3550-2-3	4.72	3.62
#2 x ½"	Round Hd.	Statuary Bronze	3550-2-4	4.89	3.74
#3 x ⅜"	Round Hd.	Blued	3550-3-3	4.72	3.62
#6 x ½"	Round Hd.	Blued	3550-6-4	5.29	4.08
#6 x ⅞"	Flat Hd.	Cadmium-Plated	3550-6-7	5.75	4.43
#8 x ⅝"	Round Hd.	Blued	3550-8-5	6.15	4.77

ORNAMENTAL HEAD SCREWS, Steel, Statuary Bronze Finish

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ¾"	2951-99	125	2951-6-6	4.37	3.34
#6-32 x 1"	2952-99	125	2951-6-8	5.12	3.97
#8-32 x 1¼"	2953-99	80	2951-8-10	7.65	5.87

RACK SCREWS, Oval Head, Steel, Nickel-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ⅝"	3543-99	175	3541-6-5	3.68	2.82
#8-32 x ⅝"	3541-99	150	3541-8-5	4.60	3.51
#10-32 x ¾"	3542-99	100	3541-10-6	5.92	4.54
#12-24 x ⅝"			3541-12-5	7.13	5.46

MISC. FASTENERS

SPADE BOLTS, Steel, Cadmium-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ⅝" O/L	3271-99	100	3270-1	$6.96	$5.35
#6-32 x ¾" O/L	3272-99	100	3270-2	7.02	5.41

HAIR PIN and COTTER PINS, Straight

Dimensions A	B	C		Bulk Part No.	1000 to 9999	10M and up
⅜"	1/16"	.026"		2650-1	3.34	2.53
⅜"	3/32"	.026"		2650-2	3.34	2.53
½"	9/64"	.032"		2650-3	3.34	2.53
⅝"	3/16"	.047"		2650-4	3.12	2.40
½"	——	——	1/16" straight type	2650-7	1.48	1.14
¾"	——	——	1/16" straight type	2650-8	1.87	1.44

THREADED ROD, Steel

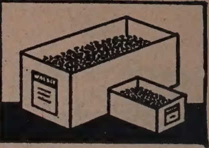
Description	Bulk Part No.	100 to 999	1M and up
#6-32; 8" long	2640-1	$52.04	$40.02
#8-32; 8" long	2640-2	54.74	42.09

WALSCO ELECTRONIC HARDWARE

The 99 *Line*

BULK PACK

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



HEX NUTS

Description			THE "99 LINE" $1.08 Net, Ea. Pkg.		BULK PACK		
Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up

SMALL PATTERN, Steel, Cadmium-Plated

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
Assorted			3520-99	175			
2-56	3/16"	1/16"			3521-2	$4.26	$2.88
4-40	3/16"	1/16"	3175-99	200	3521-4	4.26	2.88
6-32	1/4"	3/32"	3180-99	200	3521-6	3.62	2.70
8-32	5/16"	7/64"	3190-99	200	3521-8	4.03	2.99
10-32	5/16"	7/64"	3195-99	175	3521-10	4.31	3.34

STANDARD PATTERN, Steel, Cadmium-Plated

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
6-32	5/16"	7/64"			3522-6	3.85	2.99
8-32	11/32"	1/8"			3522-8	4.31	3.34
10-32	3/8"	1/8"			3522-10	4.72	3.62

BRASS NUTS, Nickel-Plated

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
4-36	1/4"	3/32"			3523-4X*	4.31	3.22
4-40	1/4"	3/32"			3523-4*	4.31	3.22
6-32	1/4"	5/64"	3180-B-99	150	3523-6*	4.31	3.22
8-32	11/32"	1/8"	3190-B-99	125	3523-8*	7.19	5.46
10-32	3/8"	1/8"	3195-B-99	100	3523-10*	7.94	6.04

(*Brass, Add 10% for Nickel Plating)

MOUNTING NUTS

VOLUME CONTROL HEX NUTS, Steel, Cadmium-Plated

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
3/8-32	1/2"	3/32"	3531-99	85	3530-1	$ 7.65	$ 5.87

VOLUME CONTROL HEX NUTS, Brass

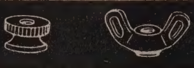
Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
3/8-32	1/2"	3/32"			3530-1B	16.91	13.00

TOGGLE SWITCH HEX NUTS, Steel, Cadmium-Plated

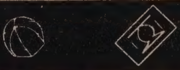
Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
15/32-32	9/16"	3/32"	3532-99	50	3530-2	14.26	10.98

TOGGLE SWITCH RING NUTS, Brass, Nickel-Plated

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
15/32-32	19/32"	5/64"	3533-99	50	3530-3	13.92	10.70



SPECIAL NUTS



KNURLED THUMB NUTS, Brass

Thread Size	Bulk Part No.	1000 to 9999	10M and up
#6-32	2971-6	$12.31	$ 9.43
#8-32	2971-8	12.31	9.43
#10-32	2971-10	25.82	19.90

WING NUTS, Zamack Metal, Nickel-Plated

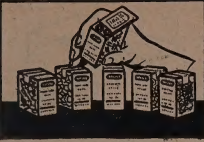
Thread Size	Bulk Part No.	1000 to 9999	10M and up
#6-32	2976-6	9.09	7.02
#8-32	2976-8	14.32	11.04
#10-32	2976-10	18.46	14.20

ACORN NUTS, PAL TYPE, Steel, Nickel-Plated

Thread Size	Bulk Part No.	1000 to 9999	10M and up
#6-32	2961-6	12.25	9.43
#8-32	2961-8	14.09	10.81
#10-32	2961-10	17.54	13.46

SPEED NUTS, Tempered Steel, Parkerized

Thread Size	Bulk Part No.	1000 to 9999	10M and up
#6-32	2981-6	4.08	3.11
#8-32	2981-8	5.69	4.37
#10-24	2981-10	7.36	5.64
1/4-20	2981-1/4	10.41	8.05



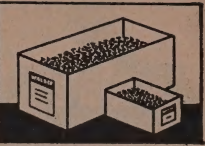
WALSCO ELECTRONIC HARDWARE

The 99 Line

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

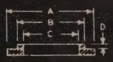
BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



INSULATING WASHERS

Phenolic Fibre



THE "99 LINE"

$1.08 Net, Ea. Pkg.

BULK PACK

EXTRUDED TYPE

Fits Screw No.	A	B	C	D	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up
6	5/16"	3/16"	.136"	1/32"	3431-E-99	125	3432-6	$5.41	$4.14
8	3/8"	1/4"	.165"	1/32"	3432-E-99	125	3432-8	5.41	4.14
10	3/8"	.308"	.195"	1/32"	3433-E-99	100	3432-10	5.98	4.60
1/4"	1/2"	11/32"	.255"	1/32"	3434-E-99	100	3432-1/4	6.38	4.89
3/8"	5/8"	1/2"	.380"	1/32"	3435-E-99	85	3432-3/8	7.36	5.69

FLAT TYPE

Fits Screw No.	O.D.	I.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
6	5/16"	.136"	1/32"	3431-F-99	250	3431-6	2.65	2.07
8	3/8"	.165"	1/32"	3432-F-99	250	3431-8	2.82	2.19
10	3/8"	.195"	1/32"	3433-F-99	250	3431-10	2.88	2.24
1/4"	1/2"	.255"	1/32"	3434-F-99	225	3431-1/4	3.05	2.36
3/8"	5/8"	.380"	1/32"	3435-F-99	175	3431-3/8	3.97	3.05

MISC. WASHERS

FLAT METAL WASHERS, Steel, Cadmium-Plated

Fits Screw No.	O.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
4	9/32"	1/32"			3511-4	$1.04	$..81
6	3/8"	1/32"	3512-99	500	3511-6	1.09	.86
8	3/8"	1/32"	3513-99	500	3511-8	1.09	.86
10	7/16"	1/32"	3514-99	300	3511-10	1.61	1.21
1/4"	1/2"	1/32"	3515-99	300	3511-1/4	1.90	1.44

LOCK WASHERS, Int. Teeth, Steel, Cadmium-Plated

Fits Screw No.	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
4			3591-4	2.36	1.84
6	3592-99	300	3591-6	2.36	1.84
8	3593-99	275	3591-8	2.53	1.96
10	3594-99	275	3591-10	2.53	1.96
1/4"	3595-99	200	3591-1/4	3.28	2.53
3/8"	3596-99	125	3591-3/8	5.69	4.37

SPRING (FRICTION) WASHERS

I.D.	O.D.	Thickness	Bulk Part No.	1000 to 9999	10M and up
1/8"	5/16"	.010"	3425-1	8.05	6.33
3/16"	3/8"	.008"	3425-2	8.91	6.90
1/4"	1/2"	.012"	3425-3	10.06	7.76

CUP WASHERS, Steel, Nickel-Plated

Fits Screw No.	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
6	3544-99	275	3542-6	2.24	1.73
8	3545-99	250	3542-8	2.76	2.13
10	3546-99	200	3542-10	3.45	2.65
12			3542-12	4.95	3.80

"C" WASHERS, Soft Steel, Cadmium-Plated

Fits Shaft	A	B	C	Thickness	Bulk Part No.	1000 to 9999	10M and up
1/4"	.260	3/16"	1/16"	1/32"	3420-2	7.19	5.52
3/16"	5/32"	1/8"	1/16"	1/32"	3420-3	6.21	4.77

KNOB FELT WASHERS, Brown

O.D.	I.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
3/4"	1/4"	1/32"	3490-99	250	3490-1	2.01	1.27

PHONE TIPS

	Part No.	Quantity per Package	Bulk Part No.	250 to 4999	5M and up
15/16" O/L	2725-99	60	2725-1	$10.41	$7.99

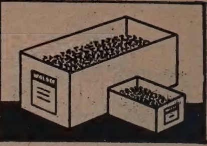
WALSCO ELECTRONIC HARDWARE

The 99 Line

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS

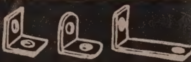


MISC. CLIPS

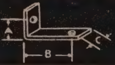
Description			THE "99 LINE" $1.08 Net, Ea. Pkg. Part No.	Quantity per Package	BULK PACK Bulk Part No.	Net Prices, per Thousand	
Length	Width	Mtg. Hole Size *				1000 to 9999	10M and up
SPRING CLIPS, Spring Brass, Nickel-Plated							
11/16"	7/32"	4 and 5	2731-99	100	2730-1	$ 6.50	$5.00
13/16"	5/16"	6	2732-99	75	2730-2	8.80	6.79
GRID CAPS						250 to 4999	5M and up
For Glass Tubes					2600-1	$22.43	$17.25
For Metal and "GT" Tubes					2600-4	7.25	5.58
For High Voltage TV Rectifier Tube					2600-6	34.39	26.45
FUSE CLIPS							
For ¼" Fuses					2720-1	9.20	6.61
For 9/32" Fuses					2720-2	16.10	12.42

FUSE INSULATORS

Description	Bulk Part No.	1000 to 9999	10M and up
1⅛" long, ¼" I.D.	2690-1	$ 3.85	$2.93
⅝" long, ¼" I.D.	2690-2	3.39	2.65



ANGLE BRACKETS



Material	Dimensions A	B	C	Bulk Part No.	500 to 9999	10M and up
Brass, cadmium-plated	7/32"	¼"	¼"	2610-1	$ 7.88	$6.04
Steel, cadmium-plated	¼"	⅝"	5/16"	2610-2	8.28	6.38
Brass (one hole tapped 6-32)	5/32"	5/16"	5/16"	2610-5	11.44	8.80

INSULATING TUBING

FLEXITUBE

Extruded vinyl tubing; dielectric strength: 15,000 v.
Clear will be supplied unless order specifies color. Black, Green or Red available subject to stock on hand.

Part No.	Size, B & S Gauge No.	Approx. I.D. Inches	MM.		Part No.	Price per thousand ft. 100 to 1999* ft.	2M* ft. and up
R 600	18	.042	1		R 600	$ 17.25	$ 10.14
R 601	16	.053	1.4		R 601	17.25	10.14
R 602	14	.066	1.6		R 602	17.94	11.93
R 603	12	.085	2		R 603	18.40	13.70
R 604	10	.106	2.7		R 604	20.70	14.03
R 605	8	.133	3.5		R 605	25.53	15.30
R 606	6	.166	4		R 606	29.90	18.40
R 607	4	.208	5		R 607	36.80	26.45
R 608	2	.263	6.5		R 608	51.75	34.50
R 609	....	.330		Flat to fit 300-ohm twin-lead. Clear color only. 75 ft. hanks	R 609	54.63	43.59

RAYOFLEX

Lacquered-rayon tubing, radio grade. Meets A.S.T.M. Specifications B-2.
Available in Black, Blue, Red, and Yellow. Please specify color.

Part No.	Size, B & S Gauge No.	Approx. I.D. Inches	MM.	Part No.	100 to 1999* ft.	2M* ft. and up
(Following sizes supplied in continuous lengths.)						
R 630	18	.042	1	R 630	$ 45.43	$ 34.96
R 631	15	.059	1.5	R 631	50.26	38.63
R 632	12	.085	2	R 632	59.69	45.89
R 633	9	.118	3	R 633	69.00	53.13
R 634	6	.166	4	R 634	77.97	60.03
(Following sizes supplied in 30-inch lengths.)						
R 635	2	¼"	6.5	R 635	122.82	94.53
R 636	0	5/16"	8.5	R 636	164.68	126.73
R 637	00	⅜"	9.5	R 637	197.57	152.03
R 638	0000	½"	13	R 638	272.32	209.53

*Various sizes and colors, but not less than 100 ft. of any one size or color, may be combined in one order to take advantage of quantity discounts. Sizes other than listed above can be supplied. Prices quoted on request.

WALSCO *products*
Help The Radio Man
WALTER L. SCHOTT COMPANY, BEVERLY HILLS, CALIFORNIA

BULK PRICE LIST
DIAL CABLE & CORDS — GRILLE CLOTH & SCREENING — CHEMICALS & FINISHES

DIAL CABLE AND CORDS

Part No.	Description	3000 to 14,999 ft.	15M ft. and up
	METAL CABLES		
R 30	Phosphor bronze cable, twisted, 42-strand, .032″ diameter	$23.00/M ft.	$17.71/M ft.
R 31	Bronze cable, braided, 16-strand, .038″ diameter	11.50/M ft.	9.20/M ft.
R 32	Bronze cable, braided, 8-strand, .026″ diameter	12.65/M ft.	9.78/M ft.
	NYLON CORDS		
	Constructed with impregnated fibreglass core, and black nylon braid. Construction combines minimum stretch, high coefficient of friction, and maximum resistance to abrasion.		
R 35	"Special-Thin" Cord, approximately .026″ diameter	$10.35/M ft.	$ 6.96/M ft.
R 39	Standard Cord, approximately .032″ diameter	10.81/M ft.	7.13/M ft.
R 34	Medium Cord, approximately .040″ diameter	12.42/M ft.	9.20/M ft.
R 33	Heavy-Duty Cord, approximately .060″ diameter	20.13/M ft.	15.53/M ft.

GRILLE CLOTH, SCREENING AND METAL GRILLE

Part No.	Description	5 to 49 yd.	50 yd. and up
	GRILLE CLOTH		
R 362 BU	Standard Grille Cloth, 48-54″ wide. (Available in Light, Walnut, and Mahogany)	$3.50/yd.	$2.80/yd.
R 365 BU	Wrinkle- and Stain-Resistant, Highest Quality Material. Approx. 44″ wide. (Available in 6 Standard Patterns)	7.94/yd.	6.10/yd.

FLOCKED GRILLE SCREENING

Part No.	Color	Width, inches	10 to 99 ft.	100 ft. and up
R 374-1 BU	Brown	11	$ .52/lin. ft.	$ .40/lin. ft.
R 374-3 BU	Light Ivory	11	.52/lin. ft.	.40/lin. ft.
R 376-1 BU	Brown	18	.75/lin. ft.	.58/lin. ft.
R 376-3 BU	Light Ivory	18	.75/lin. ft.	.58/lin. ft.
R 378-1 BU	Brown	36	1.50/lin. ft.	1.15/lin. ft.
R 378-3 BU	Light Ivory	36	1.50/lin. ft.	1.15/lin. ft.

Note: Grille Cloth and Flocked Grille Screening also available in "cut-to-order" sizes........Prices Quoted on Request

ORNAMENTAL METAL GRILLE

R 380 Available in a variety of finishes and in any size up to 48″ width........Prices Quoted on Request

CHEMICALS AND FINISHES

Part No.	Description	1-gal. Cans	5-gal. Cans
	INDUSTRIAL ADHESIVES		
R 21	WALSCO Fabric Cement	$8.63/gal.	$6.67/gal.
R 40	WALSCO Plastic Cement	8.63/gal.	6.67/gal.
R 50	WALSCO Radio Cement	6.33/gal.	4.95/gal.
R 110	WALSCO Rubber Cement	8.63/gal.	6.67/gal.
R 150	WALSCO Polystyrene Cement	6.79/gal.	5.18/gal.
	SOLVENTS & THINNERS		
R 1	For Lacquer No. 120	4.60/gal.	3.57/gal.
R 2	For Cement No. R 110 and Wrinkle Varnish No. R 145	1.44/gal.	1.09/gal.
R 60	For Cements Nos. R 20, R 40, and R 50	4.03/gal.	3.11/gal.
R 160	For Cement No. R 150	2.88/gal.	2.24/gal.
R 214	Carbon-Tetrachloride	4.31/gal.	3.45/gal.
	SPECIAL CHEMICALS		
		1-lb. Cans	5-lb. Cans
R 22	WALSCOLUB-B	$1.73/lb.	$1.38/lb.
R 23A	Lubriplate	1.38/lb.	.92/lb.
		1-gal. Cans	5-gal. Cans
R 80	Contactene	$ 5.75/gal.	$ 4.49/gal.
R 100	No-Ox	29.90/gal.	23.00/gal.
R 190	Insulating Varnish	7.48/gal.	5.87/gal.
	POLISHES		
R 410	WALSCO Super Polish	4.03/gal.	3.11/gal.
R 414	Scratch-Removing Polish, Dark	2.88/gal.	2.24/gal.
R 430	Scratch-Removing Polish, Light	2.88/gal.	2.24/gal.
	LACQUERS AND FINISHES		
R 120	Crystallizing Lacquer: Black, Green, Grey, Clear, Brown	11.50/gal.	9.37/gal.
R 145	Wrinkle Varnish — Air-Dry: Grey or Black	11.39/gal.	9.26/gal.

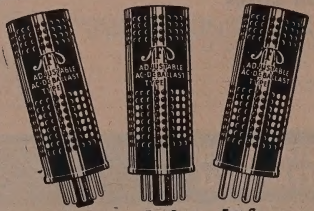
Improved • Air-Cooled
JFD AC-DC Adjustable Ballasts

Just

3 ***Adjustable Ballasts***

***Replace Over* 3000**

Exact Duplicate AC-DC Resistance Tubes!



Type A
8 Prong

Type B
8 Prong

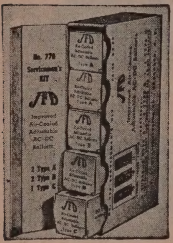
Type C
4 Prong

JFD *IMPROVED AIR-COOLED* ADJUSTABLE AC-DC BALLASTS HAVE THESE *IMPROVEMENTS:*

1. Air-Cooled Perforated Shell
2. Larger Insulating Surface
3. Longer Life, Heavier Resistance Wire
4. Exact Adjustments made

LIST PRICE $1.65 ea.

Over 3,000,000 JFD Adjustable Ballasts have been sold since 1934 — practically every one still in use, giving service and satisfaction.



Dealer's and Serviceman's Kit
Improved • Air-Cooled
AC-DC Adjustable Ballasts

No. 770—SERVICEMEN'S KIT

contains 5 Ballasts: 2 Type A, 2 Type B, 1 Type C Ballasts together with listing of over 2500 replacements and complete instructions.............................List Price $8.25

GET THIS FREE AC-DC BALLAST TUBE MANUAL!

Contains valuable information on how to adapt adjustable ballasts to all service jobs. Simply send 12 flaps from JFD Dial Belt envelopes and 10c in stamps (to cover mailing) to JFD MANUFACTURING CO. INC., 6101 Sixteenth Ave., Brooklyn 4, N. Y., U. S. A.

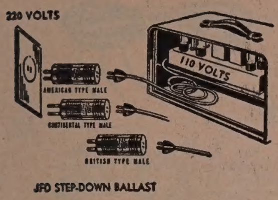
USE JFD BALLASTS	TO REPLACE AC-DC RESISTANCE TUBES		
	Beginning with Letter	With Numbers Including	Ending with letter
"A" Ballasts	K, L, M, BK, BL, or BM	6 through 42	A, B, C, D, F, G, or H
"B" Ballasts	K, L, M, BK, BL, or BM	45 through 105	A, B, C, D, F, G, H, S1, S2, S3
"C" Ballasts	All 4 prongs	80 through 350	R, R4, R8, L, L4, L8

AC-DC STANDARD TUBES—RMA STANDARD CODING

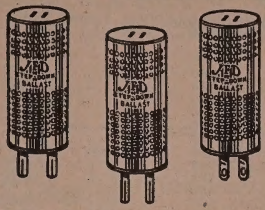
Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
10A Addison	$1.10	M36B	$1.10	M42C	$1.10	KZ49B	$1.40	K55D	$1.10	K72B	$1.10
17A	1.10	M36C	1.10	M42D	1.10	KZ49C	1.40	BK55D	1.10	K73C	1.10
K17B	1.10	M36D	1.10	M42E	1.10	L49B	1.10	K55F	1.10	M73B	1.10
K17C	1.10	42A	1.10	M42F	1.10	L49BJ	1.40	K55H	1.10	K74B	1.10
L17B	1.10	42B2	1.40	M42H	1.10	L49C	1.10	KX55A	1.40	K74C	1.10
L17C	1.10	K42B	1.10	49A	1.10	L49CJ	1.40	KX55B	1.40	K74D	1.10
K22B	1.10	K42BJ	1.40	K49B	1.10	L49D	1.10	KX55C	1.40	80A	1.10
K23B	1.10	BK42B	1.10	K49BJ	1.10	L49DJ	1.40	L55B	1.10	K80B	1.10
L23B	1.10	BL42B	1.10	BK49B	1.10	L49E	1.10	L55C	1.10	K80C	1.10
L23C	1.10	K42C	1.10	K49C	1.40	L49F	1.10	L55CP	1.40	K80D	1.10
33A	1.10	BK42C	1.10	BK49C	1.40	LX49B	1.40	L55D	1.10	K80F	1.10
33AG	1.10	BL42C	1.10	K49CJ	1.10	LX49C	1.40	L55F	1.10	K80H	1.10
36A	1.10	K42D	1.10	K49D	1.10	LX49D	1.40	L55H	1.10	L80B	1.10
K36B	1.10	BK42D	1.10	BK49D	1.10	M49B	1.10	M55B	1.10	L80C	1.10
BK36B	1.10	KX42A	1.40	K49E	1.10	M49C	1.10	M55C	1.10	M80B	1.10
K36BJ	1.10	KX42B	1.40	K49F	1.10	M49D	1.10	M55D	1.10	M80C	1.10
K36C	1.10	KX42C	1.40	K49H	1.10	M49H	1.10	M55F	1.10	K87B	1.10
K36D	1.10	L42B	1.10	KX49A	1.10	50	1.10	M55H	1.10	90A	1.10
K36H	1.10	L42BJ	1.40	KX49B	1.40	K52H	1.10	60R30	1.40	K90B	1.10
KX36A	1.40	L42C	1.10	KX49C	1.40	55A	1.10	62A	1.10	K90C	1.10
KX36B	1.40	L42CJ	1.40	KX49D	1.40	K55B	1.10	K67B	1.10	92A	1.10
KX36C	1.40	L42D	1.10	KY49A	1.40	BK55B	1.10	K67BJ	1.40	K92B	1.10
L36B	1.10	L42DJ	1.40	KY49B	1.40	BL55B	1.10	K67C	1.10	K92C	1.10
L36C	1.10	L42E	1.10	KY49C	1.40	K55C	1.10	K67D	1.10	K92D	1.10
L36D	1.10	M42B	1.10	KZ49A	1.40	BK55C	1.10	L67C	1.10	K92F	1.10
L36DJ	1.40									K92H	1.10

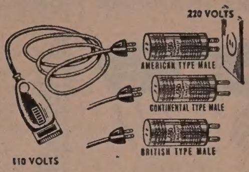
JFD *Plug-in type* RESISTOR BALLASTS

STEP-DOWN FROM 220 VOLTS TO 110 VOLTS



JFD STEP-DOWN BALLAST





Use JFD voltage reducing ballasts on 220 volt current supply if you want to operate 110 volt appliances. Excellent for radios, floor lamps, clocks, therapeutic lamps, electric blankets, etc.

Catalog No.	Resist.	Current	Voltage Drop	Watts	Male End	Female End	Load	List Price
450	97	1.13	220-110	125	American	American	125 W Infra Red Therapeutic Lamp	$2.65
451B	97	1.13	220-110	125	British	American	125 W Infra Red Therapeutic Lamp	2.65
451C	97	1.13	220-110	125	Continental	American	125 W Infra Red Therapeutic Lamp	2.65
456	250	.44	220-110	65	American	American	35-65 W Radio Heating Pads	2.65
457B	250	.44	220-110	65	British	American	35-65 W Radio Heating Pads	2.65
457C	250	.44	220-110	65	Continental	American	35-65 W Radio Heating Pads	2.65
458	300	.35	220-110	38	American	American	4-5 Tube AC-DC Radio, .3 Amp tubes	2.65
459B	300	.35	220-110	38	British	American	4-5 Tube AC-DC Radio, .3 Amp tubes	2.65
459C	300	.35	220-110	38	Continental	American	4-5 Tube AC-DC Radio, .3 Amp tubes	2.65
462	500	.22	220-110	25	American	American	General Use	2.65
463B	500	.22	220-110	25	British	American	General Use	2.65
463C	500	.22	220-110	25	Continental	American	General Use	2.65
464	560	.20	220-110	25	American	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.65
465B	560	.20	220-110	25	British	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.65
465C	560	.20	220-110	25	Continental	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.65
466	660	.167	220-110	8	American	American	General Use	2.65
467B	660	.167	220-110	8	British	American	General Use	2.65
467C	660	.167	220-110	8	Continental	American	General Use	2.65
468	1345	.082	220-110	9	American	American	Electric Razor	2.65
469B	1345	.082	220-110	9	British	American	Electric Razor	2.65
469C	1345	.082	220-110	9	Continental	American	Electric Razor	2.65
470	6000	.018	220-110	2	American	American	Electric Clock	2.65
471B	6000	.018	220-110	2	British	American	Electric Clock	2.65
471C	6000	.018	220-110	2	Continental	American	Electric Clock	2.65
472	110	.950	220-110	105	American	American	15-7 Watt Xmas lights in parallel	2.65
473B	110	.950	220-110	105	British	American	15-7 Watt Xmas lights in parallel	2.65
473C	110	.950	220-110	105	Continental	American	15-7 Watt Xmas lights in parallel	2.65
474	960	.115	220-110	13	American	American	Schick Razor	2.65
475B	960	.115	220-110	13	British	American	Schick Razor	2.65
475C	960	.115	220-110	13	Continental	American	Schick Razor	2.65
476	1100	.1	220-110	11	American	American	Packard Razor	2.65
477B	1100	.1	220-110	11	British	American	Packard Razor	2.65
477C	1100	.1	220-110	11	Continental	American	Packard Razor	2.65
478	475	.230	220-110	26	American	American	6 tube AC-DC Radio Using .15 Amp tubes	2.65
479B	475	.230	220-110	26	British	American	6 tube AC-DC Radio Using .15 Amp tubes	2.65
479C	475	.230	220-110	26	Continental	American	6 tube AC-DC Radio Using .15 Amp tubes	2.65
480	300	.300	220-110	33	American	American	Remington Razor	2.65
481B	300	.300	220-110	33	British	American	Remington Razor	2.65
481C	300	.300	220-110	33	Continental	American	Remington Razor	2.65
482	785	.140	220-110	16	American	American	Portable Radio Total Current drain .140 Amp.	2.65
483B	785	.140	220-110	16	British	American	Portable Radio Total Current drain .140 Amp.	2.65
483C	785	.140	220-110	16	Continental	American	Portable Radio Total Current drain .140 Amp.	2.65
484	430	.255	220-110	28	American	American	Detrola Automatic Phono Turntable	2.65
485B	430	.255	220-110	28	British	American	Detrola Automatic Phono Turntable	2.65
485C	430	.255	220-110	28	Continental	American	Detrola Automatic Phono Turntable	2.65
488	2000	.055	220-110	6	American	American	General Use	2.65
489B	2000	.055	220-110	6	British	American	General Use	2.65
489C	2000	.055	220-110	6	Continental	American	General Use	2.65
490	143	.87	220-110	96	American	American	65-130 Watt 110 Volt Radio	2.65
491B	143	.87	220-110	96	British	American	65-130 Watt 110 Volt Radio	2.65
491C	143	.87	220-110	96	Continental	American	65-130 Watt 110 Volt Radio	2.65

JFD FOREIGN ADAPTER

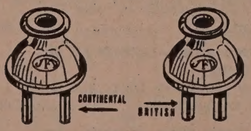
Converts American Male Plug to Continental and British Male Plugs

Converts Foreign receptacles into the standard American type—in a jiffy!

No. 2-449—with Continental type prongs. **List Price $0.37**

No. 2-450—with British type prongs. **List Price $0.37**

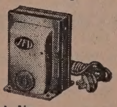
JFD Bakelite Handle Cap for Use in Foreign Countries



Comes with Continental or British Prongs

No.		List Price
2-451	Cap with Continental type prongs	**$0.30**
2-452	Cap with English type prongs	.35

JFD Step-Down Transformers



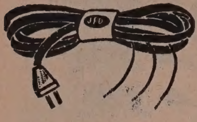
220V - 110V
AC - DC

Cat. No.	Watts	List
52-85	85	$13.87
52-150	150	15.00
52-200	200	15.75
52-300	300	20.02
52-500	500	32.40
52-1000	1000	57.60
52-1500	1500	82.80
52-2000	2000	99.00
52-2500	2500	103.80
52-3000	3000	121.80

JFD New Enlarged Line of AC-DC RESISTANCE LINE CORDS

STANDARD 3 TERMINALS AC-DC RESISTANCE CORDS

FLEXIBLE, STURDY CORDS, 3-TERMINAL TYPE, WITH COLOR-CODED, TINNED LEADS



Attractive individual Cartons

No.	Ohms	List
*2180	135	$1.40
*2181	160	1.40
*2182	180	1.40
*2183	200	1.40
2184	220	1.40
2185	250	1.40
2186	290	1.40
2187	300	1.40
2188	330	1.40
2189	350	1.40
2190	390	1.40
2450	450 (High Resist.)	2.06

*Note: 135, 160, 180, and 200 ohm cords can also be used for single light 20 and 15 watt fluorescent fixtures.

TAPPED 4 TERMINAL AC-DC RESISTANCE CORDS

Pilot light resistor shunt built into the line cord. Used on Emerson, Zenith, Sparton, R. C. A., General Electric, Wells-Gardner, Sears Roebuck, Fada, Admiral, Air King, Detrola, Crosley, Garod, and others.

No. List, Ea.

2176—160 OHMS—TAPPED AT 24 OHMS
For sets using tubes having a voltage drop of approximately 69 volts as 2-25 volt tubes and 3-6.3 volt tubes plus single pilot light or similar combination $1.66

2195—165 OHMS—TAPPED AT 30 OHMS
There is a large demand for this tapped line cord 1.66

2177—180 OHMS—TAPPED AT 25 OHMS
For sets using tubes having a voltage drop of approximately 63 volts as 2-25 volt tubes and 2-6.3 volt tubes plus a single pilot light or similar combination 1.66

2178—200 OHMS—TAPPED AT 25 OHMS
For sets using tubes having a voltage drop of approximately 57 volts as 1-25 volt tube, 1-12 volt tube and 3-6.3 volt tubes and a single pilot light. May also be used for sets using tubes having a voltage drop of 63 volts, (2-25 volt and 2-6.3 volt tubes) if high line voltage (125 volts) is encountered.......... 1.66

2179—200 OHMS—TAPPED AT 40 OHMS
For sets using tubes having a voltage drop of approximately 57 volts as 1-25 volt tube, 1-12 volt tube and 3-6.3 volt tubes and two pilot lights in series 1.66

No. List, Ea.

2174—280 OHMS—TAPPED AT 40 OHMS
For sets using tubes having a voltage drop of approximately 32 volts as 2-12 volt tubes and 1-6.3 volt tube or 5-6.3 volt tubes or similar combinations using 2 pilot light in series $1.66

2164—360 OHMS—TAPPED AT 80 OHMS
Used in Garod Model BP-20. See No. 2196 for specifications.......... 2.06

2166—430 OHMS—TAPPED AT 80 OHMS
For Farnsworth Model CD59. See No. 2196 for specifications.......... 2.06

2156—510 OHMS—TAPPED AT 80 OHMS
For Fada. See No. 2196 for specifications 2.06

2196—560 OHMS—TAPPED AT 80 OHMS
Tapped at 80 ohms for plate of rectifier. Designed with voltage dropping resistor to plate of rectifier. Avoids necessity of using B+ resistor 2.06

2158—960 OHMS—TAPPED AT 80 OHMS
For G. E. Model L622. See No. 2196 for specifications 2.06

2165—1950 OHMS—TAPPED AT 360 OHMS
Used extensively in sets such as Crosley Model 27BD, Admiral Model 28-G-5, and other sets with similar circuits 2.47

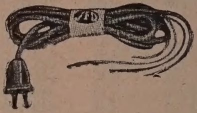
HIGH RESISTANCE CORDS

No. List Price

2197 For 3-way portable radios. AC-DC battery. New high resistance type cord, has 560 ohms resistance. Many thousands of sets using this identical cord are now in use. This popular replacement cord should be stocked by every serviceman! Individually packaged $2.06

2157—For AC-DC Sets.
This cord has 960 ohms resistance, and is used wherever 45Z3 rectifier tube is employed. (For pocket type radios, such as: Admiral, Fada, Sentinel, Sonora, Motorola, Detrola. Farnsworth, etc.) Individually packaged 2.06

REPLACEMENT LINE CORD FOR MOTOROLA SETS



No. List Price

2198—8 ft. cord containing 2 resistance elements—1100 and 280 ohms. Has 4 terminals. Essential replacement for all Motorola portables. Nos. 41D, 51D, 52D, 41H $2.47

COMBINATION ANTENNA WIRE and STRAIGHT AC CORD

No. List Price

2168—3-wire cord with special female socket to fit sets which have three prong male plug, used in Sentinel, Admiral, Belmont, Sonora, etc. Individually packaged.......... $2.06

UNIVERSAL AC-DC RESISTANCE LINE CORDS

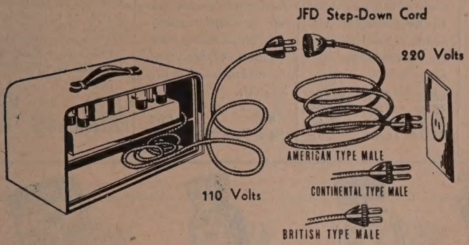
No. List Price

2175—This line cord replaces AC-DC cords from 220 ohms to 300 ohms. Can be used for either standard three terminal or tapped cord.......... $2.06

STEP-DOWN — AC-DC
RESISTOR LINE CORDS

(Step-Down from 220 V. to 110 V.)

JFD STEP-DOWN LINE CORDS FOR RADIOS

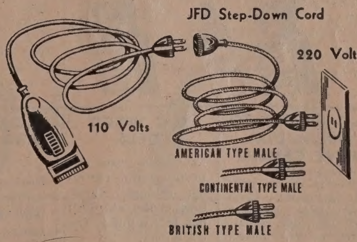


Cat. No.	Description	List Price
2432C	220V-110V Stepdown for 6 tube sets drawing .150 amps. Continental Male and American Female Plugs	$2.90

Cat. No.	Description	List Price
2191	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. American Male Plug	$2.88
2193C	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. Continental Male Plug	2.88
2193B	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. British Male Plug	2.88
2192	220V-110V Stepdown for 5 tube sets drawing .15 amps. American Male Plug	2.88
2194C	220V-110V Stepdown for 5 tube sets drawing .15 amps. Continental Male Plug	2.88
2194B	220V-110V Stepdown for 5 tube sets drawing .15 amps. British Male Plug	2.88
2430A	220V-110V Stepdown for 6 tube sets drawing .150 amps. American Male and Female Plugs	2.90
2431B	220V-110V Stepdown for 6 tube sets drawing .150 amps. British Male and American Female Plugs	2.90

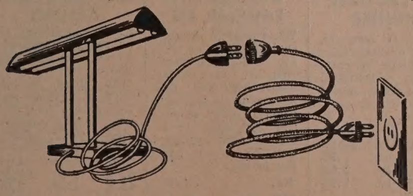
JFD STEP-DOWN LINE CORDS FOR ELECTRIC RAZORS

Cat. No.	Description	List Price
2203	220V-110V Stepdown for Remington Rand Razor 15W. American Female and American Male	$3.12
2203B	220V-110V Stepdown for Remington Rand Razor 15W. American Female and British Male	3.12
2203C	220V-110V Stepdown for Remington-Rand Razor 15W. American Female and Continental Male	3.12
2204	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and American Male	3.12
2204B	220-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and British Male	3.12
2204C	220V-110V Stepdown for Shick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and Continental Male	3.12
2205	220V-110V Stepdown for Packard Razor 6W with American Female and American Male	3.12
2205B	220V-110V Stepdown for Packard Razor 6W with American Female and British Male	3.12



Cat. No.	Description	List Price
2205C	220V-110V Stepdown for Packard Razor 6W with American Female and Continental Male	$3.12

JFD AC-DC LINE CORDS FOR FLUORESCENT FIXTURES



Cat. No.	Description	List Price
2181FL	165 ohm, for 20 watt bulb, 117 volts, 6 feet long	$1.40
2181FL-2	2-Two 165 ohm windings, for two 20 watt bulbs, 117 volts, 6 feet long	2.40
2182FL	180 ohm, for 15 watt bulb, 117 volts, 6 feet long	1.40
2200FL	2-Two 180 ohm windings, for two 15 watt bulbs, 117 volts, 6 feet long	2.40

GENERAL G-C CEMENT RADIO CEMENTS FOR ALL PURPOSES

RADIO SERVICE CEMENT

RADIO SERVICE SOLVENT

PLASTIC CEMENT

G-C RADIO SERVICE CEMENT

The best Cement for repairing radios and speakers. Excellent for repairing and replacing torn cones. Vibration-proof, water-proof and fast drying. Brushes attached.

No.		List
30-2	2-oz.	$0.65
34-2	Tube	.55
30-4	4-oz.	1.10
30-6	6-oz.	1.55
30-8	8-oz.	1.95
30-16	16-oz.	3.65

G-C RADIO SERVICE SOLVENT

Best Solvent for loosening cement on speaker cones, frames, etc. Will dissolve all cements on speakers. Brush attached.

No.		List
31-2	2-oz.	$0.55
31-4	4-oz.	.95
31-6	6-oz.	1.10
31-8	8-oz.	1.40
31-16	16-oz.	1.95

G-C CEMENT THINNER

Made of same solvents as G-C Service Cement. Best thinner for all cements.

No.		List
28-2	2-oz.	$0.55
28-4	4-oz.	.95
28-8	8-oz.	1.40
28-16	16-oz.	1.95

G-C SPEAKER CEMENT

Best grade cement put up in handy tubes. For radio and speaker repairs. Water-proof, vibration-proof, fast drying.

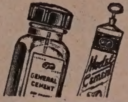
No.	List
34-2 2-oz. Tube	$0.55

G-C PLASTIC CEMENT

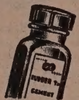
For cementing broken plastic cabinets, knobs, dial and crystal assemblies, grille cloth, etc. Fast drying. Brush attached.

No.		List
32-2A	2-oz.	$0.65
32-8A	8-oz.	1.95
32-16A	16-oz.	3.65

VINYLITE CEMENT



FABRIC TO METAL CEMENT



GRILLE CLOTH FABRIC CEMENT

G-C BAKELITE CEMENT

For cementing bakelite to bakelite and bakelite to other materials. For repairing knobs, cabinets, panels, for inserts in moldings, attaching labels to plastics, etc. Brush attached.

No.		List
32-2	2-oz.	$0.70
32-8	8-oz.	2.40
32-16	16-oz.	4.55

G-C VINYLITE CEMENT

Clear transparent adhesive, air drying. For cementing metals, plastics, paper, leather, etc. Used also as thermoplastic cement for non-porous materials. Sets on cooling. Brush attached.

No.		List
58-2	2-oz.	$0.65
58-8	8-oz.	1.90

G-C HOUSEHOLD & MODEL CEMENT

Best cement for model makers, household, and office use. For airplanes, railroads, ships, toys, etc. Will cement wood, paper, plastics, metal, china, ceramics, etc. Fast drying, water-proof. Brush attached.

No.		List
45-2	2-oz.	$0.50
45-3	Tube	.50

G-C FABRIC TO METAL CEMENT

For cementing cloth and felt to metal or plastics. Best for grille cloth, phono turntable felts, upholstering, fabrics, etc. Fast drying, water-proof.

No.		List
22-4	4-oz.	$0.75
22-8	8-oz.	1.35
22-16	16-oz.	2.45

G-C GRAY RUBBER CEMENT

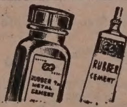
General purpose for cloth, paper, rubber, etc. Has great tackiness and adhesion for radio, shop, auto, or hobby use.

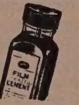
No.		List
23-8	8-oz.	$1.40
23-16	16-oz.	2.50

G-C GRILLE CLOTH CEMENT

Rubber base cement for grille cloth, leatherette, fabric, upholstering, etc. Will not penetrate, stain, or shrink.

No.		List
38-4	4-oz.	$0.75
38-8	8-oz.	1.35
38-16	16-oz.	2.45





ACRYLIC CEMENT

LABEL CEMENT

G-C RUBBER TO METAL DIAL DRIVE CEMENT

For cementing rubber drives to shafts, rubber mountings, gaskets, hose, weather stripping, for radios, refrigerators, autos, etc.

No.		List
35-2	2-oz.	$0.65
35-3	Tube	.55
35-4	4-oz.	1.10
35-8	8-oz.	1.90
35-16	16-oz.	3.65

G-C WOOD GLUE

New white resin water-proof glue for radio cabinets, furniture, chairs, etc. Will not injure finish. Extra strong.

No.		List
39-2	2-oz.	$0.65
39-4	4-oz.	1.10
39-8	8-oz.	1.35
39-16	16-oz.	2.15

G-C ELECTRICAL AND RESISTOR CEMENT

Heat-proof cement, hardens like porcelain. Same as on resistors, flat irons, etc.

No.		List
27-2	2-oz.	$0.65

G-C FILM CEMENT

New improved cement for all safety and nitrate film. Sets fast. Brush attached.

No.		List
33-1	1-oz.	$0.50

G-C ACRYLIC CEMENT

Welds and cements lucite, plexiglass, and other acrylic materials. Strong, fast drying. Brush attached.

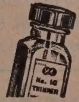
No.		List
40-2	2-oz.	$0.65

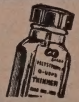
G-C LABEL CEMENT

Sticks labels to anything — metal, glass, wood, tin, bakelite, plastics, etc. Good for cementing labels to bins, racks, waterproofing labels, etc.

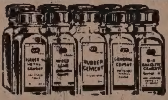
No.		List
46-2	2-oz.	$0.65
46-8	8-oz.	1.90

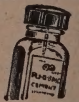
Ask Your Distributor for Complete GC 64-Page Catalog — FREE — or Write Us





LACQUER THINNER





G-C No. 67 PAINT THINNER

For Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish, Rubber Cements, and ordinary paints.

No.		List
67-2	2-oz.	$0.55
67-4	4-oz.	.95
67-8	8-oz.	1.35
67-16	16-oz.	1.90

G-C Q-DOPE THINNER

Will cut and dissolve Q-Dope and other polystyrene coil dopes and cements. Will soften and weld polystyrene rods tubes, sheets, etc.

No.		List
41-2	2-oz.	$0.55
41-4	4-oz.	.95
41-8	8-oz.	1.35

G-C LACQUER THINNER

Will thin all lacquers, lacquer enamels, telephone black or gray, touch-up lacquers, airplane dopes, model cements, etc.

No.		List
29-2	2-oz.	$0.55
29-4	4-oz.	.95
29-8	8-oz.	1.40
29-16	16-oz.	1.95

G-C CEMENT SAMPLER KIT

What kind of cement shall I use? Get this kit and experiment with all types of cements available. Cements for all applications included so you can try them yourself for your application. 10 — 2-oz. bottles in Kit.

No.		List
345	Kit	$6.60

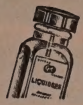
G-C PLI-O-BOND CEMENT

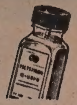
Sticks anything to anything. Cold setting, rubber-like, thermoplastic cement that dries rapidly with a flexible and very strong bond. For iron, steel, plastics, glass, cloth, plastic fabrics, etc.

No.		List
43-2	2-oz.	$0.80
43-8	8-oz.	1.90
43-16	16-oz.	3.65

GENERAL G-C CEMENT RADIO CHEMICALS

G-C INSULATING AND DIPPING VARNISH





G-C COIL DOPE KIT

For high frequency coils, ultra low loss. Contains 2-oz. bottle Polystyrene Q-Dope, 2-oz. Thinner, and 2 brushes. The best!

No.		List
888	Kit	$1.10

G-C CEMENT & SOLVENT KIT

"Handy to carry with you." Contains bottle G-C Radio Cement and G-C Solvent, with brushes.

No.		List
343	Kit	$0.85

G-C CONTACT & ATTENUATOR KIT

For cleaning and lubricating attenuator, tunners, contacts, all-wave switches, condenser bearings, etc. Eliminates noise and prevents corrosion.

No.		List
777	Kit	$1.25

G-C INSULATING & DIPPING VARNISH

For treating field coils, noisy or buzzing transformers and chokes. Air dries to a tough insulating film. Can be brushed or dipped.

No.		List
56-2	2-oz.	$0.65
56-4	4-oz.	1.05
56-8	8-oz.	1.65
56-16	16-oz.	2.75

G-C LIQUIDOPE

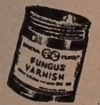
All wave nitrocellulose base dope for coils. Air dries fast to tough film, that insures toughness and firmness. Use for sealing, doping, supporting coils, etc.

No.		List
36-2	2-oz.	$0.65
36-8	8-oz.	1.90
36-16	16-oz.	3.30

G-C Q-DOPE

Liquid polystyrene ultra low loss coil dope for RF, UHF, and VHF components. Will not change R.F. circuit values. Performs — 70°F to 160°F. Also use as Polystyrene Cement.

No.		List
37-2	2-oz.	$0.65
37-4	4-oz.	1.10
37-8	8-oz.	1.90
37-16	16-oz.	3.30



CONTACT CRYSTAL CLEANER

Electronic CONTACT CLEANER

RADIO CLEANER

CARBON TETRA-CHLORIDE

CONTACT DOPE

G-C FUNGUS VARNISH

Used on radio equipment and instruments to insulate and prevent fungus growth in moist or humid climates. Air dry, brush or spray.

No.		List
57-2	2-oz.	$0.65
57-8	8-oz.	1.65
57-16	16-oz.	2.75

G-C CONTACT & CRYSTAL CLEANER

Extra pure cleaner. Fast drying for cleaning contacts and crystals. Will not injure delicate parts.

No.		List
127-2	2-oz.	$0.55
127-4	4-oz.	.95
127-8	8-oz.	1.10
127-16	16-oz.	1.65

G-C RED ELECTRONIC CONTACT CLEANER

The best and only all-purpose cleaner. Dissolves the dirt and removes corrosion. Leaves protective film on contacts to prevent corrosion.

No.		List
210-2	2-oz.	$0.55
210-4	4-oz.	.95
210-8	8-oz.	1.25
210-16	16-oz.	2.20

G-C RADIO CHASSIS CLEANER

Clean the chassis and make extra money on every repair job. Satisfy your customer. For radio chassis, panels, testers, etc. Non-explosive cleaner.

No.		List
123-8	8-oz.	$0.95
123-16	16-oz.	1.50
123-G	1 Gal.	5.25

G-C CARBON TETRA-CHLORIDE

100% pure for cleaning and degreasing electrical contacts, controls, motors. Absolutely safe — will not burn. Also kills bugs, roaches, ets.

No.		List
211-2	2-oz.	$0.55
211-4	4-oz.	.85
211-8	8-oz.	1.10
211-16	16-oz.	1.95
211-G	1 Gal.	6.90

G-C CONTACT DOPE

Ideal cleaner and lubricant for switches, controls and contacts. Resists corrosion and oxidation. Eliminates noise.

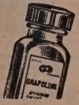
No.		List
1213	Tube	$0.45
1214	2-oz.	.65

CARB-O-TET

Specially made from 100% Carbon-Tet materials.

215-G 1 Gal.

CARBON CONTROL CLEANER



LUBE-REX
LUBE REX

SILICONE COMPOUND

SOLDERING SOLUTION

G-C CARBON CONTROL CLEANER

Fix noisy carbon controls without taking apart. Just squirt cleaner along shaft and job is done. Save money. Applicator supplied.

No.		List
212-2	2-oz.	$0.65

G-C GRAFOLINE

Noiseless lubricant for air exposed switch contacts, rheostats, relays, wire volume controls, tube prongs, etc. Increases current capacity of switch controls. Cleans also.

No.		List
120-2	2-oz.	$0.65

G-C CARBON-X

New improved formula. Fix those old noisy carbon controls, touch up noisy spots on worn controls. Brush in bottle.

No.		List
1204	1-oz.	$0.85
1205	2-oz.	1.10

G-C LUBE-REX

Lubriplate — white lubricant for push buttons, phonographs, Philco mystery controls, guns, fishing reels, dials, etc. Prevents corrosion, repels water.

No.		List
1206	2-oz. Tube	$0.65
1209	2-oz. Bottle	.65

G-C SILICONE COMPOUND

"The miracle moisture and waterproofing compound for Television and FM"

A permanent waterproofing material for TV and FM leads.

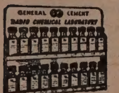
No.		List
8100	1-oz. Tube	$1.65
	Dealer's Net	.99

G-C LIQUID SOLDER FLUX

Non-corrosive flux for radio and electrical work. Solders faster, smoother.

No.		List
42-2	2-oz.	$0.65
42-8	8-oz.	1.90

G-C CHEMICAL LABORATORY



Complete assortment of 20 popular radio chemicals and cements in 2-oz. bottles put up on steel rack. Very neat for the radio bench and home work shop. Steel Rack FREE.

No. 997 Lab List $12.80
Dealer's Net: 7.68

G-C DELUXE CHEMICAL LAB

Practical larger laboratory of popular chemicals and cements to fit needs of average shop — 2-oz., 4-oz., and 8-oz. bottles. Larger bottles of more popular items. Steel rack is FREE.

No. 998 Lab List $17.10
Dealer's Net: 10.26

G-C DE-OX-ID KIT

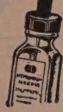
"Ideal for Television Controls"

DE-OX-ID
99¢
BOTH FOR
INTRODUCTORY OFFER

Handy kit contains 2 oz. of De-Ox-Id and hypodermic injector in box.

No. 8460 Kit List $2.25

G-C ELECTRONIC HYPODERMIC NEEDLE INJECTOR

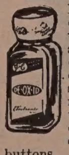


A handy applicator on the hypodermic principle; for injecting cleaners and oils into tight places. Supplied with 2-oz. bottle.

No.		List
8383	Hypodermic Needle	$0.75

G-C DE-OX-ID*

"Television Contact Cleaner"



Liquid chemical for all electronic contacts and controls. It cleans, lubricates, and preserves. Recommended for volume and tone controls, relay contacts, push-buttons, etc. Dissolves corrosion and oxidation.

No.		List
19-1	1-oz.	$0.85
19-2	2-oz.	1.60
19-16	16-oz.	12.50

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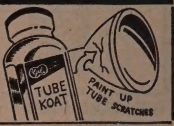
* Net

GENERAL G-C CEMENT PAINTS—KITS—COMPOUNDS



G-C RUF-KOAT WRINKLE VARNISH

Air Dry or Bake

The only finish that will air dry and give professional wrinkle job without baking. Same as used by leading manufacturers. Apply and let dry. Colors: Black, Gray, Brown, Green, Red and Blue. (Specify Color.)

No.		List
60-2	2-oz.	$0.65
60-4	4-oz.	1.10
60-8	8-oz.	1.90
60-16	16-oz.	3.30

G-C KRYSTAL KOAT CRYSTAL LACQUER

Makes beautiful floral pattern when dry. Strictly air drying. For chassis, panels, decorations on metal, etc. Colors: Black, Gray, Brown, Green, Red, Blue and Clear. (Specify Color.)

No.		List
63-2	2-oz.	$0.65
63-4	4-oz.	1.10
63-8	8-oz.	2.15
63-16	16-oz.	4.10

G-C TELEPHONE BLACK OR GRAY

High grade lacquer enamel covers well, dries fast. Black is satin ebony finish similar to telephones. Gray is pleasing shade. For panels, racks, parts, etc. (Specify Color.)

No.		List
62-2	2-oz.	$0.65
62-8	8-oz.	1.90
62-16	16-oz.	3.30

G-C TELEVISION HIGH VOLTAGE CORONA DOPE

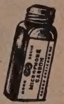
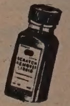
Used by manufacturers and service men to prevent corona shorts on high voltage circuits in Television sets. Easy to apply, air-drying. It has very excellent high voltage insulating qualities.

No.		List
47-2	2-oz.	$1.20
47-8	8-oz.	3.90
47-16	16-oz.	7.50

G-C TELEVISION TUBE KOAT

A black conductive coating for outside of glass TV tubes and for interior of cabinets to ground high potential, built up for TV tubes.

No.		List
49-2	2-oz.	$1.20
49-8	8-oz.	3.90
49-16	16-oz.	7.50

G-C KROME-KOAT ALUMINUM PAINT

Fast drying, ready mixed, leaves chrome-like finish. For PA equipment, speakers, chassis, towers, antennas, etc.

No.		List
61-2	2-oz.	$0.65
61-4	4-oz.	1.05
61-8	8-oz.	1.90
61-16	16-oz.	2.75

G-C PORCELAIN GLAZE

Fills in nicks and dents on porcelain and duco refrigerators, sinks, washing machines, etc. Fill in and let dry.

No.		List
911	2-oz.	$0.70
911-16	16-oz.	4.25

G-C SPIRIT VARNISH

Fast drying walnut spirit varnish for touching up nicks and scratches. Will not raise the finish.

No.		List
161-2	2-oz.	$0.65
161-4	4-oz.	1.10
161-8	8-oz.	1.90

G-C PENETRATING STAIN

Spirit type stain, penetrates and will not injure finish. Cover scratches, dents, darken corners on cabinets, etc. Walnut and Mahogany. Specify.

No.		List
162-2	2-oz.	$0.55
162-4	4-oz.	.95
162-8	8-oz.	1.55

G-C MICROPHONE CARBON GRANULES

Polished pure carbon granules for microphones.

No.		List
1281	100 Size	$1.10
	Highest Sensitivity	
1282	80 Size	1.10
	Best for General Use	
1283	60 Size	1.10
	Best for Hard Use — Sound Trucks, etc.	

G-C SCRATCH REMOVER LIQUID

New liquid! Removes scratches instantly. Simply wipe over scratches. Handy to have in tool box.

No.		List
917	2-oz.	$0.55
923	½-oz.	.33

G-C RMA COLOR CODING KIT

Complete kit of all standard RMA colors to code resistors, condensers, parts, etc. Chart included. Ten bottles.

No. 677 **List $2.15**

G-C TOUCH UP CODING KIT

Five bottles, 4 colors and solvent for coding and sealing parts, adjustments, wires, etc. Red, Green, Blue, Yellow and Solvent.

No. 675 **List $1.10**

G-C DIAL LITE COLOR KIT

Long lasting coloring for dials signals, lamps, panels, hobby work, etc. Red, Green, Blue, Amber, Purple and Solvent in kit.

No.		List
66-6	Kit	$1.20
66-5	Kit no purple	1.05
66-2	2-oz. (Specify color)	.65
66-16	16-oz. (specify color)	2.75

G-C LUMINOUS KITS

Complete kits of luminous paint that glows in the dark. Many uses in shop and home. See it at night. Easy to use — apply and let dry.

No.		List
184-0	DeLuxe kit contains Powder, Mix-Koat, Top Koat and Brush.	$3.05
184-1	Regular kit contains Powder, Mix-Koat and Brush.	$1.80

G-C LUMINOUS MATERIALS

LITE-KOAT POWDER

No.		List
185-1	1-oz.	$1.05

KOVER-KOAT

To protect and cover luminous material.

No.		List
187-2	2-oz.	$0.65

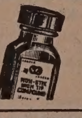
MIX-KOAT

To mix with powder.

No.		List
186-2	2-oz.	$0.65
186-8	8-oz.	1.60

MIX-KOAT AND KOVER-KOAT THINNER

No.		List
188-2	2-oz.	$0.65



G-C DIAL OIL

Made with graphite. Special for lubricating dials, drives, and fine mechanisms. Long lasting.

No.		List
1245	4-oz.	$0.55

G-C REFRIGERATOR AND APPLIANCE OIL

Non-gumming oil for household appliances and small motors. The best general purpose oil.

No.		List
1250	4-oz.	$0.55

G-C SOLDERING PASTE

The best non-corrosive paste for radio and electrical work. Solders faster and smoother.

No.		List
1207	2-oz. can	$0.45

G-C NON-STICK IRON TIP COMPOUND

Prevents soldering iron tips from burning into iron. Saves your iron and tips.

No.		List
1201	2-oz.	$0.65

G-C SILVER PRINT

"Same as used for Printed Circuits"

"No more wires" when you use G-C Silver Print. It is the same "Pure Silver" compound as used by manufacturers in Printed Circuit design. You need G-C Silver Print to repair those Printed Circuits, to touch up the circuit around eyelets, rivets, parts, etc. It is also handy for experimenters, engineers, laboratories, etc. Yes, it is a Pure Silver compound and it's air drying.

No.		List
21-2	1-Troy oz.	$6.60

GENERAL G-C CEMENT CABINET REPAIR KITS—POLISHES

FRENCH EMULSION

G-C FRENCH EMULSION

Best pad lubricant to use with French Varnish Polishing Method.

No.		List
164-4	4-oz.	$0.85

FRENCH VARNISH

G-C FRENCH VARNISH

Used by craftsmen to repair furniture and blend in the finish. Can be applied with pad, brush or spray. Dries fast.

No.		List
160-2	2-oz.	$0.65
160-4	4-oz.	1.10
160-8	8-oz.	1.90

WINDOW CLEANER CONCENTRATE

G-C WINDOW CLEANER CONCENTRATE

Mix with quart of water and make your own high-grade window cleaner. Makes glass sparkle.

No.		List
122-5	6-oz.	$0.55

TOPS SPOT REMOVER

G-C SPOT CLEANER

Safe high-grade cleaner with special applicator in cap. Non-explosive.

No.		List
124-2	6-oz.	$0.65

G-C STRIP-X

Strips enamel from magnet wire. Dip wire in and wipe insulation off—ready for soldering.

No.		List
26-2	2-oz.	$0.65

G-C CONE RECONDITIONER

Apply to old dried out cones to restore plasticizer and bring back original tones.

No.		List
25-8	8-oz.	$1.05
25-16	16-oz.	1.80

G-C RUBBING OIL

Rub down newly finished or repaired cabinets to produce rich satin sheen finish.

No.		List
163-16	16-oz.	$0.95

TOPS SELF-Polishing WAX

G-C FLOOR WAX

High-grade heavy duty commercial self-polishing floor wax. Gives hard, durable finish.

No.		List
97-G	1 Gal.	$7.20

LEMON OIL POLISH

G-C LEMON OIL POLISH

Inexpensive polish for removing dust, finger marks, treating dust rags, mops, etc. Picks up dust.

No.		List
91-8	8-oz.	$0.65
91-16	16-oz.	.95

Scratch Remover Polish

Scratch Remover Polish

G-C SCRATCH REMOVER POLISHES

DARK

Polish contains stains to remove scratches. Sell to housewives.

No.		List
92-2	2-oz.	$0.50
92-8	8-oz.	.65
92-8-L	8-oz. Lab size	.65
92-16	16-oz.	1.10

LIGHT

For light woods; polishes and removes scratches at same time. Popular with housewives.

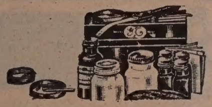
No.		List
93-2	2-oz.	$0.50
93-8	8-oz.	.65
93-16	16-oz.	1.10

CREME-O-WAX Polish

G-C CREME-O-WAX POLISH

White non-staining hard wax base polish produces a hard glossy finish. Excellent for radios, pianos, refrigerators, furniture, etc.

No.		List
95-2	2-oz.	$0.50
95-8	8-oz.	.65
95-8-L	8-oz. Lab. size	.65
95-16	16-oz.	1.10



G-C REFRIGERATOR PATCH KIT

"New Improved Kit"

Supplies everything necessary to repair porcelain or Duco nicks, dents, or scratches. Kit contains bottle of pure white lacquer enamel and bottles of Yellow, Blue, Brown, and Black tinting colors, solvent, spatula, porcelain patch stick, sandpaper, and brushes. Useful on refrigerators, washers, ranges, table tops, etc. Directions included.

No. 902 **List $4.80**

G-C DELUXE CABINET REPAIR KIT

"New Improved Kit"

Comes in handy metal box. Contains ten shades of shellac sticks, bottles of light and dark oil stain, bottles of metal shading varnish, polish, General Skratch Stik, alcohol lamp (with alcohol), spatula, small brushes, steel wool, sandpaper, and wiping cloth. Everything necessary for a practical repair job. No special skill required. Directions included.

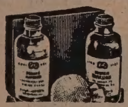
No. 901 **List $6.00**

G-C MASTER DELUXE CABINET REPAIR KIT

"New, Most Complete Kit"

A complete cabinet repair kit put in a permanent metal box. All finishes supplied are spirit soluble and will not cut or damage surrounding finishes on cabinets, etc. Kit contains 10 shellac sticks, alcohol lamp, French varnishes, rubbing felt and fluid, enamels, glue, steel wool, sandpaper, polish, directions, etc. Nothing else needed! The best buy on the market!

No. 900 **List $10.95**



G-C FRENCH VARNISH KIT

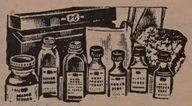
Kit for French polishing. Only way to blend repairs with adjoining finish. Kit includes varnish, emulsion, pad, and instructions.

No. 160-0 List $1.55

G-C MAGIC SCRATCH KIT

Combination of 6 shades fillers and light and dark scratch fluid. Easy to use on emergency jobs.

No. 915 **List $1.55**

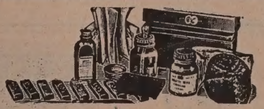


G-C MASTER CABINET TOUCH-UP KIT

"Ideal Quick Touch-Up Kit"

A complete, fast touch-up kit for repairing scratches and dents. Works on wood and plastic cabinets. The spirit finishes will not cut into the adjoining surface or injure surrounding finish. Contains French varnish, emulsion, colored enamels, stains, polishes, and filler. Sandpaper, steel wool, rubbing cloth and directions included. Brushes attached to caps of all finish bottles. Put up in metal box.

No. 907 **List $3.60**



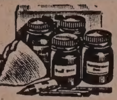
G-C RADIO-REFRIGERATOR CABINET PATCH KIT

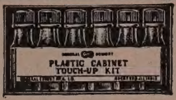
"New Improved Kit"

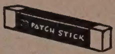
A kit of the shellac patch sticks to fill all needs. Patches wood, plastics, bakelite and porcelain. Nine shellac sticks for the light and dark shades of wood, and black and white, alcohol lamp (with alcohol), spatula, steel wool, sandpaper and wiping cloth are packed in the metal box. Directions included.

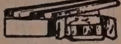
No. 903 **List $4.40**

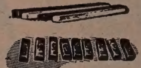
GENERAL G-C CEMENT GRILLE CLOTH—FLOCK KITS











G-C TOUCH-UP KIT

Practical for touching up small scratches and dents. Includes light and dark varnish and spirit stains, filler, cloth, brushes, etc.

No.		List
905	Kit	$1.20

G-C PLASTIC TOUCH-UP KIT

Kit contains 6 colors touch-up lacquer enamels to fix up plastic and colored cabinets. Walnut, Ivory, Black, Red, Blue, Green, and brushes.

No.		List
910	Kit	$1.55

G-C PORCELAIN PATCH STICK

Made for white porcelain refrigerators, sinks, ranges, fixtures, etc. Simply melt into nick and smooth off.

No.		List
908	Stick	$0.45

G-C SHELLAC STICK KIT

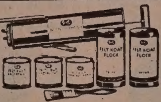
Handy assortment of 10 colors to take care of any shade of wood. Same as in G-C Kits.

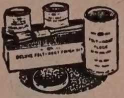
No.		List
925	Kit	$2.00

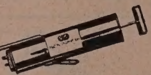
G-C SHELLAC STICKS

High grade sticks for filling dents and nicks in wood cabinets and furniture. Sticks 7" long.

No.	List	No.	List
929 Lt. Walnut	$0.55	979 Dk. Oak	$0.55
930 Dk. Walnut	55	980 Transparent	.55
933 Black	.55	981 Lt. Transp.	.55
934 White	.55	982 Walnut	.55
935 Maple	.55	983 Mahogany	.55
978 Lt. Oak	.55	984 Blonde Maple	.55







FELT-KOAT UNDERCOAT

RUBBER UNDERCOAT

G-C FELT KOAT FLOCK KIT

New G-C kit with special blower gun. Distributes flock evenly and applies a thick velvet-like coat. Kit is complete with gun, brown and ivory flock, brown and ivory undercoat, thinner, brush, etc. Gives professional job on turntables, cabinets, grilles, tool boxes, toys, signs, etc. Has thousands of applications.

No.		List
180-2	Kit	$12.65

G-C FELT KOAT KITS

Complete flock kit with flock undercoat, thinner and brushes and shaker type can for applying flock. Colors: Brown, Blue, Taupe, Black, Red, Green and Gold. (Specify Color).

No.		List
180-0	DeLuxe Kit	$3.30
180-1	Reg. Kit (No brush or thinner)	2.35

G-C FLOCK BLOWER GUN

It's easy to apply flock and be sure to get a good job with the G-C Patented Gun. Gun can also be used for dusting and cleaning.

No.		List
180-3	Gun	$4.80
180-4N	Cleaning Nozzle for Gun	.70

G-C FLOCK UNDERCOAT

Material is first applied on surface to be flocked. Then flock is applied. Used on metal, wood, paper, etc. Colors: Brown, Taupe, Blue, Black, Ivory, Red, Green, Silver and Gold. (Specify Color).

No.		List
180-4	4-oz.	$1.20
180-8	8-oz.	2.15
180-16	16-oz.	3.30

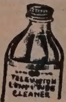
FLOCK SIZING THINNER

For #180 Undercoat.

181-4	4-oz.	$0.50
181-8	8-oz.	.65
181-16	16-oz.	.95

FELT COAT FLOCK

Scratch STIK



G-C FELT-KOAT FLOCK

Genuine Rayon Flock, 1/8" length fibers accurately cut, give beautiful even finish. One pound covers approximately 90 sq. ft. Colors: Brown, Taupe, Blue, Black, Ivory, Red, Green, Silver, and Gold. (Specify Color).

No.		List
180-5	2-oz. Can	$1.20
180-6	½-lb. Bag	3.60
180-7	1-lb. Bag	6.05

G-C GENERAL SCRATCH STICK

Removes scratches. Simply run over scratches and they will disappear. Handy to carry in your pocket or tool box for emergency repairs. Also sell to housewives.

No.		List
909	Scratch Stik	$0.45
909-D	Display 12 Stiks	5.40

1-A SKRATCH STIK DEAL — WIRE DISPLAY FOR DEALERS

Dealers and servicemen — Display the No. 1-A Skratch Stik deal in your shop or store and sell Skratch Stiks to your customers. Every home and office needs one. You can earn extra profit with this self-selling display.

No. 1-A Deal 12 Skratch Stiks Wire
List $5.90
Dealer's Net 3.54*

G-C TELEVISION LENS AND TUBE CLEANER

Specially prepared cleaner for Television Lens and Tubes. Eliminates marks and spots and makes tube and lens crystal clear.

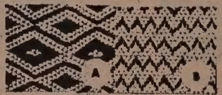
No.		List
216-8	8-oz.	$0.85
216-16	16-oz.	1.40

G-C INSTRUMENT FABRIC

Leatherette fabric to cover cabinets and instruments. Same as used by manufacturers. Colors: Black and Brown. (Specify Color).

No.		List
966	18"x32"	$1.80
967	Any length, per yard	3.35

Grille Cloth



G-C CABINET SPEAKER GRILLE CLOTH

Beautiful modern patterns of Brown, Gold and light colors to match Walnut, Mahogany and Ivory cabinets. Specify "Ivory" when ivory is wanted.

No.	Size	List	No.	Size	List
940	18" x 20"	$1.50	954	5" x 10"	$0.39
941	9" x 18"	.65	949-1	1-Yd. Pkgs., 40" Wide	6.30
942	12" x 12"	.70	949-1R	40" Wide Cont. lgth., per yd.	6.00
943	14" x 18"	.75	949-2R	50" Wide Cont. lgth., per yd.	6.85
944	24" x 13"	1.00	950	Roll 9" x 12"	.55
945	18" x 13"	.75			
946	8" x 8"	.33			
947	9½" x 10"	.33			
948	6" x 6"	.28			

G-C TELEVISION GRILLE CLOTH

New television metallic grille cloth specially made for TV cabinets.

No.	Size	List
8656	18"x24"	$2.50
8657	24"x36"	4.75
8658	36"x36"	7.50
8659	36" wide x yards	7.25

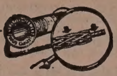
G-C METAL FLOCKED GRILLE SCREEN

Very popular. Both sides flocked with rayon over galvanized metal screen. Used on radios, P.A. speakers, intercoms, auto radios, etc. Waterproof, durable. Colors: Brown, Ivory, Maroon.

No.	Size	Color	List
951-1	8" x 11"	Brown	$0.95
951-3	8" x 11"	Ivory	.95
951-5	8" x 11"	Maroon	.95
952-1	18" x 24"	Brown	3.20
952-3	18" x 24"	Ivory	3.20
952-5	18" x 24"	Maroon	3.20
953-1	36" x 36"	Brown	9.85
953-3	36" x 36"	Ivory	9.85
953-5	36" x 36"	Maroon	9.85

* Net

GENERAL G-C CEMENT RADIO DIAL CORDS and CABLES



THE THREE MOST POPULAR CORDS USED

G-C No. 75
STANDARD THIN NYLON CORD

.028″ diam. Most popular; used on 95% of sets. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75-25	25 ft.	$1.40
75-50	50 ft.	2.65
75-100	100 ft.	4.95
75-11	Env.	.45

G-C No. 75-A
EXTRA THIN NYLON CORD

.025″ diam. Used on RCA, GE, Strom.-Carl., etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75A-25	25 ft.	$1.40
75A-50	50 ft.	2.65
75A-100	100 ft.	4.95
75A-11	Env.	.45

G-C No. 74
MEDIUM NYLON CORD

.040″ diam. Very popular; used by RCA, Philco, GE, etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
74-25	25 ft.	$1.40
74-50	50 ft.	2.65
74-100	100 ft.	4.95
74-11	Env.	.45

G-C No. 70
BRAIDED BRONZE CABLE

.040″ diam.; used on radio dials, instruments and for aircraft reel-in antenna cable. Phosphor bronze braided over fibre glass core for strength. In plastic container.

No.	Spool	List
70-25	25 ft.	$1.40
70-50	50 ft.	2.65
70-100	100 ft.	4.95
70-11	Env.	.45

G-C No. 71
42-STRAND BRONZE CABLE

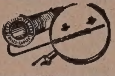
.040″ diameter; 42 strands twisted phosphor bronze over fibre glass core. Radio dials, aircraft reel-in antennas, etc. Durable and flexible. In plastic containers.

No.	Spool	List
71-25	25 ft.	$1.40
71-50	50 ft.	2.75
71-100	100 ft.	4.95
71-11	Env.	.45

G-C No. 73
HEAVY NYLON CORD

.062″ diameter; used on Philco, Majestic, Brunswick, etc. Very strong, chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73-25	25 ft.	$1.65
73-50	50 ft.	3.05
73-100	100 ft.	5.50
73-11	Env.	.45



G-C No. 76
SPECIAL THIN BRONZE CABLE

.025″ diam. braided bronze as used on GE, RCA, and others. Also for flexible connections on speakers, cones, etc. In plastic container.

No.	Spool	List
76-25	25 ft.	$1.40
76-50	50 ft.	2.65
76-100	100 ft.	4.95
76-11	Env.	.45

G-C No. 73-X
EXTRA HEAVY NYLON CORD

.072″ diameter. Extra heavy cord as used by Philco and others. Chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73X-25	25 ft.	$1.65

G-C No. 78
BRAIDED LINEN CORD

.040″ diameter, same as used on Emerson radios, instruments, drawing boards, etc. Extra strong and durable. In plastic container.

No.	Spool	List
78-25	25 ft.	$1.40
78-50	50 ft.	2.65
78-100	100 ft.	4.95
78-11	Env.	.45

G-C No. 79
MONEL METAL CABLE

.035″ diam. Strong and durable, non-corrosive cable for radio dials and instruments. Preferred by many to bronze cable. In plastic container.

No.	Spool	List
79-25	25 ft.	$1.40
79-100	100 ft.	4.95

G-C No. 80
EXTRA THIN METAL CABLE

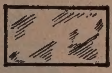
.015″ diameter. Very strong twisted steel cable. Popular on foreign and export receivers, instruments, dials, etc. In plastic container.

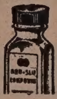
No.	Spool	List
80-25	25 ft.	$1.40
80-100	100 ft.	4.95

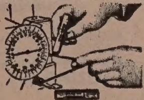
G-C No. 82
EXTRA THIN PHOSPHOR BRONZE CABLE

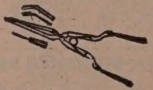
.012″ diam. twisted of 7 strands .004″ phosphor bronze. Used on dial instruments and Army and Navy Radar Equipment. In plastic container.

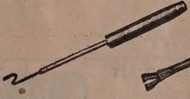
No.	Spool	List
82-25	25 ft.	$1.40
82-100	100 ft.	4.95

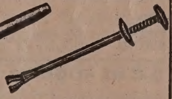












G-C PLASTIC CRYSTAL

Clear plastic crystal in flat sheet. For radio dials, clocks, dashboards, etc. Can be cut to size, fitted and cemented in place.

No.		List
92	8″ x 10″	$1.60

G-C NON-SLIP COMPOUNDS

Powder Compound

For dials, cords, pulleys, belts. Prevents slipping.

No.		List
1210	2-oz.	$0.55

Liquid

Penetrating liquid shrinks fibers, prevents slipping on dial cord and belts.

1215	2-oz.	$0.60

G-C CORD DRESSING

Easy way to treat slipping cords. Simply rub on stick and job is done. Prevents and stops slipping.

No.		List
1212	Stick	$0.28

G-C LONG NOSE PLIERS

Very handy pliers to reach into places and hold parts. It's very handy for installing radio dial cords. Available in straight nose and curved nose styles.

No.		List
5192	Straight Nose Pliers	$0.95
5193	Curved Nose Pliers	.95

G-C DIAL CABLE TOOL

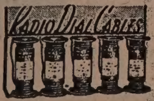
Handy tool to aid in stringing new dial cord and replacing cables slipped off pulleys and drums. It's like an extra hand. Speeds up the job.

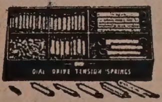
No.	List
5096	$0.85

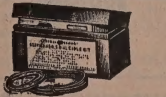
G-C HANDY PICK-UP TOOL

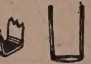
Very handy for every one. Picks up pieces in hard-to-get-at places. Will hold and start screws, nuts, etc. Will pay for itself in short time.

No.	List
5089	$1.65









G-C DIAL CABLE RACK

Very handy, includes popular cables. Hangs on wall or on bench. Handy measuring rule or sign. Kit includes rack and five 25 ft. spools each Nos. 71, 73, 74, 75 and 76 cables.

No.	List
7-A-25	$7.15

G-C DIAL SPRING KITS

Handy kit of springs as used on dial cord drives. Six sizes included.

No.		List
1054-E	10 Assorted	$0.45
1054-SE	10 Small Springs	.45
1055	Kit 25 Asst. Springs	1.30
1056	Kit 100 Asst. Springs	4.85

G-C No. 77-SK
DIAL CORD KIT

Contains four 25 ft. spools most popular cord; 75-25, 74-25, 76-25, 71-25, and free assortment of dial cord clamps and eyelets.

No.		List
77-SK	Cable Kit	$5.25

G-C No. 78-SK
DIAL CORD KIT

Combination kit in 10 ft. lengths of all G-C Dial Cables. Each in separate envelope, packed in leatherette box. Handy for servicemen and experimenters.

No.		List
78-SK	Cable Kit	$5.10

G-C DIAL CORD CLIPS

Handy clip and eyelet assortment used to fasten to ends of dial cords, etc. Required on every set.

No.		List
1028-E	Assortment	$0.45

G-C SERVICEMEN'S DIAL BELT KITS

General Cement Belts are approved replacements for all sets. They are made of best quality material and will not stretch. They are specially treated to prevent slipping. They are the best. Sizes available for all sets. They are easy to install as they are made to fit. No adjustments necessary.

BELTS — 25c List Each

Servicemen! Have an assortment of belts on hand for prompt replacement. Kits contain only the more popular belts used. KIT INCLUDES ATTRACTIVE STEEL BOX—BELT SCALE AND COMPLETE LISTING OF OVER 1100 MODELS.

G-C SERVICEMEN'S KITS

	List Price
No. G- 25—Kit of 25 popular belts	$ 7.50
No. G- 50—Kit of 50 popular belts	14.75
No. G-100—Kit of 100 (includes every size)	25.00

INSTRUCTIONS — FOR MEASURING BELTS

To determine size of belt, if the old belt is available, cut the belt and measure for stretched out length. This will be "cut length" of belt.

If old belt is not available or is worn out so that it cannot be properly measured, stretch a thin thread around belt pulleys on set. (Be sure to use thin thread as a thick cord will give an inaccurate reading.) Measure the thread, it will be our "circumference around pulleys." In measuring belts always remember that the **circumference around pulleys** is not the same as **stretched out or cut length.** A belt when cut, develops approximately 3/16" extra length when stretched out, depending on thickness of belt.

G-C RADIO BELT SPECIFICATIONS

LISTED AS PER BELT SIZE

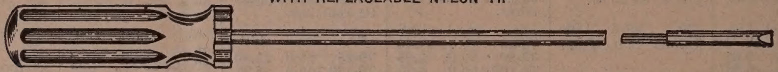
Circumference Around Pulleys	Cut Length	G-C Belt No.	Circumference Around Pulleys	Cut Length	G-C Belt No.
5 7/16"x¼"	5⅝"x¼"	195	8-43/64"	8-55/64"	112
6 23/32"	6-29/32"	101	8-11/16"	8-7/8"	160
6-55/64"	7-3/64"	161	8-13/16"	9"	167
6-57/64"	7-5/64"	102	9-1/16"	9-1/4"	117
6-15/16"	7-1/8"	158	9-13/64"	9-25/64"	115
7-1/64"	7-13/64"	157	9-19/64"	9-31/64"	163
7-1/4"	7-7/16"	106	9-5/16"	9-1/2"	116
7-9/32"	7-15/32"	156	9-17/32"	9-23/32"	119
7-13/32"	7-19/32"	177	9-7/8"	10-1/16"	123
7-15/32"	7-21/32"	103	9-59/64"	10-7/64"	127
7-1/2"	7-11/16"	105	10-1/16"	10-1/4"	126
7-35/64"	7-23/32"	155	10-1/4"	10-7/16"	164
7-11/16"	7-7/8"	107	10-17/64"	10-29/64"	124
7-3/4"	7-15/16"	174	10-19/64"	10-31/64"	128
7-15/16"	8-1/8"	111	10-23/64"	10-35/64"	118
8-1/64"	8-13/64"	104	10-3/8"	10-9/16"	122
8-1/32"	8-7/32"	159	10-25/64"	10-37/64"	125
8-3/32"	8-9/32"	113	10-1/2"	10-11/16"	152
8-3/16"	8-3/8"	172	10-41/64"	10-53/64"	129
8-13/64"	8-25/64"	162	10-11/16"	10-7/8"	121
8-15/64"	8-27/64"	114	10-45/64"	10-57/64"	120
8-25/64"	8-37/64"	110	10-27/32"	11-1/32"	180
8-1/2"	8-11/16"	109	10-61/64"	11-9/64"	133
8-21/32"	8-27/32"	108	10-31/32"	11-5/32"	132
8-39/64"	8-51/64"	153			

LISTED AS PER BELT SIZE

Circumference Around Pulleys	Cut Length	G-C Belt No.	Circumference Around Pulleys	Cut Length	G-C Belt No.
11"	11-3/16"	135	14-27/64"	14-39/64"	147
11-5/64"	11-17/64"	130	14-33/64"	14-3/4"	148
11-9/64"	11-21/64"	131	14-57/64"	15-5/64"	151
11-5/32"	11-15/32"	137	15-1/64"	15-13/64"	149
11-3/16"	11-3/8"	171	15-17/64"	15-29/64"	187
11-9/32"x5/16"	11-15/32"x5/16"	131 W	15-7/16"	15-5/8"	183
11-3/8"	11-9/16"	134	15-13/16"	16"	182
11-25/64"	11-37/64"	136	straight belt	16" - str. belt	192
11-7/16"	11-5/8"	173	15-61/64"	16-9/64"	150
11-21/32"	11-27/32"	194	16-19/64"	16-31/64"	170
11-3/4"	11-15/16"	141	16-27/64"	16-39/64"	184
11-13/16"	12"	143	16-15/16"	17-1/8"	185
12"	12-3/16"	138	17-1/16"	17-1/4"	165
12-1/32"	12-7/32"	154	17-13/32"	17-19/32"	169
12-3/32"	12-1/4"	142	17-37/64"	17-49/64"	179
12-7/32"	12-13/32"	140	17-5/8"	17-13/16"	190
straight belt	12-7/16"-str. belt	193	18-1/2"	18-11/16"	189
12-9/32"	12-15/32"	139	18-9/16"	18-3/4"	181
12-15/32"	12-21/32"	144	19-7/16"	19-5/8"	166
12-1/2"	12-11/16"	178	19-47/64"	19-59/64"	188
12-39/64"	12-51/64"	145	21-5/16"	21-1/2"	175
12-13/16"	13"	168	22-35/64"	22-47/64"	176
13-3/16"	13-3/8"	146	22-19/64"	22-61/64"	191
14-7/32"	14-13/32"	186			

G-C NEW NYLON TELEVISION LONG REACH ALIGNER

"WITH REPLACEABLE NYLON TIP"



Handy new long reach TV aligner with insulated metal shaft and nylon tip that can be replaced. Very sturdy tool for TV work. 12" long overall.

No.		List Price
8607	TV Tool	$ 1.80
8607-D	Display of 12	21.60

NYLON REPLACEMENT TIP FOR No. 8607

No.		List Price
8608-E	Envelope 1 Tip	$0.30
8608-D	Display 20 Envelopes	6.00

G-C NX ALIGNING KIT

Popular approved Army-Navy Kit for all sets. Fourteen tools. Contains Nos. 5004, 5011, 5017, 5015, 5016, and leatherette case.

No.		List
5020	Kit	$7.15

G-C TE-45A NEUTRALIZING KIT

Approved by U. S. Signal Corps. All popular balancing tools to make an all purpose kit. Contains two each Nos. 5051, 5052, and one each Nos. 5019, 5003, 5000, and 5" screwdriver in roll-type leatherette case.

No. 5021 Kit List $7.45

G-C VEST POCKET ALIGNING KIT

Easy-to-carry all-purpose kit. Four tools with telescoping parts making them equivalent to six. Contains Nos. 5012, 5000, 5003, 5004 and leatherette case.

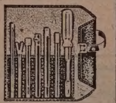
No.		List
5022	Kit	$3.30

G-C ALL-PURPOSE ALIGNMENT TOOL KIT

Seventeen tools designed into nine basic tools some of which telescope into each other. Roll-type leatherette case. Includes Nos. 5001, 5003, 5004, 5011, 5016, 5017, 5053, 5056, 5057.

No. 5023 Kit List $6.90

G-C DELUXE ALIGNMENT KIT



Fourteen most popular tools including Flexible Shaft Screwdriver and Tuning Wand, designed into seven basic tools. Contains Nos. 5002, 5004, 5011, 5014, 5016, 5017, 5019. In leatherette roll-type case.

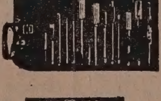
No. 5026 Kit List $8.25

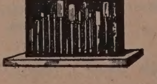
G-C STANDARD TELEVISION ALIGNMENT TOOL KIT

Here's a popular low-priced alignment kit that has the latest essential tools for Television Sets. Specially engineered for Television Sets. A real value in this kit. Nine essential tools in roll-type case.

No.		List
8455	TV Kit Complete	$7.65

G-C TELEVISION ALIGNMENT TOOL KITS



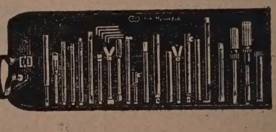


G-C Television Tools are the best quality tools you can buy. They are made specially for Television work and are all designed to give you long service. The steel tips are all extra thin and are of the best grade hardened steel that will give you service.

Kit contains 16 essential Tools.

No.		List
8280	TV Kit in Leatherette Case	$12.90
8281	Kit supplied with Bench Stand	12.90

G-C PROFESSIONAL ALIGNMENT TOOL KITS



Complete kits. Be prepared to service every set with these DeLuxe Alignment Kits. In a handy roll-type leatherette case or a steel partitioned box. Kit contains 30 Tools.

No.		List
5024	Kit in Roll-Type Case	$21.95
5025	Kit in Steel Box	21.95

GENERAL G-C CEMENT ALIGNMENT TOOLS—KITS

The Best Tools for TV — Tools have Extra Thin Spring Steel Tips for Long Life

G-C TELEVISION ALIGNMENT TOOL

Special short sturdy tool with a fine metal screwdriver blade to adjust Television and FM sets while they are in the cabinet. Only 2⅝″ long over-all.

No.		List
5066	TV Tool	$0.55

G-C TELEVISION ALIGNING WRENCH

New Television tool with ⅛″ square socket wrench, 3/16″ shaft with insulated handle. Approximately 6″ long.

No.		List
5080	Television Wrench	$0.85

G-C K-TRAN TOOL
Ideal Television Tool

Specially designed for K-Tran and I.F. transformers. Made of bone fibre, screw driver on both ends.

No.		List
5097	Tool	$0.85

G-C TELEVISION CHANNEL TUNING TOOL

Designed for Television receivers, for making channel adjustments, etc. Completely insulated, non-metallic tool with long ⅛″ narrow blade. Over-all length of tool approx. 7″. Made of bone fibre.

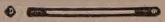
No.		List
8195	TV Tool	$0.80

G-C TELEVISION AND FM TUNING TOOL

Special short tool with fine recessed screwdriver tip for Television and FM adjustments. Makes those difficult adjustments when set is installed in console. Only 2½″ long. Made of bone fibre.

No.		List
8196	TV Tool	$0.55

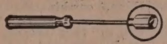
G-C TELEVISION CORE ALIGNER



For Motorola, Stewart-Warner, Belmont, etc., using Stackpole or other stud type cores that are not slotted. Made of hard fibre 6″ long with a milled steel insert on one end and a thin screw driver blade on other end.

No.		List
8271	Core Aligner	$0.80

G-C TELEVISION I.F. OSCILLATOR ALIGNER



For I.F. and oscillator adjustments. Fits all makes of sets, RCA, G-E, Philco, Admiral, etc. Made of plastic handle and steel shaft. Blade is extra thin spring steel for long life.

No.		List
8272	TV Osc. Tool	$1.10

G-C TELEVISION ALL-PURPOSE ALIGNER

Specially made for TV I.F. adjustments, with a plastic handle and a hard fibre shaft. Very thin spring steel tip is recessed so the tool will guide itself over the screws.

No.		List
8273	TV Aligner	$1.10

G-C TELEVISION LONG REACH ALIGNER

Made for Admiral, Zenith, RCA, and other sets to adjust nested iron cores and make front end adjustments. The blades are extra thin, made of bone fibre and are extra long.

No.		List
8274	Long Reach Aligner	$1.10

G-C TELEVISION ZENITH UNIVERSAL ALIGNER

Designed for Zenith and other sets. Made of bone fibre and plastic handle, it has a thin fibre screw driver on one end and a recessed extra thin spring steel tip on the other end.

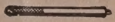
No.		List
8275	TV Universal Aligner	$0.80

G-C TELEVISION DUPLEX ALIGNER

All-purpose TV aligner for trimmers and I.F. transformers. Made of bone fibre with extra thin spring steel tips. One end has a projected tip, the other end has a recessed tip.

No.		List
8276	Duplex Aligner	$0.80

G-C TELEVISION "Shorty" DUPLEX ALIGNER



For trimmer and I.F. transformers where space is limited. Bone fibre with extra thin hardened spring steel tips. One end has a projected metal tip, the other end is recessed.

No.		List
8277	TV Shorty Aligner	$0.80

G-C TELEVISION TUNING WAND

Made of extra thin flexible plastic material to fit small coil openings in TV sets. Brass insert on end reduces inductance and iron core on other end increases the inductance.

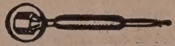
No.		List
8278	TV Tuning Wand	$0.80

G-C TELEVISION CORE ALIGNER

For hard-to-reach places in TV sets. Tool has a recessed steel milled slot to fit over the Stackpole and other type stud cores that are not slotted. Steel insert is pinned in a fibre shaft for extra strength.

No.		List
8279	TV Core Aligner	$1.10

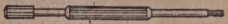
G-C NEW ZENITH TV WRENCH AND ALIGNER
NYLON TOOL



New plastic molded special tool made specially for Zenith TV sets. One end has a plastic hex wrench and the other end a small screw driver tip.

No.		List
8282	Zenith TV Tool	$0.80

G-C NEW! TELEVISION 2-IN-1 ALIGNMENT TOOL



Made of molded nylon has a hex wrench on each end. For Zenith, Admiral, Hoffman, G.E., R.C.A., and others using the hex type slug tuners.

No.		List
8606	Tool	$0.50

G-C ALIGNMENT SCREW DRIVER

Low Inductance Metal Tip Screw Driver made of Genflex—strong, completely insulated. Very popular all-around alignment tool. Two sizes—¼″ and 7/32″ diameter.

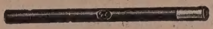
No.		List
5000	¼″ Diam. x 6″ Tool	$0.45
5088	7/32″ Diam. x 6″ Tool	.45

G-C DUPLEX ALIGNMENT SCREW DRIVER

Low Inductance Metal Tip on both ends made of Genflex material. One end is ¼″ and other end is turned down to 7/32″ diameter for small holes. Strong, completely insulated tool.

No.		List
5001	Tool	$0.85

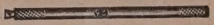
G-C "STRATO" TUNING WAND



Made of Genflex rod with brass cylinder on one end and iron core on other end, used for adjusting and checking coils. By inserting iron core end you increase the inductance and inserting brass end lowers inductance.

No.		List
5002	Tool	$1.10

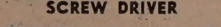
G-C RCA ALIGNING TOOL



Made of ¼″ Bone Fibre, narrow screw driver on one end and screw nib inserted on other end. Used on RCA sets and others for coil and push-button adjustments.

No.		List
5003	Tool	$0.85

G-C NO-METAL INSULATING ADJUSTMENT SCREW DRIVER



Made of black Bone Fibre. Indispensable for aligning all-wave sets. Will give long service. Ends can be re-ground.

No.		List
5004	7″ Long	$0.45

Low-Loss Polystyrene Type—
Ideal for U.H.F. Sets

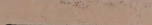
No.		List
5008	7″ Long	.45

G-C INSULATED HEX WRENCH AND DRIVER

Combination hex wrench and insulated screw driver. The screw driver may be extended from handle to provide extra long length. No metal parts, this is an all-fibre tool.

No.		List
5005	Extends from 7-13″	$0.85
5006	Extends from 11-17″	1.10

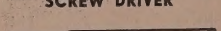
G-C NON-EXTENSION TYPE WRENCH & DRIVER



Same as No. 5005 except screw driver is permanently attached in wrench. Length not adjustable. Over-all length 6″.

No.		List
5007	Tool	$0.45

G-C DUPLEX NO-METAL ALIGNMENT SCREW DRIVER

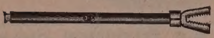


Made of Hard Bone Fibre or Polystyrene—¼″ blade on one end and ⅛″ blade on other. 6″ long. A dual purpose alignment screw driver. Ends can be re-ground.

No.		List
5009	Bone Fibre—6″	$0.45
5010	Polystyrene—6″	.45

GENERAL G-C CEMENT ALIGNMENT TOOLS—KITS

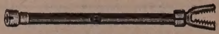
G-C ALLIGATOR WRENCH AND SCREW DRIVER



For RCA, Philco and others. Made of 7/32" Bone Fibre and strong metal wrench on one end and metal screw driver tip on other end.

No.		List
5011	Tool	$0.55

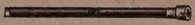
G-C ALLIGATOR AND WRENCH ALIGNING TOOL



Made of 7/32" Bone Fibre with alligator on one end and ¼" metal Hex Wrench on other end. Very popular tool.

No.		List
5012	Tool	$0.55

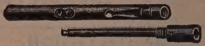
G-C WRENCH & SCREW DRIVER ALIGNING TOOL



Made of 7/32" Bone Fibre with ¼" Hex Wrench on one end and Screw Driver with metal nib on other end. This is a very handy alignment tool and wrench.

No.		List
5013	Tool	$0.95

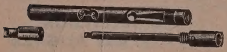
G-C 4-in-1 ALIGNMENT TOOL



This is the most popular alignment tool for most receivers. Made of Bone Fibre, combination tool. Consists of Screw Driver with metal nib, ¼" Hex Wrench slotted and 5/16" Hex Wrench on other end.

No.		List
5014	Tool	$0.95

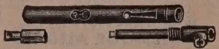
G-C 5-in-1 ALIGNMENT TOOL



Similar to our 5014 except supplied with heavy duty metal screw driver.

No.		List
5015	Tool	$1.50

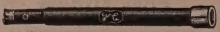
G-C 6-in-1 ALIGNMENT TOOL



Bone Fibre, combination tool. Consists of Screw Driver with metal nib, 5/16" Hex Wrench, ¼" Hex Side Wrench and ¼" Hex End Wrench slotted.

No.		List
5016	Tool	$1.50

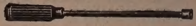
G-C DUPLEX INSULATED WRENCH ALIGNMENT TOOL



Made of Bone Fibre with ¼" Hex Metal Wrench one end and 5/16" Hex Metal Wrench on other end.

No.		List
5017	Tool	$1.40

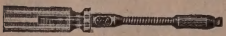
G-C TELEVISION AND PUSH-BUTTON TOOL



Required to adjust Push-Button Tuners. Socket Screw Driver made of best steel.

No.		List
5018	Tool	$0.85

G-C FLEXI-DRIVER

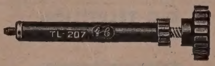


"Around-the-Corner" screw driver for radio work. Approved by U. S. Army and Navy.

No.		List
5019	Tool	$2.20

BAKELITE NEUTRALIZING TOOL

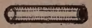
U. S. Army TL-207



Genuine Molded Bakelite. Combination screw driver and 5/16" Hex Wrench. Approved by U. S. Army Signal Corps.

No.		List
5027	Tool	$2.50

HEX INSULATED FIBRE ALIGNING WRENCHES



Hexed full length inside, so end can be cut off when worn.

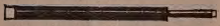
No.	Length	Hex Size Across Flat	Diam.	List
5051	5"	5/16"	7/16"	$0.33
5052	5"	¼"	⅜"	.28
5053	6"	¼"	⅜"	.40
5054	8"	¼"	⅜"	.45
5055	12"	¼"	⅜"	.55

G-C SCREW DRIVERS

Insulated screw drivers for radio work. No. 5056 for radio knobs. No. 5057 regular type for all-around radio use.

No.	Blade	List
5056	3" x ⅛" (Small)	$0.30
5057	3" x 3/16" (Large)	.95

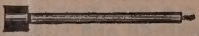
G-C TELEVISION AND TRIMMER TOOL



Handy tool to adjust smallest size trimmer condensers. Screw driver is 7/32" diameter and will fit small holes. Other end has a reinforced 5/16" hex nut wrench.

No.		List
5067	Trimmer 6" Long	$1.10

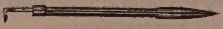
G-C TEST MALLET, SCREW DRIVER & TUBE TAPPER



Handy tool made with insulated screw driver on one end and rubber mallet on other end. Very handy for tapping tubes to find shorted or intermittent tubes.

No.		List
5081	Tool	$0.70

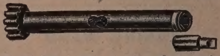
G-C TEST PROBE



Handy new test probe to "dig in" and find the trouble. Fibre point on one end. Metal hook on other end. Excellent for locating loose connections and shorted parts.

No.		List
5082	Tool	$0.65

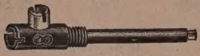
G-C BAKELITE 5/16" HEX WRENCH-SCREW DRIVER



Molded bakelite insulated wrench for radio work. 5/16" hex has reinforced brass collar to prevent breakage. 9/16" dia. x 5" long.

No.		List
5083	Tool	$0.55

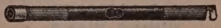
G-C BALANCING TOOL



A short neutralizing tool for work in close quarters. Sets can be adjusted without removing from cabinets. A very handy tool.

No.		List
5084	Tool	$0.65

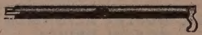
G-C ALIGNMENT WRENCH FOR PHILCO, RCA, ETC.



Excellent for neutralizing air trimmers on many models, RCA-Victor, Philco and others. Has 5/16" Hex Wrench on one end and metal hook on other end.

No.		List
5085	Tool	$1.65

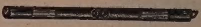
G-C ALIGNMENT TOOL FOR PHILCO, RCA, ETC.



For neutralizing air trimmer condensers on all model sets. Made of 7/32" Fibre. Metal clip on end.

No.		List
5086	Tool	$0.65

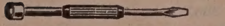
G-C TELEVISION AND PUSH-BUTTON TOOL



A specially-designed tool for adjusting iron core I.F. and R.F. transformers, coils, alignment condensers, and push-button tuners. Used on Bendix, RCA, and others. Metal tip on one end, other end recessed tip.

No.		List
5087	Tool	$0.85

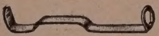
G-C TELEVISION AND TRIMMER TOOL



Specially made for adjusting neutralizing padding condensers and iron core tuners and coils.

No.		List
5091	Tool	$0.85

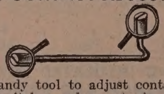
ZENITH PUSH-BUTTON WRENCH



Special wrench necessary to use in adjusting Zenith push-button radios.

No.		List
5094	Zenith Wrench	$0.20

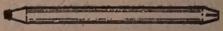
G-C CONTACT ADJUSTER



A handy tool to adjust contacts on switches, relays on pin ball machines and radio sets.

No.		List
5095	Contact Adjuster	$0.22

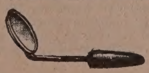
G-C GENERAL ELECTRIC ALIGNMENT TOOL



Handy alignment tool made of clear plastic. Has metal tip one end and a recessed tip on other end. Tool 6" long, ⅜" diameter. Tip ⅛" wide.

No.		List
8609	Tool	$1.00

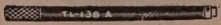
G-C INSPECTION MIRROR



No.		List
5090	Inspection Mirror	$0.55

G-C NEUTRALIZING AND ALIGNING TOOL

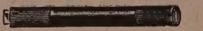
U. S. Army TL-138-A



No.		List
5098	Tool	$1.10

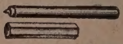
G-C NEUTRALIZING AND ALIGNING TOOL

Approved by U. S. Army & Navy



No.		List
5099	Tool	$1.40

G-C CABLE EYELET TOOL

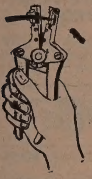


No.		List
741	Tool	$1.10

GENERAL G-C CEMENT WIRE STRIPPERS — TESTLITES

G-C STANDARD SPEEDEX WIRE STRIPPER

Fast operating precision made hand tool for stripping insulation from all types of wire. Very easy to operate. Strips 750 to 1000 wires per hour. Used by girls or men. All blades are interchangeable and easily replaced.

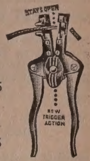


Standard Models

No.	Wire	List
733	12 to 20	$6.60
733-A	14 to 30	6.60
733-B	10 to 18	6.60
733-C	8 to 10	6.60
733-D	16,18,20,22	6.60
733-E	14, 16, 18	6.60
733-F	10, 12, 14	6.60
733-G	For #18 P.O. S.J. or parallel wire	$6.60
733-H	For the new 300-ohm television and FM transmission line	6.60
733-I	For 10, 12, 14, 16, 18, 20, 22 wire	6.60

G-C AUTOMATIC SPEEDEX WIRE STRIPPER

Similar to standard models except has the "stay open feature" with the new Speedex "Trig-O-Matic Action." Automatically holds jaws open until wire is removed, and prevents bending or crushing of fine wires. Has on-off mechanism so tool can be used as standard model if desired.

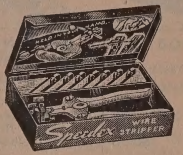


Automatic Models

No.	Wire	List
744	12 to 20	$8.25
744-A	14 to 30	8.25
744-B	10 to 18	8.25
744-C	8 to 10	8.25
744-D	16,18,20,22	8.25
744-E	14, 16, 18	8.25
744-F	10, 12, 14	8.25
744-G	For #18 P.O. S.J. or parallel wire	$8.25
744-H	For the new 300-ohm television and FM transmission line	8.25
744-I	For 10, 12, 14, 16, 18, 20, 22 wire	8.25

G-C SPEEDEX WIRE STRIPPER KIT

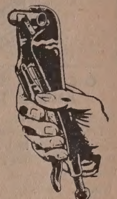
Wire stripper complete with seven different size blades put up in a specially designed permanent steel box. For wires No. 8 to No. 30.



No.		List
733-K	Standard Stripper Kit, with blades	$15.60
744-K	DeLuxe Automatic Stripper Kit, with blades	17.25

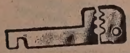
G-C SHUR-GRIP PLIER WRENCH

IT UNLOCKS WITHOUT SNAPPING THE FINGERS. Jaws are forged from alloy steel and specially heat-treated for toughness and durability. It is a high quality tool.



No.		List
767	7″ Shur-Grip	$4.35
770	10″ Shur-Grip	5.50

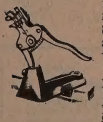
G-C SPEEDEX REPLACEMENT BLADES



Fit standard and automatic models. Blades interchangeable.

No.		List
3W	12 to 20	$1.50
3W-A	14 to 30	1.50
3W-B	10 to 18	1.50
3W-C	8 to 10	1.50
3W-D	16, 18, 20, 22	1.50
3W-E	14, 16, 18	1.50
3W-F	10, 12, 14	1.50
3W-G	Blades for parallel No. 18 P.O.S.J. or similar	1.50
3W-H	Blades for the new 300-ohm television and FM twin transmission line	1.50
3W-I	10, 12, 14, 16, 18, 20, 22 wire	1.50

G-C SPEEDEX STRIPPER BENCH HOLDER



Bench type holder for any model Speedex Wire Stripper. Converts a hand operated tool to a bench type and increases production up to 2,500 wire strippings per hour. Steel.

No. 755 Bench Holder List **$4.15**

G-C SPEEDEX TRIG-O-MATIC PLATE

(Patent Pend.)

Converts any standard model Speedex Stripper to an Automatic Model. Easy to install.

No.		List
756	Trig-O-Matic Plate, only	$2.20

G-C MASTER TEST LEADS

The best test leads you can buy, 50″ long, 6000-volt, heavy duty test prods, solderless type. Extra flexible leads run through the handles and are fastened under the knurled collar on the tips. Available with either the attached angle tips or the straigh solderless type tips.

No.		List
5050	With Solderless type Straight Tips	$1.65
8459	With Angle type Test Tips	1.90

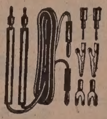
G-C NEEDLE POINT TEST LEADS

Heavy duty 6000-volt test leads, 50″ long, made with unbreakable plastic handles 6″ long with needle type chuck and needle to penetrate insulation. Available with either the attached angle tips or the straight solderless type tips.

No.		List
8461	With Solderless Straight Tips	$1.65
8462	With Angle type Test Tips	1.90

G-C UNIVERSAL TYPE TEST LEADS

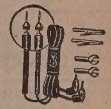
Heavy duty 6000-volt leads 50″ long, made with unbreakable plastic handles 6″ long with solderless type tips. Other end comes with standard banana plugs, interchangeable for spade lugs, phone tips, and alligator clips. Supplied complete.



No.		List
8463	Universal Test Leads	$2.75

UNIVERSAL TYPE TEST LEADS WITH NEEDLE POINT PRODS

Heavy duty 6000-volt leads 50″ long, made with unbreakable plastic handles 6″ long. Equipped with needle point chucks and needles to pierce insulation. Other end comes with standard banana plugs, interchangeable for spade lugs, phone tips, and alligator clips. Supplied complete.

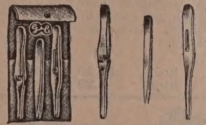


No.		List
8464	Universal Needle Test Leads	$2.75

G-C THIN TYPE TEST LEADS

This is a handy pair of test leads for hard-to-reach places. Made with slim, plastic handles with long, slim insulated test rods attached. Made with 50″ of 6000-volt test lead wire. Comes equipped with angle type phone tips.

No.		List
8465	Thin Type Test Leads	$1.75



G-C TWEEZERS AND KIT

For the shop or laboratory to pick up and examine small parts, start screws and nuts, to get in hard-to-get spots, stringing dial cord, fastening springs, etc.

No.		List
7950	Tweezer Kit, beautiful leatherette case and one each tweezers described below	$3.55
7946*	6½″ Self-closing tweezer. Opens when squeezed, Serrated, blunt points	0.90
7947*	6½″ Heavy-duty type with slide lock feature. Holds wires or parts tight like an extra finger. Serrated, blunt points	1.30
7948*	4½″ Precision Tweezer. Narrow pointed ends for delicate work.	0.60

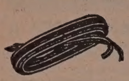
*Standard Jobber's quantity: 12 tweezers on display card — Add suffix "-D"

G-C TOOL HANDLE INSULATING TUBES

A new idea for insulating your handle tools. A supply of special insulating tubing in assorted sizes is included in kit to insulate all types of handles on pliers, cutters, screw driver blades, etc. You simply soak the tubing for a few minutes in G-C Service Solvent and the tubing will swell. Slip it over the handles and allow it to dry. It will shrink on drying and give it a professional appearance. (G-C Service Solvent is not included in kit.)

No.		List
8118-E	Env. Asstd. Tubing	$0.45
8118-D	Display of 20 Env.	9.00

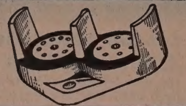
GENERAL G-C CEMENT TEST PRODS—PLUGS—TIPS



G-C TEST LEAD WIRE

Ideal long-life replacement wire, extra flexible, 6000 volt insulation. Red and Black (Specify color).

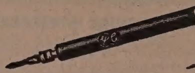
No.		List
5049	Env. 1 Red, 1 Black, 50″ long,	$0.65
5049-C	100-ft.	6.60
5049-M	1000-ft.	38.50



G-C DUPLEX TUBE PIN STRAIGHTENER

The handiest tube pin straightener for both miniature and jumbo miniature tubes of the 7 and 9 pin types. Pins on both types can be straightened by inserting in proper receptacle. Precision constructed steel dies molded in colorful plastic. Be prepared to save those tubes.

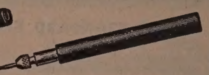
No.		List
8655	Duplex Pin Straightener	$ 2.50
8655-D	Display of 12 No. 8655	30.00



G-C LOW-LOSS DELUXE TEST PRODS

New polished low-loss material. Non-breakable. Moisture resistant. Withstands high voltages. Solderless type, brass nickel-plated.

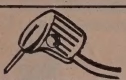
No.		List
5045	Red	$0.50
5046	Black	.50



G-C NEEDLE POINT TEST PRODS

Adjustable chuck tip for needle. 6″ polished plastic handles in Red or Black. Brass nickel-plated chuck removable. Includes needle. (Specify color).

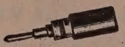
No.	List
7701	$0.50



G-C TEST LEAD ANGLE TIP

New, attractive, fully insulated, molded plastic angle phone tip plugs. Will take wires up to .140 diameter.

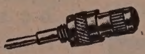
No.		List
8149	Red, each	$0.50
8150	Black, each	.50



G-C INSULATED TEST PROD TIPS

Unbreakable polished plastic insulated handles. Solderless connectors, brass nickel-plated.

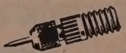
No.		List
5061	Red	$0.25
5061-E	Env. 2	.50
5062	Black	.25
5062-E	Env. 2	.50



G-C TEST PROD TIPS

Solderless type, brass nickel-plated. Non-insulated. Wire fastens easily.

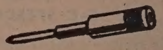
No.	List
5060	$0.18



G-C PHONO NEEDLE POINT TEST PROD CHUCK

Threaded chuck fits ¼-20 threaded hole. Needle removable. Brass nickel-plated. Includes needle.

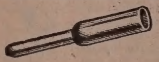
No.	List
7702	$0.22



G-C HEAVY DUTY PHONE PLUG

Standard type as used on test prods, leads, etc. Fits snugly in ¼″ hole. Brass nickel-plated.

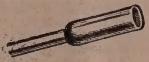
No.	List
7706	$0.17



G-C SOLID STANDARD PHONE TIP

Solid brass type made to RMA specifications. Bright nickel-plated.

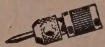
No.		List
6321-E	Env. 8	$0.45
6321-G	Pkg. 144	7.40



G-C STANDARD PHONE TIP

Made of drawn brass with hole through center for easy soldering of wire at tip. Bright nickel-plated.

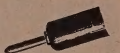
No.		List
6320	Env. 12	$0.45
6320-G	Pkg. 144	3.55
6629	Jar 30	.75



G-C PHONO NEEDLE POINT TEST PROD CHUCK

Push on type fits snugly in ¼″ hole. Brass nickel-plated.

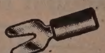
No.	List
7703	$0.22



G-C INSULATED PHONE TIP PLUG

Fits standard phone tip jacks. Polished non-breakable low-loss plastic insulated handles. Brass, nickel-plated tip. Minimum contact exposure.

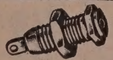
No.		List
7710	Red	$0.20
7711	Black	.20



G-C INSULATED SPADE LUG

Tapered spade lug fits all screws or terminal strips up to No. 10. Insulated female end fits banana plugs.

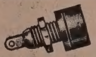
No.		List
7712	Red	$0.20
7713	Black	.20



G-C PHONO TIP JACKS

Standard type with phosphor bronze spring contacts. Fits ¼″ hole and panels up to ⅜″ thick. Brass parts nickel-plated.

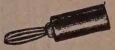
No.	List
7714	$0.15



G-C INSULATED PHONE TIP JACKS

Standard insulated type phosphor bronze spring contacts. ⅜″ insulated head. Fits ¼″ hole and panels up to ¼″ thick. Brass parts nickel-plated.

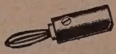
No.		List
7715	Red	$0.20
7716	Black	.20



G-C SPLIT BANANA PLUG

Insulated solderless type with polished insulated handles. Metal parts nickel-plated.

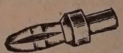
No.		List
7730	Red	$0.33
7731	Black	.33



G-C SET SCREW TYPE BANANA PLUG

Insulated set screw type. Polished insulated plastic handles. Nickel-plated metal parts.

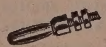
No.		List
7732	Red	$0.25
7733	Black	.25



G-C SMALL BANANA PIN PLUGS

Approved silver-plated plugs with straight shank. Can be riveted or soldered. For wires, multiple plugs, etc.

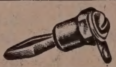
No.		List
6400	Env. 10	$0.45



G-C SPLIT BANANA PLUG

Standard size with 6-32 threaded shank. Use on plug-in coils, terminal strips, etc. Complete with lug and nut. Brass nickel-plated.

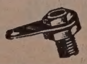
No.	List
7736	$0.15



G-C SPLIT BANANA PLUG

Standard size with 6-32 female thread on end. Supplied with screw and solder lug. Brass nickel-plated.

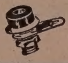
No.	List
7737	$0.15



G-C BANANA JACK

Standard size banana pin jack. Fits ¼″ hole up to ⅜″ thick panel. Nut and lug supplied. Brass nickel-plated.

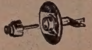
No.	List
7740	$0.15



G-C INSULATED BANANA JACK

Standard size with polished plastic insulators. Fits ¼″ hole, up to ⅜″ thick panel. Nut, lug, and insulators supplied. Brass, nickel-plated.

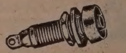
No.		List
7741	Red	$0.20
7742	Black	.20



G-C RCA PHONO PIN PLUG AND JACK

RCA types used on many type receivers. Also used as auto antenna connectors.

No.		List
1742	Mdgt. Plg.	$0.10
1742-E	Env. 4	.40
1743	Midget Jck.	.15
1743-E	Env. 3	.40

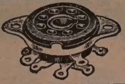
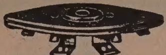
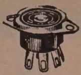
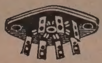


G-C INSULATED BANANA PLUG OR PHONE TIP JACK

Standard size insulated combination jack. Brass nickel-plated with phosphor bronze spring contacts. Fits ¼″ hole, panels up to ⅝″ thick.

No.		List
7744	Red	$0.33
7745	Black	.33

GENERAL G-C CEMENT RADIO SOCKETS – PLUGS – JACKS

G-C STANDARD TUBE SOCKETS

BAKELITE SOCKETS

High quality molded bakelite sockets with plated bronze contacts. Three grounding lugs on base of each socket. 1½" mounting centers.

No.		List
1528	8-prong Octal	$0.17
1528-L	8-prong Loctal	.28

WAFER SOCKETS

No.		Mntg. Center	List
1534	4-prong	1½"	$0.15
1535	5-prong	1½"	.15
1536	6-prong	1½"	.15
1537	7-pr. Small	1½"	.15
1537-L	7-pr. Large	1½"	.18
1538	8-pr. Octal	1$\frac{5}{16}$"	.18
1538-2	8-pr. Octal	1½"	.18
1538-L	8-pr. Loctal	1$\frac{5}{16}$"	.20

G-C MINIATURE TUBE SOCKETS

BAKELITE MINIATURE SOCKET

For Miniature Tubes

High quality molded bakelite socket with metal saddle mounting. Made with phosphor bronze plated contacts for 7-prong tubes. Standard ⅞" mounting centers.

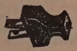
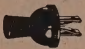
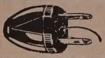
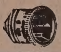
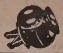
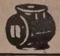
No.		List
1540	Bakelite Socket	$0.25

WAFER MINIATURE SOCKET

For Miniature Tubes

High grade bakelite sockets for new miniature tubes. Phosphor bronze contacts, for 7-prong tubes. Standard ⅞" mtg. centers.

No.		List
1541	Wafer Socket	$0.15
1542	Wafer Socket with grounding strap	.17

G-C 860 CAP

Spring action flat brown bakelite cap. Approved brass blades.

No.		List
860	Cap	$0.28

G-C 861 CAP

Spring action, finger grip rubber caps. Approved, screw terminal brass blade.

No		List
861	Cap	$0.28

G-C 865 CAP

Modern flush type rubber cap. Easy to assemble. No exposed screws or wires.

No.		List
865	Cap	$0.28

G-C 867 PLUG

Popular screw plug for standard sockets.

No.		List
867	Plug	$0.19

G-C CUBE TAP

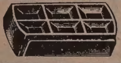
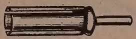
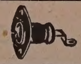
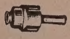
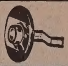
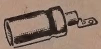
New type spring action cube tap with 3 outlets always available.

No.		List
862	Brown	$0.33

G-C CORD CONNECTOR

Brown bakelite with bronze contacts.

No.		List
863	Brown	$0.28

G-C SURFACE BLOCK

3-plug. Bakelite outlet for extension cords. Can fasten to wall or base.

No.		List
866	Brown	$0.55

G-C AUTO ANTENNA PLUG

Shielded connector plug as used on Motorola and other auto radios.

No.	List
1740	$0.15

G-C ANTENNA CONNECTOR JACK

Shielded jack to fit the 1740 plug for auto antenna and phonograph connection.

No.	List
1741	$0.25

G-C PHONO PLUG

For all phonographs and auto radio connections; RCA, Zenith, Philco and others.

No.		List
1742		$0.10
1742-E	Env. of 4,	.40

G-C PHONO JACK

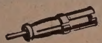
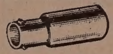
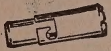
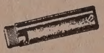
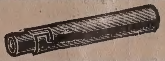
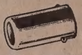
Used for phonograph attachments. To be used with 1742 plug.

No.		List
1743		$0.15
1743-E	Env. of 3,	.40

G-C EXTENSION JACK AND CONNECTOR

For extending radio ant. cables and phono attachments. Fits 1740 or 1742 plugs.

No.	List
1744	$0.20

G-C MOTOROLA LEAD ADAPTER

Adapter plug used to adapt bayonet type connector to Motorola type.

No.	List
1745	$0.40

G-C ADAPTER SHELL

Used to change the Motorola fitting to bayonet type connector.

No.	List
1746	$0.15

G-C ANTENNA CONNECTOR

Used for connections on auto antenna and ground lines.

No.	List
1747	$0.15

G-C JUMBO FUSE HOLDER

14 amp. fuse holder, 2¼" long x ½" diameter.

No.	List
1748	$0.30

G-C FUSE CONNECTOR

Regular Type

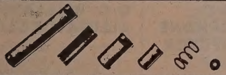
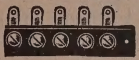
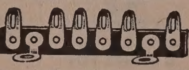
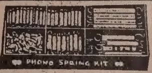
Used on auto radios and other equipment. Completely assembled.

No.	List
1749	$0.18

G-C ANTENNA CONNECTOR END

To be used with regular antenna connectors. With bushing.

No.	List
1750	$0.11

PHONO SPRING KIT

G-C REPLACEMENT PARTS FOR ANTENNA AND FUSE CONNECTORS

	No.		List
(a)	1791	Sleeve of Fuse Connector	$0.06
	1791-G	Box of 144 No. 1791	7.90
(b)	1792	Sleeve of Antenna Connector	.06
	1792-G	Box of 144 No. 1792	5.50
(c)	1793	End piece for Antenna and Fuse Connector	.05
	1793-G	Box of 144 No. 1793	7.90
(d)	6720	Auto Fuse Insulator Sleeve	.05
	6720-G	Box of 144 No. 6720	4.40
(e)	1796	Spring for Antenna and Fuse Connector	.02
	1796-G	Box of 144 No. 1796	1.55
(f)	1795	Bakelite Bushing	.05
	1795-G	Box of 144 No. 1795	4.40

G-C TERMINAL STRIPS

SCREW TYPE

Laminated bakelite strips, rigidly constructed, terminals will not turn and short.

No.	Contacts	List
1772	2	$0.18
1773	3	.27
1774	4	.36
1775	5	.45
1776	6	.54
1777	7	.63
1778	8	.72
1779	9	.81
1780	10	.90

SOLDER TYPE

Mounted on laminated bakelite strips. Lugs securely fastened and will not turn.

No.	Contacts	List
1781	1	$0.05
1782	2	.06
1783	3	.07
1784	4	.11
1785	5	.12
1786	6	.13
1787	7	.14
1788	8	.15
1789	9	.18
1790	10	.20

G-C PHONO SPRING KIT

Kit contains assorted springs same as are used on phono turntables. With this kit you can replace the broken or weak spring without waiting or delay in service.

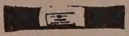
No.		List
6478	Kit of 50	$2.75
6479	Kit of 100	4.85

G-C AUTO FUSE INSULATOR SLEEVE

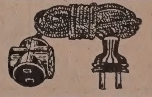
Insulating sleeve to fit regular fuse holders.

No.		List
6720-E	Env. of 16,	$0.45

5000 VOLT
INSULATING
CAMBRIC
GENERAL CEMENT MFG. CO.



"FISH PAPER"



G-C INSULATING CAMBRIC

10,000 Volts

Yellow varnished cambric. .010" thick.

No.		List
549	Roll over 210 sq. in.	$0.85
548	36" x 36", yd., any length	4.40

G-C LAMINATED BAKELITE PANELS

$\frac{1}{16}$" thick. Black.

No.		List
590	6" x 6" x $\frac{1}{16}$"	$0.65
591	6" x 12" x $\frac{1}{16}$"	1.20
592	12" x 12" x $\frac{1}{16}$"	2.40

G-C FYBEROID "FISH PAPER"

Fish paper has many uses around the shops for repair jobs where electrical insulation is required. .010" — 240 sq. in. roll.

No.		List
560	Roll	$0.55

G-C RUBBER KIT ASSORTMENT

Handy kit to keep in the shop. Contains various sizes of rubber grommets, chassis mounts, etc. An exceptional buy.

No.		List
7600	Rubber Kit	$1.00

G-C RADIO CORD SETS

Handy replacement cord sets, ready to attach to radio sets and appliances. Approved Brown parallel wire with plugs attached.

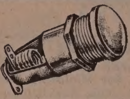
No.		List
885	6 ft.	$0.50
886-P	7½ ft.	.65

G-C EXTENSION CORDS

G-C extension cords are made of approved wire ready to use with a plug on one end and a 3-way tap on the other end. Brown.

No.		List
887	6 ft.	$1.00
889	7½ ft.	1.10

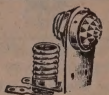
GENERAL CEMENT SIGNAL LIGHTS — CONNECTORS — CLIPS



G-C ONE-INCH JEWEL SIGNAL LIGHT

For signal devices of all types. Bulbs change from the front; for socket bases as listed below. One-inch mounting hole. Jewel colors: Red, Green, Amber, and Opal. (Specify Jewel Color).

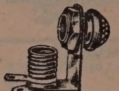
No.	Socket	Jewel	List
7901	110-V Cand.	Facett	$1.55
7902	110-V Cand.	Smooth	1.55
7903	Min. Bayonet	Facett	1.55
7905	Min. Screw	Facett	1.55



G-C ¾-INCH JEWEL SIGNAL LIGHT

All purpose signal light with facetted jewels in colors of Red, Green, Blue, Amber. $\frac{11}{16}$″ mounting hole. Jewel removed from front. (Specify Jewel Color).

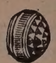
No.	Socket	List
7907	Min. Screw	$0.90
7908	Min. Bayonet	.90
7909	110-V. Candel.	.90



G-C ½-INCH JEWEL SIGNAL LIGHT

Popular signal light, requires only $\frac{7}{16}$″ mounting hole. Facetted jewel removed from front. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

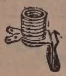
No.	Socket	List
7910	Min. Screw	$0.39
7911	Min. Bayonet	.45
7912	110-V. Candel.	.45



G-C PANEL JEWELS

Complete assemblies in 1″, ¾″, and ½″ diameters. Fit panels up to ¼″ thick. Brass nickel-plated. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

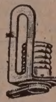
No.	Dia.	Jewel	Mtg. Hole	List
7913	½″	Facett	$\frac{7}{16}$″	$0.28
7914	½″	Smooth	$\frac{7}{16}$″	.28
7915	¾″	Facett	$\frac{11}{16}$″	.65
7916	1″	Facett	1″	1.20



G-C CLIP-ON PILOT LIGHT SOCKETS

Clip up and clip down types for replacements. Cadmium-plated.

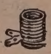
No.	Type	List
7920	Min. Screw Clip Up	$0.17
7921	Min. Screw Clip Down	.17
7922	Min. Bay. Clip Up	.19
7923	Min. Bay. Clip Down	.19
7924	110-V. Cand. Clip Up	.22
7925	110-V. Cand. Clip Down	.22



G-C BRACKET-TYPE PILOT LIGHT SOCKETS

Sturdy bracket-up or bracket-down type. Cadmium-plated.

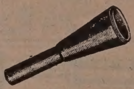
No.	Type	List
7926	Min. Screw Bracket Up	$0.17
7927	Min. Screw Bracket Down	.17
7928	Min. Bay. Bracket Up	.19
7929	Min. Bay. Bracket Down	.19
7930	110-V. Candel. Bracket Up	.22
7931	110-V. Candel. Bracket Down	.22



G-C UNMOUNTED PILOT LIGHT SOCKETS

Cadmium plated. Ideal for replacements or special assemblies.

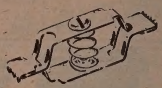
No.	Type	List
7932	Min. Screw Base	$0.17
7933	Min. Bayon. Base	.16
7934	110-V. Candelabra	.18



G-C PILOT LAMP INSTALLER

Makes it easy to install miniature dial bulbs, neon and candelabra lamps in hard-to-get-at-places. All rubber.

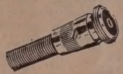
No.		List
7935	Installer	$0.55



G-C DOUBLE ALLIGATOR CLIP

Brand New! A clip on both ends. Handiest connector made for joining wires, making temporary circuits, repairs; for tests, experiments, etc. Cadmium-plated.

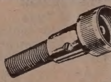
No.		List
7758-E	Env. 2	$0.45



G-C MALE MICROPHONE CONNECTOR

Completely shielded, sturdy, single contact connector. Brass, bright chrome-plated. Steel spring cord protector.

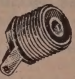
No.		List
7940	Connector	$0.50



G-C FEMALE MICROPHONE CONNECTOR

Single contact female type used with No. 7940, 7941 and 7943 connectors. Complete, brass chrome-plated.

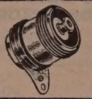
No.		List
7942	Connector	$0.60



G-C MICROPHONE CHASSIS UNIT CONNECTOR

Single contact male connector for chassis. Used with type 7942 female connector. Supplied complete. Brass nickel-plated.

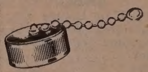
No.		List
7941	Connector	$0.39



G-C MICROPHONE CONNECTOR

Single contact, closed circuit type, prevents open circuit noises when microphone is disconnected. Chassis type, use with type No. 7942 female connector. Brass, nickel-plated.

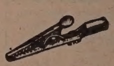
No.		List
7943	Connector	$0.60



G-C MICROPHONE CONNECTOR CAP

Chrome plated cap with anchor chain for all connectors. Seal against dirt and prevent thread damage.

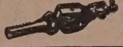
No.		List
7944	Connector Cap	$0.55



G-C INSULATED ALLIGATOR CLIP

Solder type with Red or Black insulated sleeve. Strong spring. Nickel plated.

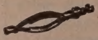
No.		List
5064	Red Clip	$0.22
5064-E	Env. of 2,	.45
5065	Black Clip	.22
5065-E	Env. of 2,	.45



G-C CROCODILE CLIP

Set screw type. Teeth nest together to assure perfect contact with wires, etc. Cadmium-plated.

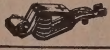
No.		List
7757	Clip	$0.33



G-C WEE-PEE-WEE CLIP

Very small and thin nosed with set screw for wire. Phosphor bronze. Ideal for coil work.

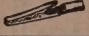
No.		List
7755	Clip	$0.33



GC PEE-WEE CLIP

Popular test clip. Interlocking jaws assure positive contact. Set screw type.

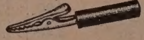
No.		List
7756	Clip	$0.13



G-C ALLIGATOR CLIP

Solder type, non-insulated. Strong spring for positive contact. Nickel-plated.

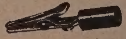
No.		List
5063	Clip	$0.13
5063-E	Env. of 3,	.45



G-C ALLIGATOR CLIP

Wire fastens under set screw. Handy for all types of connectors. Cadmium-plated.

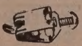
No.		List
7752	Clip	$0.20

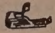


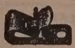
G-C SCREW TYPE INSULATED ALLIGATOR CLIP

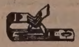
Very popular. Bright polished handles. Set screw for wire.

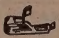
No.		List
7750	Blk, Clip	$0.28
7751	Red Clip	.28

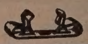












G-C FAHNESTOCK CLIPS (Also see other listing Page U-105)

G-C AMMETER CONNECTOR

Easily clips to the ends of screws. Positive fast connector.

No.		List
6307	Each	$0.13
6307-G	Box144	17.20

G-C SMALL CLIP

½″ long by $\frac{7}{32}$″ wide. Handles up to No. 16 wire. No 6 Mtg. Hole.

No.		List
6301	Each	$0.04
6301-G	Box144	2.35

G-C MEDIUM CLIP

¾″ long by $\frac{5}{16}$″ wide. Handles up to No. 14 wire. No. 6 Mtg. Hole.

No.		List
6302	Each	$0.04
6302-G	Box144	2.55

G-C LARGE CLIP

1$\frac{1}{16}$″ long by ⅜″ wide. No. 8 Mtg. Hole.

No.		List
6303	Each	$0.05
6303-G	Box144	3.70

G-C MEDIUM SOLDER LUG CLIP

¾″ long by $\frac{5}{16}$″ wide. No. 6 Mtg. Hole.

No.		List
6306	Each	$0.05
6306-G	Box 144	3.50

G-C DOUBLE CLIP

1⅛″ long by $\frac{5}{16}$″ wide. No. 6 Mtg. Hole.

No.		List
6304	Each	$0.15
6304-G	Box144	19.90

GENERAL G-C CEMENT SWITCHES — SPAGHETTI TUBING

G-C PUSH-ON PUSH-OFF SWITCH

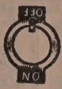
For vacuum cleaners, appliances, test equipment. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1338	S.P.S.T.	$1.90

G-C BAT HANDLE SWITCH WITH WIRE LEADS

For vacuum cleaners, appliances, radio sets, etc. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1335	S.P.S.T.	$1.25



G-C ON-OFF PLATE

Will fit the G-C, H & H, Cutler-Hammer and other makes of standard switches.

No.		List
1329	On-Off Plate	$0.06

G-C BAT HANDLE TOGGLE SWITCH

Tear drop handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No.		List
1330	S.P.S.T.	$0.85
1331	S.P.D.T.	1.10
1332	D.P.S.T.	1.60
1333	D.P.D.T.	1.85

G-C TOGGLE SWITCHES

Ball handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No.		List
1300	S.P.S.T.*	$0.85
1301	S.P.S.T.†	1.10
1302	S.P.D.T.*	1.10
1303	S.P.D.T.†	1.35
1304	D.P.S.T.*	1.60
1305	D.P.S.T.†	1.85
1306	D.P.D.T.*	1.85
1307	D.P.D.T.†	2.10

* ½" Shank Length.
† ¾" Shank Length.

G-C PUSH BUTTON SWITCH

Two circuit, "slow make and quick break" momentary contact switch. One circuit normally on, other off; pushing button reverses circuits in use. Made by H & H for G-C. 3 amps., 125 volts. Shank ⅝" long.

No.		List
1340	Switch	$1.65

PUSH BUTTON
For 1340 Switch
Red or Black (Specify)

No.		List
1343	Button	$0.35

G-C ROTARY SWITCHES

Best grade enclosed rotary switches. Made by H & H for G-C. 3 amps., 125 volts. Shafts 1½" long.

No.		List
1320	S.P.S.T.*	$1.10
1321	S.P.S.T.†	1.25
1322	S.P.D.T.*	1.35
1323	S.P.D.T.†	1.75
1324	D.P.S.T.†	1.85
1325	D.P.D.T.*	2.05
1326	D.P.D.T.†	2.50

* ⅜" Shank Length.
† 1" Shank Length.

G-C NEUTRAL CENTER SWITCH

Handy radio, appliance and tester switch with 3 positions, On-Off-On. Rated 15 amps., 110 volts; 15/32" shank. Nickel Plated.

No.		List
1308	S.P.D.T.	$1.80
1309	D.P.D.T.	3.00

G-C EXTRA HEAVY DUTY POWER SWITCH

Three position for motors, projectors, transmitters, movie equipment, etc. Made by H & H for G-C. 10 amps., 125 volts. Neutral off in center. Size 2" x 1" x 1⅝", shank ¾" diameter.

No.		List
1352	D.P.D.T.	$6.25
1353	3-P.D.T.	9.15
1354	4-P.D.T.	12.25

G-C HEAVY DUTY POWER SWITCH

Push button, D.P.S.T. safety switch for transformers, racks, transmitters, refrigerators and high frequency work Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No		List
1351	D.P.S.T.	$3.00

G-C HEAVY DUTY POWER SWITCH

D.P.S.T. toggle power switch for motors, appliances, projectors, etc. Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.		List
1350	D.P.S.T.	$2.10

G-C SLIDE SWITCHES

For phonographs, tone controls, auto lights, electric trains, etc. ½" wide x 1⅛" center mounting.

No.		List
1355	S.P.S.T.	$0.35
1357	S.P.D.T.	.35
1358	D.P.S.T.	.45
1359	D.P.D.T.	.35

G-C RADIO FRICTION TAPE

This narrow ⅜" tape was particularly made for radio work. It eliminates waste and tearing of tape. It saves time and is handy to carry with you.

No.	Roll	List
870	65 ft. ⅜"	$0.60
871	65 ft. ¾"	1.15

G-C PLASTIC TUBING KITS

Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.

No.		List
635	Kit of 25 ft. Asstd.	$1.00
635-D	Display 8 No. 635	8.00

G-C ASSORTED SPAGHETTI KIT

An assortment of 7½" lengths of spaghetti sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to ⅜" I.D. A very handy bundle to have for repair jobs.

No.		List
550	Kit 26 Lengths	$0.70

GC Sleeving
Sleeving
Assorted

G-C SPAGHETTI ASSORTMENT

"A Box Full of Spaghetti"

Here's a buy you can't beat on a spaghetti assortment. A variety of sizes and colors are included of high grade varnish tubing. Put up in attractive box.

No.	List
551	$1.40

GC
RADIO
SPAGHETTI

G-C SPAGHETTI ON SPOOLS

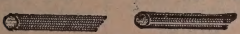
"Approved by ASTM"

5000-Volt Dielectric Strength

Best grade varnished tubing put on convenient 20-ft. spools. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green, Blue. Specify color.

No.	Spool	List
499	20-ft.	$2.15

G-C COATED SLEEVING

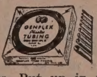


Best grade varnished sleeving. Dielectric strength 2000 volts. Colors: Black, Red, Yellow, Green, Brown. Specify color.

No.	Size	List
525	No. 20, fit 20 wire	$0.15
528	No. 17, fit 18 wire	.17
531	No. 14, fit 14 wire	.20
533	No. 12, fit 12 wire	.22
537	⅛" I.D.	.28
540	3/16" I.D.	.33
543	¼" I.D.	.45
546	⅜" I.D. (resist. size)	.75
547	7/16" I.D.	1.00

G-C GENFLEX PLASTIC TUBING

"MADE OF EXTRUDED PLASTIC"



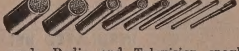
High grade extremely flexible plastic tubing for Radio and Electronic Insulation work. Resistant to cold or heat. High dielectric strength, average 8,000 volts. Put up in attractive individual boxes for easy handling.

Colors: Black, Red, Green, Clear (Specify)

No.	Wire	Std. Pkg.	List
603	18	20 ft.	$1.00
605	16	20 ft.	1.00
607	14	20 ft.	1.00
609	12	20 ft.	1.00
611	10	15 ft.	1.00
613	8	15 ft.	1.00
616	6	10 ft.	$1.00
617	4	10 ft.	1.00
620	2	10 ft.	1.00
625	Fits over 300-ohm Twin Line	8 ft.	1.00

All sizes available in continuous lengths on special order of 1,000 feet or more.

G-C RADIO SPAGHETTI

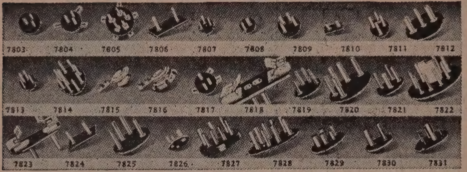


Best grade Radio and Television spaghetti. Smooth coated, with best varnishes. Very flexible. 5000 volt dielectric. Approved by ASTM. Colors: Black, Red, Yellow, Green, Brown. Specify color. 30" lengths.

No.	Size	List
500	No. 20, fit 20 wire	$0.20
503	No. 17, fit 18 wire	.20
506	No. 14, fit 14 wire	.22
508	No. 12, fit 12 wire	.28
512	⅛" I.D.	.39
515	3/16" I.D.	.55
518	¼" I.D.	.65
521	⅜" I.D. (resist. size)	.85
522	7/16" I.D.	1.05
523	½" I.D.	1.30

GENERAL G-C CEMENT BATTERY PLUGS—KITS—STAPLES

G-C RADIO BATTERY PLUGS



Part No.	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
7803	45 "B" Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	$0.12
7804	Same as No. 7826, except has Fahnestock Clips.						.39
7805	Same as No. 7829, except has Fahnestock Clips.						.55
7806	4½ "A"	G-3	746	VS002	P100	P-83A	.12
7807	45 "B" Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	.12
7808	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742, 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	.12
7809	1½ "A"- 90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793	.14
7810	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P694A, P696L, P698A, P698L	.12
7811	6 "A"- 90 "B"	2F4B60, etc.					.17
7812	7½ "A"	G-5	687	VS003		P85A	.14
7813	1½ "A"- 63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L, P41A4G	AB419	.14
7814	7½ "A"- 90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	.28
7815	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	.10
7816	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	.12
7817	Same as No. 7803, except has Fahnestock Clips.						.39
7818	Same as No. 7808, except has Fahnestock Clips.						.28
7819	6 "A"- 75 "B"	G4B50, etc.					.17
7820	6 "A"- 90 "B"	F4B60		VS048			.22
7821	6 "A"- 90 "B"	2F4A60		VS044	P60A8F4	AB694	.14
7822	9 "A"- 90 "B"	4FA60					.28
7823	Same as No. 7824, except has Fahnestock Clips.						.28
7824	3 "A"	20F2	X125	VS025	P8024	P9403	.12
7825	"AB" Batt. Packs	Usalite	AB5671		P60A110		.20
7826	4½ "C"	2370PI	X771	VS030	P3D	P231W	.17
7827	135 "B"- 9 "C"				37-08, 3738, etc.		.28
7828	135 "B"- 13½ "C"				34, 34A, 39, 39A		.39
7829	22½ "C"	5156PI	768	VS031	P15B5	P5151	.24
7830	2 prong large with one thin and one thick. Popular on Portables.						.17
7831	9 "A"- 90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AB994	.28

BATTERY PLUGS

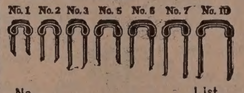
G-C RADIO BATTERY PLUGS

For all plug-in radio batteries. It pays to have an assortment to be ready for all repairs. Plugs as listed above. Complete with box and handy reference chart.

No.		List
7801	100 Asstd. Plugs, Metal Box	$13.20
7800	50 Asstd. Plugs, Cardboard Box	7.15

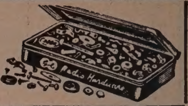
G-C INSULATED BELL STAPLES

Saddle-type insulated staples for holding wires in place and out of the way.



No.		List
	Fig. 1, $\frac{3}{16}$" x ½"	
1751	Box 50, No. 1	$0.28
1752	Box 100, No. 1	.45
	Fig. 2, $\frac{3}{16}$" x ⅝"	
1753	Box 50, No. 2	.28
1754	Box 100, No. 2	.45
	Fig. 3, $\frac{3}{16}$" x ¾"	
1755	Box 50, No. 3	.28
1756	Box 100, No. 3	.45
	Fig. 5, ¼" x ⅝"	
1757	Box 50, No. 5	.28
1758	Box 100, No. 5	$0.45
	Fig. 6, ¼" x ¾"	
1759	Box 100, No. 6	.50
	Fig. 7, ¼" x ⅞"	
1760	Box 100, No. 7	.50
	Extra Large Cable Size Fig. 10, ⅜" x ¾"	
1761	Box 100, No. 10	.85

SERVICEMENS' KIT



G-C DIAL AND KNOB REPAIR KIT

Handy assortment of knob springs, set screws, dial springs, idler pulleys and drive rubbers in box.

No.		List
1015	70-pc. Kit,	$2.50
1016	150-pc. Kit,	4.95

G-C PLASTIC JAR HARDWARE ASSORTMENT

Approximately 1000 assorted screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. No cast-offs — only regular hardware. Plastic jar with screw cap.

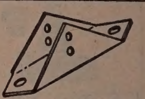
No.		List
6064	1000 Asstd.	$1.80
6056-E	Env. 100 Asstd.	.45

G-C HELL BOX

A grand assortment of useful hardware; screws, nuts, lugs, clips, washers, clamps, etc. Thousands of items needed every day. Metal hinged box.

No.	List
6500	$3.55

GENERAL G-C CEMENT
RADIO HARDWARE LABORATORY



G-C STEEL HARDWARE RACK

Steel racks, hold No. 4002 2 oz. glass bottles or plastic jars. Attractively finished. Welded construction. Heavy steel. Two sizes.

No.	Size	List
4010	20 Jars	$2.75
4012	40 Jars	4.95

G-C STEEL STOCK BOXES

Slide-in drawer type cabinet box for parts. Made so can be stacked. Attractive finish, steel welded construction with handle. Size 13½" long, 6" wide, 4" high.

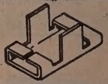
No.	List
4001	$3.55

G-C No. 8621 PIVOT MOUNT BASE

New pivot swing up base for antenna masts. Made of heavy gauge steel, zinc plated. Will hold masts up to 1¼" diameter.

No.		List
8621	Pivot Base	$0.50

Standard Jobbers Carton 100 units



G-C VENTILATING PLUGS

To ventilate chassis, amplifier, racks, transmitters, etc. Snaps into 1-inch hole. Plated.

No.	List
1709-E Env. 4	$0.45

G-C PLASTIC HARDWARE JARS

4 oz. size wide mouthed plastic jar with screw type cap. Ideal for hardware.

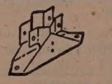
No.	List
4000	$0.33

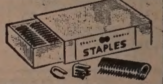
G-C STRAP CLIP

Strap clips make it easy to permanently couple strapping on chimney brackets without bolts and nuts. Also handy for coupling and extending steel strapping. Plated to prevent rust.

No.		List
8648-C	Box 100	$10.00
8648-M	Box 1000	$90.00

Jobbers Standard Carton 100 Clips





G-C SOLDER IRON TIPS

Best grade hard-drawn copper, bright plated to resist corrosion. Heats fast and holds heat.

No.	Tip	List
724	¼" x 3"	$0.45
725	$\frac{5}{16}$" x 4½"	.55
726	⅜" x 4½"	.60
727	$\frac{7}{16}$" x 4"	.75

G-C No. 8622 PIVOT SWING MOUNT

New pivot swing up mount that will hold mast up to 1¼" diameter. Made up of heavy gauge steel, zinc plated to prevent rust.

No.		List
8622	Pivot Swing Up Mount	$0.95

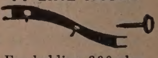
Standard Jobbers Carton 100 units

G-C STAPLE DRIVER STAPLES

Hardened steel staples in cartridge form to fit staple drivers. Lacquer coated.

No.		List
430	Box 250	$0.65

TV LINE TACKS



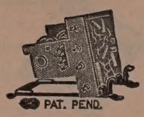
For holding 300-ohm lead wire to base boards, etc.

No.		List
8020-E	Env. 30	$0.45
8020-G	Box 144	1.35

GENERAL G-C CEMENT SERVICE AIDS—TOOLS—SHIMS

G-C CHASS-EZ
(Pat. Pending)

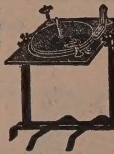
New wonder tool makes the Serviceman's job easier. Its simplicity is its chief merit. Chassis can be installed on "Chass-Ez" in five seconds. All one unit — no extra bolts or nuts to adjust. Heavy steel, riveted construction, nicely plated.



No.	List
5207	$4.00
Dealer's Net Only	2.40

G-C PHONO TURNTABLE STAND

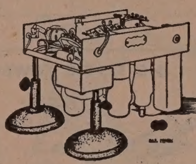
New improved model, adjustable and inexpensive. Adaptable to all turntables. Raises the turntable 15 inches above bench and can be pivoted on the swivel joints for easy examination or repairs. Sturdy steel construction. Plated.



No.	List
5205	$8.05
Dealer's Net Only	4.89

G-C RADIO JACKS

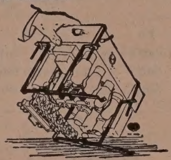
Permanent type adjustable jacks. All metal construction. Adjustable to fit any set or conditions. Easily and quickly adjusted. Two jacks supplied with three extension rods — one extra long. You need several sets in your shop.



No.	List
711	$2.35
Dealer's Net Only	1.41

G-C RADIO CHASSIS GUARDS

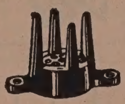
Inexpensive guards that protect the chassis and tubes when servicing. Set can be turned in any position. Easily applied and adjustable to all sets. Permanent plated metal construction.



No.	List
709	$2.75
Dealer's Net Only	1.65

G-C MINIATURE TUBE PIN STRAIGHTENER

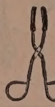
Saves tubes! Straightens without damage the pins on the fragile miniature tubes such as 1S5, 6AK5, 9002, etc. Just insert tube between guide pillars into precision base die and tube prongs are straightened and properly spaced. All metal.



No.		List
5191	For 7-pin tubes	$1.00
8105	For 9-pin tubes	1.00

G-C TUBE AND PARTS EXTRACTOR

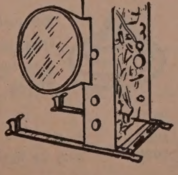
U. S. Signal Corps part No. TL 201. Handy prong tool for extracting tubes and picking up parts. Rubber cushions on prongs.



No.		List
5092	Tube Extractor	$1.65

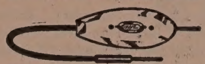
G-C TELEVISION SAF-T-RACK

A simple, sturdy rack to use in repairing heavy television chassis. Simple set it on the rack and tilt it on side. The sturdy hooks will hold the chassis on its side so you can work on it. It will prevent the tubes from being damaged.



No.		List
8045	Saf-T-Rack	$5.45

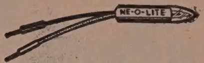
G-C DANDY TEST LITE



New neon test lite for checking radios, television sets, fuses, circuits, etc. Simple, safe and dependable for tracing all kinds of trouble. Use on voltages of 60 volts AC to 550 volts AC or DC.

No.		List
8585	Dandy Lite	$ 1.00
8585-D	Display 12 #8585	12.00

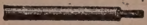
G-C NE-O-LITE



A simple, safe, electrical circuit tester for voltages from 60 volts AC to 550 volts AC or DC. Used for radio, electrical and automotive testing. Molded plastic.

No.		List
5100	Ne-O-Lite	$0.60
5112-D	Display 12 #5100	7.20

G-C NE-O-LITE WIRE



Wire same as used on Ne-O-Lite Testers, # 18 stranded, rubber covered with a red or black braid, varnished. For ignition wiring, motor wiring, etc. Red or Black — Specify color.

No.		List
5113	100 ft.	$4.15

G-C RESISTOR FOR NEON LAMP

Required resistor when using No. 717 neon lamp on voltages of 60 to 550 volts AC or DC. Connect in series.

No.	List
718	$0.11

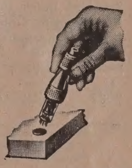
G-C NEON GLOW LAMPS

NE-T2 lamp as used in testers, appliances, as pilot light, etc.

No.	List
717	$0.28

G-C AMO MINIATURE TUBE PULLER
(Pat. Pending)

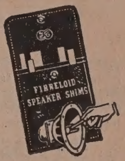
Prevents burned fingers and broken tubes. Makes it easy to remove and install tubes such as 6AG5, 50B5, etc. Works on suction and vacuum principle. Operates just by pressing on the tube and to release, just press the release button. Tube protected by rubber sleeve. Gets where your fingers can't reach. Permanent metal.



No.		List
5093	For 7-pin tubes	$1.65
8106	For 9-pin tubes	1.65

G-C FIBRELOID SPEAKER SHIMS

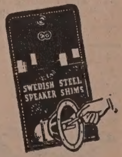
Shims made of tough and flexible fibreloid. Non-magnetic. 4 each of 5 sizes — twenty in all: Sizes, .005″, .0075″, .010″, .0125″, and .015″. Color coded. Supplied in gold lettered leatherette snap case with instructions.



No.		List
702	Kit	$0.70

G-C SWEDISH STEEL SPEAKER SHIMS

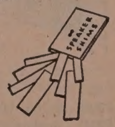
Makes it easier to center speaker voice coil. Permanent flexible Swedish steel. 4 shims each of 4 sizes coded for identification: .004″, .006″, .008″ and .010″ thick. Supplied in gold stamped leatherette partitioned snap case. Complete with instructions.



No.		List
701	Kit	$0.75

NEW! G-C SPEAKER SHIM KIT

For every type of speaker adjustment. A generous supply of Fibreloid and bronze shim stock in the various widths and thicknesses needed for speakers. Non-magnetic material. Stock can be cut to exact requirements. A long-lasting assortment. Complete instructions.



No.		List
7720	Kit	$2.20

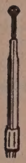
G-C RECORDING WIRE

For all wire recorders. Includes plastic leads. Permanent recordings which can be replayed indefinitely. Finest quality reproduction on stainless steel wire. Standard RMA spool fits Webster, Air King, Sears Roebuck, etc.

No.	Leaders with Spools	List
5171	1-hr. Spool	$4.50
5172	½-hr. Spool	2.75
5173	¼-hr. Spool	1.85
5174	Leaders only, for Armour type recorders, per pair	.22
5176	Empty Rewind Spool	1.00
5175	Envelope Nylon Webster Cord	.45

G-C REPLACEMENT AUTO AERIALS

FORD ROOF AERIAL
Ford-Mercury Part No. 51A-18813-A1



Replacement aerial for all Ford and Mercury Roof Aerials of 1941-42-46-47-48 that operate from behind the dividing post of the windshield. Made of Admiralty brass tubing with stainless steel extension rod, triple chrome plated. Free sliding with positive contacts insure noise-free reception. Easy to install, fits without changes, replaces original aerial. Comes complete with knob and set screw.

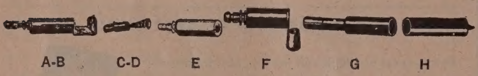
No.		List
7056	Ford Roof Aerial	$2.45

BUICK REPLACEMENT ANTENNA
Buick Part No. 980,688

Standard Buick Roof Aerial Mast. The replacement mast for Buick Roof Aerials on models 1940 through 1949. Easy to replace — merely tightens into position with a set screw. Admiralty brass tubes with a stainless steel top rod. Chrome-plated. Each mast individually packed in a paper tube. Standard packing — 10 tubes to a carton.

No.		List
7057	Buick Antenna Mast	$3.00

G-C IGNITION SUPPRESSORS

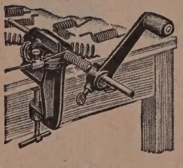


A rugged long-life assortment of bakelite auto radio ignition suppressors. Resistance, 10,000 ohms (V-8 types, 50,000 ohms). Resistors, moisture-proofed to eliminate variations due to weather changes. Impervious to heat, oil, moisture and mild acids. All metal parts brass. Good for more than 50,000 miles.

	No.		List
(a)	1501	Bracket Type	$0.33
(b)	1502	Ford V8	.33
(c)	1503	Ford V8 Brush Type, 33, 34, 35 Cars	.33
(d)	1504	Ford V8 Brush Type, 36 to 40 Cars	.33
(e)	1505	Screw Type, Universal	$0.33
(f)	1506	Snap-On Type	.33
(g)	1507	Distributor Type	.33
(h)	1508	Cable type for Splicing Cables	.33

G-C SPRING MAKER

(Pat. Pending)



Makes all types of coil springs — compression or extension types — with any number of coils or degree of wire pitch. Designed for simple adjustment and operation with any size spring wire. Necessary wherever springs must be made fast or to special specifications. Liberal supply spring wire furnished with each winder. Fastens to any bench.

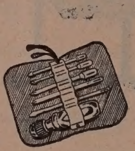
No.		List	Dealer's Net
5209	Spring Winder and Asst. Spring Wire	$24.90	$14.94*
5210	Replacement Asst. Spring Wire	2.75	1.65*

G-C MASTER-TONE RECORDING TAPE

The new G-C plastic back master-tone recording tape available in two sizes, for commercial and home use. Comes in a plastic wheel which stops rapidly. Has low surface friction, high frequency response, and is uniform from reel to reel. No magnetic weak spots.

No.		List
5180	1270 foot reel	$5.50
5181	640 foot reel	3.50

G-C SCREW DRIVER SET

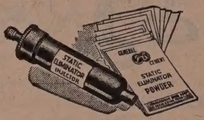


A handy screw driver set in a leatherette case with five interchangeable blades. Unbreakable handle with flanged aluminum screw chuck.

Blade Sizes	
1—cabinet	⅛ x 3¼
1—cabinet	3/16 x 3¾
1—mechanic	¼ x 5½
1—recessed head No. 1	3/16 x 4¼
1—recessed head No. 2	⅛ x 4¼

No.	List
8615	$2.65

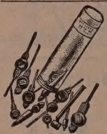
G-C STATIC POWDER AND INJECTOR GUN



It really works, cuts down auto radio static. Inject powder in tubes, and eliminate wheel tire static. Easy to apply. Powder also cuts down tire trouble by eliminating those pin-point tube leaks caused by tire static discharge. Powder blown into tube with G-C Injector Gun. Every car should be treated with G-C Static Chaser Powder.

No.		List
5604	Injector Gun, only	$1.80
5605	Packet Static Powder for 5 tires (1 car)	1.10
5606	Kit, one No. 5604 Injector, and one No. 5605 Powder	2.75

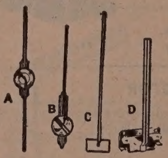
G-C DIAL POINTER KIT



A complete kit of 10 assorted dial pointers. Pointers come in a clear transparent plastic case which keeps the pointers in perfect condition.

No.	List
6810	$3.25

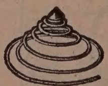
G-C DIAL POINTERS



Popular replacement pointers.

	No.		List
(a)	6801	3″ Rotary Pointer for ¼″ shaft, gold	$0.39
(b)	6802	5″ 360° Rotary Pointer for ¼″ shaft, gold and red	.39
(c)	6803	2″ Slide Pointer, red translucent	.39
(d)	6804	2¼″ Slide Pointer, white enamel	.33

G-C HUB CAP STATIC SPRINGS

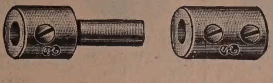


Eliminate wheel static noise developed by poor electrical contact between front axle and wheels. Springs have riveted metal points for firm, smooth contact. Plated.

No.		List
1058	Each	$0.13
1059	Box, 24 Springs	3.00

* Net

GENERAL G-C CEMENT WRENCH KITS—TOOL SETS—BUSHINGS



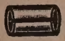
G-C SHAFT COUPLINGS, EXTENSIONS AND REDUCERS

BRASS FITTINGS

No.		List
6701	¼" to ¼" coupling....	$0.25
6702	¼" to ⅜" coupling....	.30
6703	¼" to 3/16" coupling..	.25
6704	⅜" to ⅜" coupling....	.30
6705	¼" hole to ¼" shaft extension	.30
6710	⅜" hole to ¼" shaft extension and reducer ...	.30
6712	¼" x 6" brass shaft....	.20
6713	¼" x 12" brass shaft...	.35
6716	¼" hole x ¼" round shaft x 4" long	.35

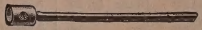
INSULATED FITTINGS

No.		List
6721	¼" to ¼" coupling....	$0.25
6722	¼" to ⅜" coupling....	.30
6725	¼" hole to ¼" shaft extension	.30
6734	¼" x 6" fibre shaft....	.30
6735	¼" x 12" fibre shaft...	.55
6737	¼" x 12" bakelite shaft	1.00



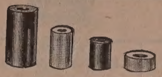
G-C REDUCING BUSHINGS

No.		List
6751-E	¼" to 3/16" reduction, 8 in Env.	$0.45
6751-G	144 No. 6751 (Gross)	7.15



G-C SHAFT EXTENSIONS

No.		List
6755	¼" x 4½" Long Flat Shaft Extension	$0.40
6716	¼" x 4½" Long Round Shaft Extension	.35



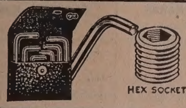
G-C BRASS AND INSULATED SPACERS AND BUSHINGS

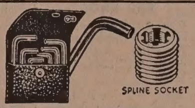
No.	Assortments	List
6617	Hardware Lab. Jar 12 Assorted Spacers and Bushings	$0.75
6760-E	Env. 12 Asst. Ins. Spacers	.45
6762	15 Asst. Threaded Brass Bushings 6-32 thread, ¼" to ¾" lg.	1.40
6763	15 Asst. Threaded Brass Bushings 8-32 thread, ¼" to ¾" lg.	1.40
6775-E	Env. 12 ¼" x ¼" Ins. Spacers	.45
6761-E	Env. 12 Asst. Metal Spacers	.45

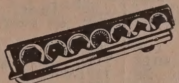
BRASS				INSULATED			
No.	O.D.	Length	List	No.	O.D.	Length	List
6765	¼"	¼"	$0.05	6775	¼"	¼"	$0.05
6767	¼"	½"	.06	6776	¼"	⅜"	.06
6768	¼"	¾"	.07	6777	¼"	½"	.06
6769	⅜"	¼"	.06	6778	¼"	¾"	.09
6770	⅜"	½"	.07	6779	⅜"	¼"	.06
6771	⅜"	¾"	.08	6780	⅜"	½"	.07
				6781	⅜"	¾"	.08

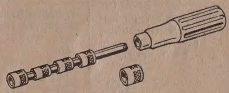
THREADED BRASS BUSHINGS

No.	O.D.	Thread Size	Length	List	No.	O.D.	Thread Size	Length	List
6785	¼"	6-32	¼"	$0.06	6790	¼"	8-32	¼"	$0.06
6786	¼"	6-32	⅜"	.08	6791	¼"	8-32	⅜"	.08
6787	¼"	6-32	½"	.09	6792	¼"	8-32	½"	.09
6789	¼"	6-32	¾"	.10	6793	¼"	8-32	¾"	.10









G-C ALLEN-HEX WRENCHES AND KITS

Made of alloy steel properly hardened. Used on knobs, dials, phono needles, motors, pulleys, etc.

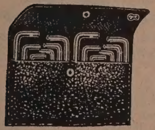
No.		List
5030	Env. 4 Asstd. Wrenches	$0.55
5029	Kit 6 Asstd. Wrenches in Leatherette Case	.85
5029-A	Env. 3 Hex Key Wrenches for No. ¼" to ⅜" Set Screws	.55
5031	No. 4	.13
5032	No. 5	.13
5033	No. 8	.13
5034	No. 10	.13
5035	¼"	.13
5036	5/16"	.14
5037	⅜"	.14

G-C BRISTO-SPLINE WRENCHES AND KITS

Very popular "Bristo" or "Spline" type wrenches as used on phono needles, motors, pulleys, knobs, etc. Made of alloy steel, properly hardened.

No.		List
5069-E	Env. 4 Asstd. Wrenches	$0.55
5070-E	Kit 6 Asstd. Wrenches in Leatherette Case	.85
5071	No. 4	.13
5071-A	No. 5	.13
5072	No. 6	.13
5073	No. 8	.13
5074	No. 10	.13
5075	¼"	.13

G-C ALLEN-BRISTO WRENCH KIT



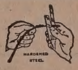
Complete wrench kit for hex and spline type screws. Double snap button case of durable leatherette. Fit No. 2 to ⅜" screws.

No.	List
5028	$1.80

G-C 8-PIECE VEST POCKET SET

Handiest tool! Seven sockets, ¼", 5/16", 11/32", ⅜", 7/16" hex; ⅜" round knurled, ¼" square, complete with 4" L handle.

No.	List
712	$1.75



G-C WIRE STRIPPER

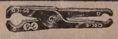
5-in-1 tool. Wire stripper, scraper, cutter, screwdriver, and wire winder all in one. Tempered steel.

No.	List
757	$0.45

G-C 6-PIECE SLIP-ON WRENCH SET

Handle holds five sockets, sizes ¼", 5/16", 11/32", ⅜", and 7/16". Easily assembled. Tempered steel, plated.

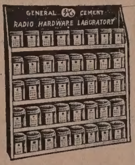
No.	List
715	$2.20



G-C FUSE PULLERS

For cartridge fuses. Heavy duty construction of high dielectric material.

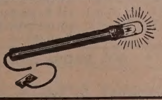
No.		List
5525	Midget size, for fuses ¼" x ½"	$0.65
5526	Large size, for fuses ½" x 1½"	1.35



G-C ELECTRONIC HARDWARE LABORATORIES

Complete assortment of hardware. Rack contains several thousand essential electronic hardware items. Packed in clear jars with screw caps. Assortments as below: Free Steel Rack!

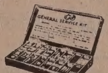
No.		List	Dealer's Net
6604	DeLuxe Hardware Laboratory, 40 jars	$30.00	$18.00*
6601	20 jar assortment	15.00	9.00*



G-C INSPECTION LITE

Operates on 110-120 volts AC or DC. Cord approximately 6 ft. long.

No.		List
705	Inspection Light	$2.15
704	Replacement Bulb for No. 705	.19
704-S	Clear Plastic Shield	.19



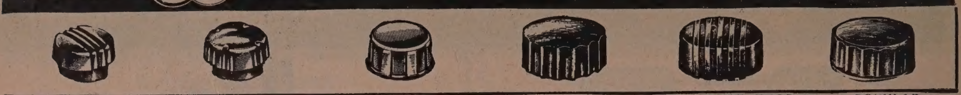
G-C CARBON BRUSH KIT

Complete assortment replacement brushes, for vacuum cleaners, washing machines, ironers, pumps, fans, etc. Contains 92 brushes and 18 springs.

No.	List
7000	$5.00

* Net

GENERAL G-C CEMENT RADIO KNOBS—KITS



MAJESTIC BAKELITE KNOBS

Popular pattern. Set screw type. ⅞" diam., ¼" shaft.

No.		List
1100	Walnut	$0.18
1100-I	Ivory	.22

ROYAL BAKELITE KNOBS

Beautiful pattern. Set screw type. ⅞" diam., ¼" shaft.

No.		List
1105	Walnut	$0.18
1105-I	Ivory	.22

YANKEE BAKELITE KNOBS

Set screw type. ¾" and 1" diam., ¼" shaft.

No.		List
1109	¾" Wln.	$0.18
1110	1" Walnut	.18
1109-I	¾" Ivory	.22
1110-I	1" Ivory	.22

MODERN LARGE KNOB

Knurl shaft or set screw types. 1⅛" diameter.

No.		List
Knurl Shaft Type		
1176	Walnut	$0.13
Set Screw Type		
1177	Walnut	.18

NEW LARGE KNOB

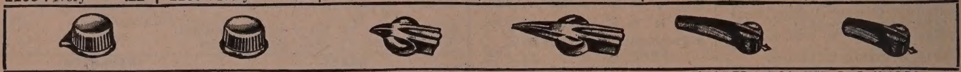
Knurl shaft or set screw types. 1⅛" diameter.

No.		List
Knurl Shaft Type		
1178	Walnut	$0.13
Set Screw Type		
1179	Walnut	.18

POPULAR LARGE KNOB

Knurl shaft or set screw types. 1 3/16" diameter.

No.		List
Knurl Shaft Type		
1180	Walnut	$0.13
Set Screw Type		
1181	Walnut	.18



MIDGET BAKELITE KNOBS

Set Screw Type

For small sets. 11/16" diam., ¼" shaft.

No.		List
Pointer Type		
1115	Walnut	$0.13
1116	Ivory	.14
1117	Red	.14
1118	Black	.13

For small sets. 11/16" diam., set screw ¼".

No.		List
Non-Pointer Type		
1111	Walnut	$0.13
1112	Ivory	.14
1113	Red	.14
1114	Black	.13

STREAMLINE POINTERS

The most popular pointer knob. ¼" shaft, set screw type 1¼" long.

No.		List
1136	Black	$0.17
1136-W	Walnut	.18
1137	Red	.20
1137-I	Ivory	.22

A very popular pointer knob. ¼" shaft, set screw type, 2" long.

No.		List
1135	Black	$0.22
1135-W	Walnut	.26
1138	Red	.26
1138-I	Ivory	.29

MODERN POINTER BAR KNOBS

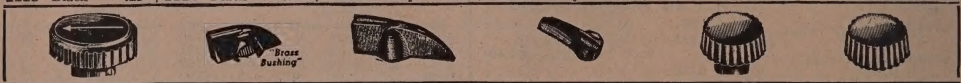
Brass Bushing

For intercomms and instruments. Black. Set screw, ¼" shaft, 2¾" long.

No.		List
1130	Black	$0.42
1130-W	Walnut	.42

For intercomms and instruments. Black finish. Set screw, ¼" shaft, 1⅝" long.

No.		List
1131	Black	$0.39
1131-W	Walnut	.39



INSTRUMENT KNOB

A heavy duty knob for communication equipment, instruments. ¼" brass insert, set screw. 1¾" O.D. x ⅞".

No.		List
1175	Black	$0.39

STREAMLINE POINTERS

Brass Bushing

Brass insert. ¼" shaft, set screw. 1¼" long.

No.		List
1170	Black	$0.28
1170-W	Walnut	.28
1172	Red	.33
1172-I	Ivory	.33

Brass insert. ¼" shaft, set screw. 2" long.

No.		List
1171	Black	$0.33
1171-W	Walnut	.33
1173	Red	.40
1173-I	Ivory	.40

POPULAR BAR KNOB

For intercomms, instruments, appliances. Bakelite with set screw. ¼" hole, 1⅝" long.

No.		List
1132	Walnut	$0.22

POPULAR PLASTIC KNOB

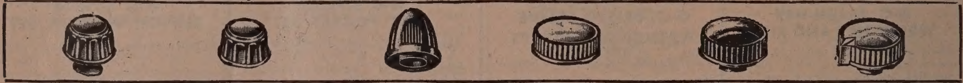
15/16" diameter with ½" shank extension for ¼" knurled shaft.

No.		List
1153	Walnut	$0.13
1154	Ivory	.14

ATTRACTIVE PLASTIC KNOB

15/16" diameter, flush type for ¼" knurled shafts.

No.		List
1155	Walnut	$0.13
1156	Ivory	.14



MIDGET TYPE PLASTIC KNOB

¾" diam., ⅜" shank for ¼" knurled shafts.

No.		List
1157	Walnut	$0.13
1158	Ivory	.14

MIDGET TYPE PLASTIC KNOB

¾" diam. flush type for ¼" knurled shafts.

No.		List
1159	Walnut	$0.13
1160	Ivory	.14

ACORN PLASTIC KNOB

¾" diam., ⅛" shank for ¼" knurled shafts.

No.		List
1182	Walnut	$0.13
1183	Ivory	.14

PUSH-ON KNURL KNOB

15/16" diam. flush type for ¼" knurled shafts.

No.		List
1184	Walnut	$0.13
1185	Ivory	.14

PUSH-ON KNURL KNOB

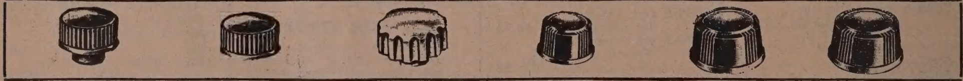
15/16" diam., ½" shank for ¼" knurled shafts.

No.		List
1186	Walnut	$0.13
1187	Ivory	.14

POINTER TYPE PLASTIC KNOB

15/16" diam., ½" shank for ¼" knurled shafts.

No.		List
1188	Walnut	$0.13
1189	Ivory	.14



MIDGET TYPE PLASTIC KNOBS

23/32" diam., ½" shank for ¼" knurled shafts.

No.		List
1197	Walnut	$0.13
1198	Ivory	.14

23/32" diam., flush shank for ¼" knurled shafts.

No.		List
1193	Walnut	$0.13
1194	Ivory	.14

SPRING AND D-SHAFT KNOBS

Spring type. 15/16" diam. Fits ¼" flat shafts.

No.		List
1151	Walnut	$0.13
1152	Ivory	.14

D- or flat shaft type. ⅝" diam.

No.		List
1161	Walnut	$0.13
1162	Ivory	.15

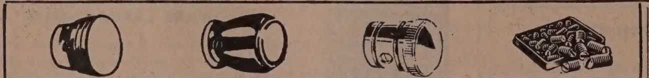
SPRING AND D-SHAFT KNOBS

D- or flat shaft type. ¾" diam.

No.		List
1163	Walnut	$0.13
1164	Ivory	.15

D- or flat shaft type. 1" diam.

No.		List
1165	Walnut	$0.15
1166	Ivory	.17



G-C AUTO RADIO KNOBS

13/16" diam. x 11/16" high. For ¼" and 3/16" shafts. Brass bushing with set screw.

No.		List
¼" Shaft		
1191	PearlGray	$0.33
1192	Maroon	.33
3/16" Shaft		
1167	Pearl Gray	.39
1168	Maroon	.39

Set screw type auto radio knob. 13/16" diam. x ⅞" high. For either ¼" or 3/16" shafts with bushing.

No.		List
1195	PearlGray	$0.33
1196	Maroon	.33

G-C AUTO RADIO KNOBS

Chrome plated. For ¼" and 3/16" shafts. Set screw mounting.

No.		List
1169	¼"	$0.33
1174	3/16"	.33

G-C KNOB SET SCREW ASST.

Handy set screw assortments for radio knobs, shafts, pulleys. 6-32, 8-32, and 10-32.

No.		List
1060	50 Asst.	$1.20
1061	100 Asst.	2.00
1062-E	15 Asst.	.45
6605	30 Asst.	.75

G-C RADIO KNOB KITS

Popular plastic knobs in assorted kits, all kinds of knobs included.

No.	Quantity	List
1140	35 Asstd. Push-on Buttons	$4.35
1141	28 Asstd. Spring Knobs	4.35
1142	24 Asstd. Set Screw Knobs	4.35
1143	30 Asstd. All Type Knobs	4.35
1144	12 Asstd. Auto Radio Knobs, for ¼" and 3/16" shafts	4.35

G-C KNOB ASST.

No.		List
1120	35 Asst. All Types Knobs	$1.85
8026	60 Auto Radio Button Knobs	1.85

G-C KNOB SPRING KITS

No.		List
1049-E	Env. 20 Asstd.	$0.45
1050	Kit 35	1.10
1051	Kit 100	1.90
6619	Jar 35 Asstd.	.75

G-C KNOB FELTS

Used behind knobs.

No.		List
1065-E	Env. 50	$0.45
6641	Jar 70	.75

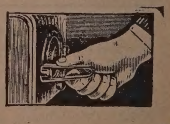
G-C KNOB BUSHINGS

Reduce from ¼" to 3/16". For auto radios.

No.	List
6751	$0.45

G-C RADIO KNOB PULLER

Very handy in removing knobs that are hard to pull off. Simply slip behind knob and pull off. Saves the cabinet and the knobs.



No.	List
1063	$0.45

GENERAL G-C CEMENT PHONO NEEDLES and ACCESSORIES

G-C MASTER POINT PHONO NEEDLES

G-C SYMPHONIC NEEDLE

Superior quality long life needle designed to give excellent tone. Special osmium alloy tip gives true reproduction with less pressure on the records. Will last indefinitely.

No.		List
1435	Each	$1.00
1435-D	Display 12 # 1435,	12.00

G-C CONCERT GRAND

Very finest "long life" curved "spring action" needle that will bring out the finest tones in music. Special osmium alloy tip insures long life. Tip is perfectly formed to fit record grooves. The best.

No.		List
1436	Each	$1.50
1436-D	Display 12 # 1436,	18.00

G-C "RECO" STATIC CHASER

Developed specially for vinylite records, it eliminates static electricity on plastic records and keeps records dust free. Also stops crackling and static discharge noises. Simply wipe it on and the job is done. Can be used on any type records.

No.		List
48-2	2-oz.	$0.75

G-C RECORD-LIFE LUBRICANT

Simply wipe record with "Record-Life" and the needle will glide over the record smoothly. Prevents record and needle wear; also eliminates noises and scratching sounds. Use also for making records.

No.		List
125-1	1-oz.	$0.50
125-2	2-oz.	.65
125-4	4-oz.	1.10
125-6	6-oz.	1.50

G-C REK-O-DOPE

Required lubricant when recording and cutting records. All purpose, it cools, cleans, lubricates, and hardens grooves when cut. Rek-O-Dope will give better tone and longer life.

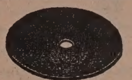
No.		List
126-1	1-oz.	$0.50
126-2	2-oz.	.65
126-4	4-oz.	1.10
126-6	6-oz.	1.50

G-C CORD CONNECTOR

Handy cord connector to connect phono motors to radio sets, for appliances, vacuum cleaners, sewing machines, etc.

No.	List
868	$0.70

MASTER-POINT
LONG LIFE
Phonograph Record
RECORDING
STYLUS
No. 1433



G-C 'JUKE SPECIAL' PHONO NEEDLE

Long life needle. Preferred by operators on coin machines, automatic records, etc. Precious osmium tip will give long, hard service and tone quality, even when used with heavy pick-ups. Will give thousands of plays.

No.		List
1437	Each	$1.00
1437-D	Display 12 # 1437,	12.00

G-C RECORDING STYLUS

The best cutting stylus made from alloy steel will give several hours of good cutting. Make your own recordings.

No.		List
1433	Each	$0.50
1434-D	Display 12 # 1433,	6.00

G-C PICK-UP AND CARTRIDGE SCREW ASST.

Contains small size screws and bushings such as used on cartridges of pick-up arms.

No.		List
6000-E	60 Screws,	$0.45

CARTRIDGE MTG. SCREWS

No.		List
6005-E	Env. 60 4-36 x ¼"	$0.45
6005-AE	Env. 60 4-40 x ¼"	.45

G-C RECORD TURNTABLE FELT

Re-cover phono turntables with ready cut felts. Dark brown.

No.	Dia.	List
1292	7⅞"	$0.50
1296	8⅞"	.65
1293	9⅞"	.70
1294	11⅞"	.85
1295	15⅞"	1.45

Brown Felt — By The Yard

No.		List
1298	36" Wide, per yd.	6.50

G-C SHIELDED PHONO PICK-UP WIRE

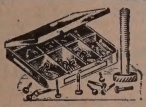
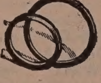
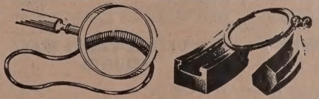
Handy package of single conductor shielded wire as used on phono pick-ups, etc. Enough wire for several jobs in package.

No.		List
1738-E	Envelope	$0.45

G-C RECORD CLEANING PAD

Specially treated soft felt pad for cleaning and removing dust from records. Saves records.

No.		List
1290	4" x 4"	$0.28
1291	6" x 6"	.50

G-C PHONO NEEDLE STYLUS SCREWS

Here's the hard-to-get replacement thumb set screws for pick-up arms and recording heads!

No.		List
1052	15 Asst. Stylus Screws	$ 1.90
1052-E	Env. 7 Asst. Screws	.45
1053	100 Asst. Stylus Screws	12.10

Individual Phono Screw Specifications

		Env. of	
P1-E	For Shure Brothers, etc.	3	.45
P2-E	For Astatic, RCA, Seeburg, Webster, etc.	4	.45
P3-E	For Astatic, Stromberg-Carlson, Universal, Webster, etc.	4	.45
P4-E	For Rek-O-Cut, Webster, etc.	3	.45
P5-E	For RCA, etc.	3	.45
P6-E	For RCA, etc.	4	.45
P7-E	For Webster, etc.	3	.45
P8-E	For Shure Brothers, etc.	3	.45
P9-E	For RCA, Astatic, Webster, etc.	3	.45
P10-E	For Audex, etc.	3	.45

G-C STA-PUT PHONO-GEAR LUBRICANT

New "STA-PUT" lubricant for phonomotors, gears, shafts, etc. Will not run or drip—it "Stays Put." Recommended by RCA, G-E, and others.

No.		List
1223	Tube	$0.65
122-2	2-oz.	.65

G-C RADIO AND TELEVISION DRIVES

No.		List
1024-SE	Env. Asst. 5 Small	$0.45
1024-LE	Env. Asst. 5 Large	.45
1024-E	Env. Asst. 10 Dial	.90
1025	Box 25 Asst. Drives	1.65
1026	Box 100 Asst.	6.60
1	AK Small	.11
2	AK Large	.11
3	Stewart-Warner	.11
4	Kennedy, Wells-G.	.11
5	Stewart-Warner	.11
6	RCA	.11
7	Stewart-Warner	.11
8	Stewart-Warner	.11
9	Atwater-Kent	.11
10	Stewart-Warner	.11
11	Lge. Atwater-Kent	.28

G-C RCA TELEVISION TUNING BELT

New belt for RCA Television Tuner. Used on models series numbers 8 TC, 8 TK, 9 TC, etc. (Belt Part No. 73465).

No.		List
195	Tuner Belt	$0.30

G-C PHONO TURNTABLE DRIVES

No.	Type	List
14	Small drive belt for dual and 3-speed units, Admiral, Philco, G-I, V-M, etc.	$0.15
14-E	Envelope 3 No. 14 Drives	.45
14-B-E	Large belt for Trav-ler Model A, etc.	.45
14-F	RCA cam drive tire for RP-178, etc.	1.00
14-J	Narrow idler drive tire for V-M 405, 800-D, etc.	.25
14-J-E	Env. 2 No. 14-J	.45
14-K	45 RPM Drive for Milwaukee Stamping Units	.15
14-K-E	Env. 3 No. 14-K Drives	.45
14-L	Special molded RCA 45-RPM drive. For RCA-RP-178, RP-168, 45 RPM Models, etc.	1.00
16	For General Industries. RX-LX and Silvertone	.28
16-E	Env. 2 No. 16 drives	.45
17	Popular for Alliance, Motorola, V-M, Admiral, Philco, Zenith, Trav-ler, etc.	$0.28
17-E	Env. 2 No. 17 drives	.45
18	RCA, etc., drives	.17
18-E	Env. 3 No. 18 drives	.45
19	Philco, RCA, etc., drives	.17
19-E	Env. 4 No. 19 drives	.45
20-E	Detrola rubber drive	.45
20-1-E	Detrola spring drive	.55
21-A	General Electric Model drive	.17
21-A-E	Env. 2 No. 21-A drives	.45
22	Large V tire for RCA, RP-176, RP-177, 809-J, etc.	1.10
23	Rim drive for RCA, RP-176, RP-177, 809-J, etc.	.22
23-E	Env. 2 No. 23 drives	.45
24-E	Admiral and Crescent 3¾" OD drives	.45
24-A-E	Admiral and Crescent, etc., 3¼" OD drives	.45
24-B-E	Admiral, Crescent, etc., 3⅛" OD drive	.45

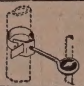
GENERAL G-C CEMENT TELEVISION ACCESSORIES

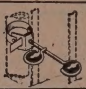
G-C TELEVISION DELUXE STAND-OFF INSULATORS

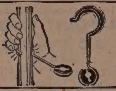
Will fit 300-ohm flat and RGU cables. Order part numbers below.

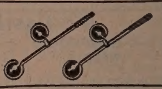
Specify "X" after part number to order this style.

Ask your Distributor for a Free Copy of G-C Television Catalog









G-C DELUXE MAST STAND-OFFS

For Masts Up to 3¾" Dia.

No.	Length	List
8253	3½"	$0.19
8257	7½"	.25

For Masts Up to 5" Dia.

No.	Length	List
8283	3½"	$0.25
8287	7½"	.30

G-C DELUXE DUPLEX MAST STAND-OFFS

For Masts Up to 3¾" Dia.

No.	Length	List
8258	7½"	$0.30

For Masts Up to 5" Dia.

No.	Length	List
8288	7½"	$0.35

G-C "SNAP-ON" TYPE MAST STAND-OFFS

3½" Length

No.	For Masts	List
8393	1"	$0.10
8394	1¼"	.10

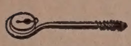
G-C DUPLEX STAND-OFFS

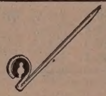
Wood Screw Type

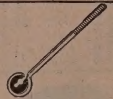
No.	Length	List
8225	7½"	$0.25

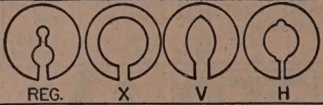
Machine Screw Type

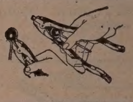
No.	Length	List
8226	7½"	$0.25











G-C UNIVERSAL STAND-OFFS

Wood Screw Type

No.	Length	List per 100
8027	3½"	$4.90
8028	5½"	7.50
8029	7½"	8.40
8030	12"	18.00

G-C NAIL-IN STAND-OFFS

No.	Length	List per 100
8343	3½"	$6.00

G-C UNIVERSAL STAND-OFFS

Machine Screw Type

No.	Length	List per 100
8031	3½"	$5.40
8032	5½"	7.50
8035	7½"	8.05

G-C TV INSERTS

Four types for all popular TV lead wires as pictured above.

Made of high grade, low loss polyethylene materials. Available to fit all types of wires and cables.

No.		List per 100	List per 1000
8025	Universal Type	$2.80 C	$20.00 M
8025-X	Co-Ax Type	2.50 C	20.00 M
8025-V	Large Oval Type	2.50 C	20.00 M
8025-H	Hollow Line Type	2.50 C	20.00 M

Standard Package 100 of a Type to Box

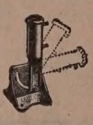
G-C TV STAND-OFF "EYE-OPENER" TOOL

For opening and closing eyes on stand-offs.

No.	List
8450	$1.65

G-C UNIVERSAL SWING BRACKET

"Made of Aircraft Aluminum"

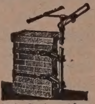


A quality bracket for the best installation of Television Masts and Aerials. Easy to install — adjustable to any angle. Fits masts up to 1⅜" diameter. Will not rust.

No. 8000 **List $8.75**

G-C Chimney Corner or Flat Mount Brackets

"Made of Aircraft Aluminum"

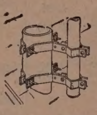


Cast aluminum brackets for masts up to 1⅜" diameter. One-piece brackets.

No.		List
8001	Pair of Brackets with straps and hdwre.	$8.75
8002	Brackets only	6.25
8003	Straps and hardware	2.50

G-C DELUXE VENT MOUNTS

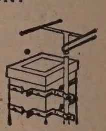
Made of ⅛" x 1¼" steel, heavily plated.



No.	For Vents	List
8334	4"	$4.25
8336	6"	3.95

G-C CHIMNEY QUICK MOUNT

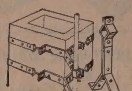
Made of ⅛" x 1¼" steel, heavily plated — supports masts up to 1⅜" diameter. Straps and hardware included.



No.		List
8005	Chimney Quick Mount with hdwre. & straps	$3.25

G-C DELUXE CHIMNEY MOUNTS

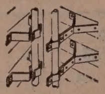
Made of ⅛" x 1¼" steel — all parts heavily plated. Supports masts up to 1¾" diameter.



No.		List
8344	Chimney Brackets, complete	$4.25
8337	Brackets only	3.25

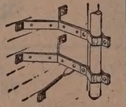
G-C DELUXE CLOSE WALL MOUNTS

Made of ⅛" x 1¼" steel — all parts heavily plated. Supports masts up to 1¾" diameter.



No.		List
8302	Clearance 2"	$2.00
8306	Clearance 6"	2.75

G-C DELUXE WALL BRACKETS

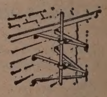


Made of ⅛" x 1¼" steel — heavily plated.

No.	Clearance	List
8308	8"	per set $4.25
8312	12"	per set 4.95
8318	18"	per set 5.95
8324	24"	per set 6.95

G-C DELUXE ADJUSTABLE UNIVERSAL WALL MOUNT

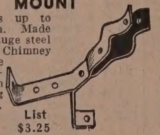
Made of ⅛" x 1¼" steel — heavily plated. Adjustable from 1" to 19" clearance. Holds masts up to 1½" diameter.



No.	List per Pair
8230	$7.75

G-C SNAP-IN CHIMNEY MOUNT

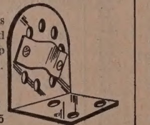
Fits masts up to 1¾" diam. Made of heavy gauge steel 1¼"x⅛". Chimney clearance 4". Complete with strapping & hardwre.



No.	List
8610	$3.25

G-C TV MAST MOUNT

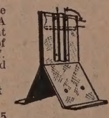
Will mount masts at any angle and supports masts up to 1⅜" diam. Heavily plated.



No.	List
8620	$0.75

G-C UNIVERSAL ANTENNA ROOF AND WALL MOUNT

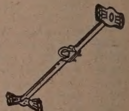
Made of heavy gauge plated steel. A universal mount that will fit any type of flat or angle roof. Can also be used for a wall mount.



No.		List
8575	Universal Mount	$2.95

G-C TV CONICAL CROSS BAR ANTENNA ASSEMBLY

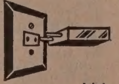
Replacement cross bar for TV antennas. Complete with insulator and all hardware ready to use.



No.	List
8705	$5.50

G-C TV 300 OHM LINE WALL PLATE PLUG

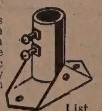
Lo-loss plastic plate complete with connecting plugs for TV antenna lead. Can be used in wall or floor.



No.		List
8595	Wall Plate and Plug	$1.25

G-C SWING UP JUNIOR MOUNT

Inexpensive swing up mounts for light weight installation for masts up to 20 feet high and up to 2" diameter. Made of heavy gauge steel, zinc plated to prevent rust. Easy to use. Can be used on slanted or flat roofs.

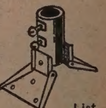


No.		List
8626	For Mast up to 1¾"	$3.05
8627	For Mast up to 2"	3.90

Jobbers Standard Cartons 12 Units

G-C NEW RIDGE MOUNT

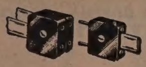
New, easy-to-use ridge mount that allows tall masts to be swung up along the ridge of the roof. Made of heavy gauge steel, heavily plated. Adjustable to any angle roof or flat roof. Supplied in 2 sizes for masts up to 1¾" and 2".



No.		List
8630	For Mast up to 1¾" diam.	$3.25
8632	For Mast up to 2" diam.	3.95

Jobbers Standard Cartons 12 Units

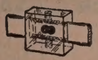
GENERAL G-C CEMENT TELEVISION ACCESSORIES



G-C DUPLEX LINE CONNECTORS

For boosters, duplex antennas, etc. Molded bakelite material for brass contacts.

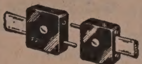
No.		List
8221	Duplex TV Plug	$1.50
8221-D	Display of 20	30.00
8221-C	Box of 100	125.00



G-C 300-OHM UNIVERSAL SCREW TYPE CONNECTOR

Handy to splice 300-ohm twin line. Makes secure connection. Made of clear plastic materials.

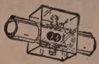
No.		List
8095-E	Env. of 2	$0.45
8095-D	Display 20 Env.	9.00
8095-C	Box of 100	17.50



G-C 300-OHM LINE POLARIZED CONNECTOR

Convenient method of connecting TV leads to boosters, antennas, matching stubs, etc. Just like plugging into wall socket. Molded bakelite

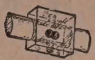
No.		List
8220	Plugs, per pair	$1.40
8220-D	Display 20 Env.	28.00
8220-C	Box of 100 pair	120.00



G-C HOLLOW TUBULAR 300-OHM LINE CONNECTOR

A new plastic connector to connect the new 300-ohm tubular line. Two screws hold wires securely.

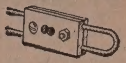
No.		List
8223-E	Env. of 2	$0.60
8223-D	Display 20 Env.	12.00
8223-C	Box of 100	27.50



G-C 300-OHM OVAL JUMBO LINE CONNECTOR

A new plastic connector to connect the new 300-ohm oval or jumbo line. Two screws hold wires in place.

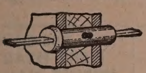
No.		List
8224-E	Env. of 2	$0.50
8224-D	Display 20 Env.	10.00
8224-C	Box of 100	23.50



G-C GUY WIRE CLAMP

New type stamped steel zinc plated clamps for guy wires 1/8" to 1/4" diameter. Two screws hold clamp securely.

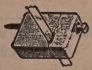
No.		List
8347	Cable Clamp	$0.25
8347-E	Env. of 2	.50
8347-D	Display 20 Env.	10.00
8347-G	Box of 144	35.00



G-C PORCELAIN 300-OHM LEAD-IN TUBE

Handy porcelain lead-in tube to bring in 300-ohm twin line into the house.

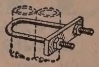
No.		List
8264	4" ea.	$0.20
8264-C	4" per 100	21.00
8266	6" ea.	.31
8266-C	6" per 100	32.40
8268	8" ea.	.53
8268-C	8" per 100	57.00



G-C PORCELAIN 300-OHM NAIL-IN STAND-OFFS & END ANCHOR

Handy porcelain insulator to anchor the end of the line or to use all the way down as stand-off insulator.

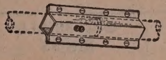
No.		List
8260	Each	$0.19
8260-C	Box of 100	19.80



G-C U-TYPE CLAMP

Holds masts up to 1¼" diameter. Supplied complete with strap and nuts.

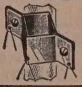
No.		List
8370	Each	$0.40
8370-G	Box of 144	54.50



G-C MAST COUPLERS

Handy mast coupler to extend and couple masts. Steel, zinc plated. Will couple masts ¾" x 1½" dia. Complete with screws.

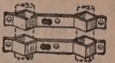
No.		List
8371	Each	$1.25



G-C GUY WIRE CLAMP

For fastening guy wires to masts. Heavy steel — zinc plated. Fits masts ¾" to 1½". Complete with screws.

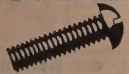
No.		List
8372	Each	$0.35
8372-G	Box of 144	45.00



G-C DUPLEX MAST CLAMPS

For extending antennas and couple shafts. Made of steel, zinc plated. Can be used on masts ¾" to 1½".

No.		List
8373	Per Pair	$2.50



G-C ¼-20 BOLTS

Round Head — Steel — Cadmium Plated.

"G" after No.: 144
"M" after No.: 1000

No.	Length	List
7144-G	½"	$3.20
7144-M	½"	19.15
8061-G	¾"	3.90
8061-M	¾"	23.40
8062-G	1"	4.45
8062-M	1"	26.65
7145-G	1¼"	4.80
7145-M	1¼"	29.05
7146-G	2½"	8.30
7146-M	2½"	49.50

G-C LEAD ANCHORS

Lead anchors for wood screws. Fit ¼" and 5/16" holes, and will take Nos. 10, 12, and 14 wood screws.

No.	1" Long	List
8084-E	Env. 3	$0.45
8084-D	Display	9.00
8084-G	Box of 144	14.35
	1½" Long	
8085-E	Env. 2	.45
8085-D	Display 20 Env.	9.00
8085-G	Box of 144	20.10

G-C WOOD SCREWS

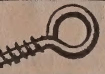
Steel — Cadmium Plated.

No.	Size & Qunty.	List
8071-G	# 8x1¼" 144	$3.65
8071-M	1000	21.95
8073-G	#10x1½" 144	4.85
8073-M	1000	29.15
8075-G	#12x1½" 144	5.75
8075-M	1000	34.55
8076-G	#14x1¾" 144	8.15
8076-M	1000	48.95

G-C ¼" LAG SCREWS

Steel — Cadmium Plated.

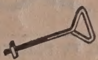
No.	1¾" Length	List
8064-G	Box of 144	$16.20
8064-M	Box of 1000	97.20
	2" Length	
8065-G	Box of 144	16.20
8065-M	Box of 1000	97.20



G-C SCREW EYES

Steel, cadmium plated screw eyes made for Television Antenna installations. Handy for fastening guy wires, etc. Size No. 6 wire, overall length 1 5/16", stem 1" long, eye 17/32" ID.

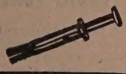
No.		List
8078-E	Env. 8	$0.45
8078-G	144	6.40
8078-M	1000	38.20
	3" Heavy Duty Screw Eye	
8342-G	144	14.15
8342-M	1000	84.70
	5" Extra Heavy Duty Screw Eye	
8486-G	144	15.05
8486-M	1000	90.25



G-C CHIMNEY & MAST HOOK

Cadmium plated hook, same as used for chimney straps and masts.

No.		List
8049	Each	$0.13
8049-C	Box of 144	18.95
8049-M	Box of 1000	97.90



G-C DRIVE-IN ANCHORS

Easy to use for fastening brackets to masonry. Will fit ¼" hole.

No.		List
8083-E	Env. 2	$0.45
8083-D	Display	9.00
8083-G	Box of 144	23.00

G-C ¼-20 HEX NUTS

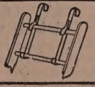
Steel — Cadmium Plated.

No.		List
7235-E	Env. 25	$0.45
7235-D	Display	9.00
7235-G	Box 144	2.65
7235-M	Box of 1000	15.95

G-C LAG SCREW EXPANSION SHIELD

Fits ¼" lag screw. Shield is 1" long by ½" O.D. ½ drill required.

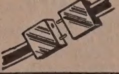
No.		List
8088	Env. of 12	$3.00
8088-G	Box of 144	36.80



G-C LADDER HOOKS

Make your own hook ladder by fastening these hooks to your ladder. Sold in pairs complete with bolts for easy installation.

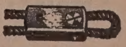
No.		List
8215	Hooks, per pair	$6.00



G-C 300 OHM CONNECTOR

New inexpensive type low-loss plastic connector.

No.		List
8596	Env. Plugs, per pr.	$0.50
8596-D	Display 20 Env.	10.00



G-C GUY WIRE CLAMPS

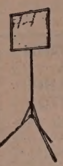
The quickest way to fasten ends of guy wire. Easily adjusted with screw driver. Galvanized steel.

No.		List
8081	1/8" Wire	$0.60
8082	3/16" Wire	.60

GENERAL G-C CEMENT TELEVISION ACCESSORIES

G-C THIRD EYE DELUXE TELEVISION MIRROR

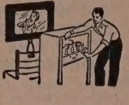
A DeLuxe mirror, complete with telescoping stand. Absolutely no distortion.



Specifications:
Glass 12″ x 10″ in metal frame.
Stand telescoping and adjustable.

No.		List
8390	Third Eye Mirror with stand	$7.40
8391	Mirror only	$2.75
8199	Soft Bag for carrying mirror	1.10

G-C TELEVISION SERVICE MIRROR

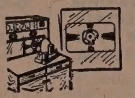


New — all-metal mirror for adjusting rear controls of TV sets. Complete with spring clamp that can be used on a chair or anywhere. Made of heavy metal to prevent distortion.

No. 8198 Tele-Mirror **List $3.00**

G-C SERVICE BENCH MIRROR

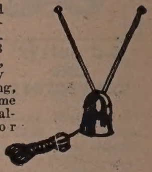
Metal, chrome mirror, large 10″ x 16″ size. A handy mirror to fasten on the back wall of the bench for adjusting and working on TV sets.



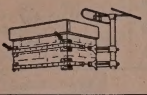
No. 8197 Mirror **List $2.75**

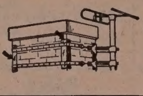
RO-TO DI-POLE INDOOR TV ANTENNA

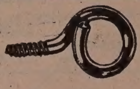
A beautiful high-quality antenna. Made of 3 sections, Admirality Brass Tubing, triple chrome plated. Walnut color plastic base Sections—closed 16″—open 44″. Complete with 300-ohm twin line, ready to install.

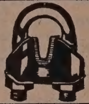


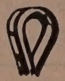
No.		List
8160	Ro-to Antenna	$6.55

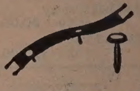












G-C CHIMNEY CORNER PROTECTORS

Galvanized corner protectors to go under chimney strapping. Supports strapping and makes it easier to tighten the brackets.

No.		List
8231-G	Box of 144	$6.55

G-C CHIMNEY CORNER SUPPORTS

The answer to fastening antennas to weak chimneys. Fasten these angle supports on each corner of the chimney and attach the chimney strapping and brackets. Reinforcing angles are 18″ long and are heavily plated.

No.		List
8340	Set of 4 Chimney Supports	$4.35

G-C BRIDLE RINGS

Handy bridle rings for tying guy wires, masts, etc. Made of hot-galvanized steel.

No.		List
8153-E	Env. of 4	$0.45
8153-D	Display 20 Env.	9.00
8153-G	Box of 144	14.30
8153-M	Box of 1000	85.80

G-C CABLE CLAMPS

Popular guy wire clamps will hold guy wire securely. Easy to install and easy to use. Made of galvanized steel.

No.		List
8131-E	Env. of 2	$0.55
8131-D	Display 20 Env.	11.00
8131-G	Box of 144	35.20
8131-M	Box of 1000	186.45

G-C GUY WIRE THIMBLES

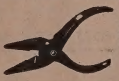
Made to quickly fasten and hold securely guy wires and cables. Prevents wire from breaking and loosening. Galvanized steel.

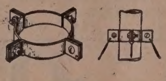
No.		List
8132-E	Env. of 2	$0.45
8132-D	Display 20 Env.	9.00
8132-G	Box of 144	15.00
8132-M	Box of 1000	90.15

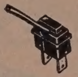
G-C 300-OHM FIBRE HEAD WIRING NAILS

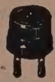
Specially made for nailing down 300-ohm twin line. Makes installation easy and does not affect characteristic of the wire.

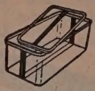
No.		List
8020-E	Env.20	$0.45
8020-D	Display 20 Env.	9.00
8020-G	Box of 144	1.35
8020-M	Box of 1000	9.35

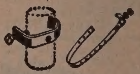












G-C TV PLASTIC PLIERS

An insulated long nose plier that is absolutely shock proof. It is non-magnetic. Will stand up to 6000 volts. Handy for working on set while it is "hot."

No.		List
8387	Plastic Pliers	$1.65
8387-D	Display 12	19.80

G-C UNIVERSAL GUY WIRE MAST CLAMPS

Will fit masts ¾″ to 3″ split type. Clamps can be put on by slipping over end of mast or be put on the mast after it is up. Fits any size mast by using more or less of the clamping sections, to fit the desired size.

No.		List
8374	Clamp	$1.50

G-C ANGLE PLUG

New, quick assembling, angle plug. No screws, no soldering. Simply strip wires and assemble.

No.		List
8360-E	Brown, each	$0.18
8360-D	Display 40	7.20
8361-E	Ivory, each	.18
8361-D	Display 40	7.20

G-C FOREIGN ADAPTERS

For connecting American type male plug to Continental style and British style plug.

No.		List
8378	Adapter for Continental Plug	$0.28
8379	Adapter for British Plug	.28

G-C PLASTIC STOCK BOXES & TRAYS

Clear polystyrene boxes for stocking small parts, screws, nuts, etc. Supplied with covers.

No.		List
8022	4x4x2½″	$0.60
8023	4x8x2½″	1.20

Round, 4 oz. Paint Jar with Screw Cap.

4000	4-oz.	$0.33

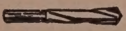
G-C GROUND CLAMPS

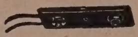
C Type Clamp for masts up to 1⅜″ dia.

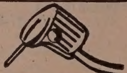
No.		List
8120	Each	$0.25
8120-C	Box of 100	20.00

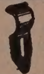
Popular Strap type to fit ⅜″ to 2″.

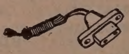
8121	Each	$0.10
8121-C	Box of 100	9.00

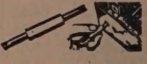












G-C CARBIDE TIP MASONRY DRILLS

Drill is carbide tipped and has a spiral fluted body. It makes holes easily and accurately in hardest masonry.

No.	Size	List
8096	¼″	$4.10
8097	5/16″	4.40
8098	⅜″	5.20
8099	½″	6.60

G-C MINI-MAX STRIP

Used for connecting 67½-volt "B" batteries, such as Eveready 455, 466, Burgess XX30, XX-45.

No.		List
8115	Connectors	$0.33

G-C MODERN TEST LEAD ANGLE TIP

New, attractive, full insulated, molded plastic angle phone tip plugs. Takes wires up to .140 diameter.

No.		List
8149	Red, each	$0.50
8149-C	Red, per 100	45.00
8150	Black, each	.50
8150-C	Black, per 100	45.00
8149-D	Display: 10 red, 10 black	10.00

G-C BASE BOARD CLIPS

Handy clips to run wires around base and avoid nailing.

No.		List
8345-E	Env. of 25	$0.45
8345-D	Display 20 Env.	9.00
8345-G	Box of 144	2.30
8345-M	Box of 1000	13.75

G-C INTERLOCK CABLE CORD

"Television Safety Cord"

Replacement cord for RCA, Philco, G-E, Admiral, and others. It has regular molded plug on one end, and special rubber plug on other. 6 ft. long.—Underwriters approved.

No. **List**
Cord $0.75
8200 Reg. TV
Cord .75
No. **List**
8201 Spec. Zenith

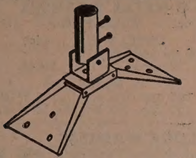
G-C AUTO RADIO TUNER

A tuner tool to adjust sets when radio is removed from set and the cables are removed. One end has a square tip and the other end has a V shape to fit various type shafts. Plastic handle in middle.

No.		List
8285	Auto Tuner	$0.45
8285-D	Display of 20	9.00

GENERAL G-C CEMENT TELEVISION ACCESSORIES

G-C No. 8635 NEW UNIVERSAL HEAVY DUTY MOUNT

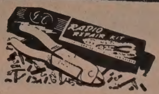


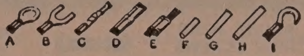
For Heavy Duty Mast up to 2″ diameter

New Deluxe swing up mount that can be fastened on the ridge or the flat of the roof. Truly a heavy duty mount that will hold masts up to 2″ in diameter. Just the mount for tall heavy masts. Made of heavy steel, plated to prevent rust. Adjustable to fit angle roof or flat roof. Can be rotated to swing up from either side of roof or ridge of roof.

No.		List
8635	Swing Up Mount	$5.70

Standard Jobbers Carton 12 Units





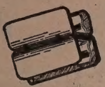
G-C SPEEDEX SOLDERLESS CONNECTOR KIT

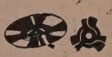
For television antenna, radio, and electrical work. Complete kit of terminals and a handy tool to install terminals on wire. Kit complete with assortment of terminals.

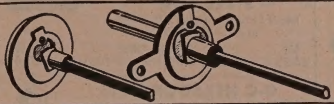
No.		List
8175	Kit	$9.95
8176	Tool only	6.60

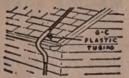
G-C SPEEDEX SOLDERLESS TERMINALS

No.	Fig.	Style No. and Description	Quan.	List
8177		Assortment of 50 Terminals	50	$1.85
8178	"A"	Small Ring Type No. 6 Screw	50	1.85
8179	"A"	Large Ring Type No. 6 Screw	50	1.85
8180	"A"	Large Ring Type No. 8 Screw	50	1.85
8181	"A"	Large Ring Type No. 10 Screw	50	1.85
8188	"A"	Large Ring Type for 16-14 Wire, No. 10 Screw	50	1.85
8182	"B"	Slotted Tongue Type No. 6 Screw	50	1.85
8294	"B"	Slotted Tongue Type No. 8 Screw	50	1.85
8295	"B"	Slotted Tongue Type No. 10 Screw	50	1.85
8185	"C"	Knife Disconnect	36	1.85
8186	"D"	Butt Connector	45	1.85
8187	"E"	Parallel Connector 22-16 Wire	60	1.85
8189	"E"	Parallel Connector 16-14 Wire	65	1.85
8190	"F"	Disconnect Plastic Tubing	50	1.85
8191	"G"	Connector Plastic Tubing	50	1.85
8192	"H"	Terminal Plastic Tubing	50	1.85
8193	"I"	Hook Type Connector No. 6 Screw	50	1.85









G-C SNAP-IN TV FUSE HOLDER

Just "snap-in" the new G-C TV Fuse Holder, and in fifteen seconds the job is done. Sturdy fibre with positive brass contact clips to hold fuses securely.

No.		List
8618	Fuse Holder	$0.30
8618-D	Display of 24	7.20

G-C RCA RECORD ADAPTERS

Handy fibre adapters will adapt large hole RCA records to the standard shafts of regular turntables.

No.		List
8380-E	Env. of 5	$0.45
8380-D	Display 20 Env.	9.00

G-C TV "*Smoother*" TUNER DETENTS

The Best Quality Detents for Replacements. Quality Engineered to Last.

Popular short shafted detent. Replaces RCA Part No. 71463 used on RCA, Admiral, Air King, Capehart, DeWald, Garod, Fada, Emerson, Packard-Bell, etc.

No.	List
8600	$2.80

Extra long shaft detent for replacing Admiral Part No. 76B14. Used in Admiral series No. 30-A and No. 8C, etc. Also on sets using RCA tuner type 201E1 — Part No. 71531.

No.	List
8602	$4.15

Long shaft detent. Replaces RCA Part No. 72743 used on RCA Models 8TS30, 721TC5, 730TCS, 730TV2, etc.

No.	List
8601	$3.15

Al phenolic shaft type detent used to replace RCA Part No. 73440. Used as a replacement on RCA tuners types 73435, 74571, and 74941. Used on RCA models in the 8T, 9T, 6TC, 8TR, 8TV, 9TC, 9TW series.

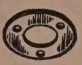
No.	List
8603	$4.75

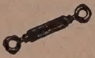
G-C 300-OHM LINE PROTECTIVE TUBING

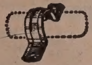
"Improves TV Reception"

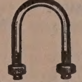
A clear plastic tubing to fit over 300-ohm flat line and will protect the line from grounding and rubbing on corners, eaves, etc. On coastal cities this has been satisfactorily used to prevent black-out from fog and salt spray.

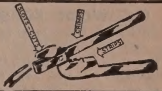
No.		List
625	Box of 8 ft.	$ 1.00
626	Coil of 250 ft.	23.60
627	1000 ft.	79.00











G-C TELEVISION GUY WIRE

A high grade galvanized steel twisted guy wire.

No.		List
4-Strand #20 Wire (App. $\frac{7}{32}$″ Dia.)		
8107-C	100-ft. Coil	$1.30
8107-M	1000-ft. Spool	12.25
6-Strand #20 Wire (Approx. ⅛″ Dia.)		
8109-C	100-ft. Coil	$1.75
8109-M	1000-ft. Spool	17.20
Heavy Duty 6-Strand #18 Wire (Approx. $\frac{9}{64}$″ Dia.)		
8375-C	100-ft. Coil	$3.00
8375-M	1000-ft. Spool	25.00

G-C FLOATING GUY RINGS

Made of Steel—Zinc Plated

For ¾″ and 1″ O.D. Masts

No.		List
8055-E	Envelope 3	$ 0.45
8055-D	Display 20 Env.	9.00
8055-G	Box of 144	16.50

No.	For Mast Size	Ring I.D.	List
8055	¾″-1″	1⅛″	$0.22
8313	1⅛″	1¼″	.22
8314	1¼″	1⅜″	.22
8315	1⅜″	1½″	.30
8316	1½″	1⅝″	.30
8317	2″	2⅛″	.30

G-C TURNBUCKLES

Extra strong — cadmium plated.

Size: 3⅜″ Closed, 4⅝″ Open

No.		List
8056-E	Env. of 2	$0.55
8056-D	Display 20 Env.	11.00
8056-G	Box of 144	33.00

Size: 4″ Closed, 5⅝″ Open

No.		List
8057-E	Env. of 2	.55
8057-D	Display 20 Env.	11.00
8057-G	Box of 144	35.20

Size: 4½″ Closed, 6⅜″ Open

No.		List
8058	Each	.33
8058-G	Box of 144	39.00

	Clsd.	Opn.	ea.
8065	5½″	7⅝″	.45
8366	6¾″	9¼″	.65
8367	7½″	10½″	.90

G-C MAST STRAPS

Made of galvanized steel. Used for fastening masts, poles to wells, roofs, etc.

No.		List
8130	Each	$0.07
8130-G	Box of 144	8.80
8130-M	Box of 1000	45.80

G-C U BOLTS

To fit masts ¾″ to 1⅜″ diameter. Inside max. size 1⅜″ wide x 3″ long. Ideal for strapping 2 masts together or for fastening masts to buildings, plates, etc. Steel, zinc plated.

No.		List
8123	U Bolt	$0.33
8123-G	Box of 144	39.60

G-C 300-OHM 4-in-1 TOOL AND KIT

Will work on all types of 300-ohm line. Strips, slits, cuts and crimps. All in one tool. Supplied individually or with a kit of solderless terminals.

No.		List
8385	TV 4-in-1 Tool	$1.65
8386	Kit of Tool and Solderless Connectors	3.85

GENERAL G-C CEMENT *Electronic Hardware*

G-C ROUND HEAD MACHINE SCREWS

Steel — Nickel Plated

No.	ENVELOPE	List
296-E	40 Asst. Machine Screws	$0.45
6038-E	50 Asst. Screws and Nuts	.45
7129-E	50 Asst. 2-56 Screws and Nuts	.45
6001-E	45 Asst. 4-36 Screws	.45
6002-E	45 Asst. 6-32 Screws	.45
6003-E	40 Asst. 8-32 Screws	.45
6004-E	30 Asst. 10-32 Screws	.45
6005-E	60 4-36 x ¼″ Screws	.45
6006-E	50 4-36 x ½″ Screws	.45
6008-E	40 6-32 x ¼″ Screws	.45
6009-E	35 6-32 x ½″ Screws	.45
	GLASS JAR	
6610	75 Asst. 4-36 and 6-32 Screws	.75
6611	60 Asst. 8-32 and 10-32 Screws	.75
6005	100 4-36 x ¼″ Screws	.75
6008	90 6-32 x ¼″ Screws	.75
6009	85 6-32 x ½″ Screws	.75

G-C BRASS ROUND HEAD MACHINE SCREWS

Brass — Nickel Plated

No.		List
8500-E	Env. 30 Asst. Screws	$0.45

G-C PHILLIPS TYPE ROUND HEAD MACINE SCREWS

Steel — Nickel Plated

No.		List
8510-E	Env. 30 Asst. Screws	$0.45

G-C BINDING HEAD MACHINE SCREWS

Steel — Nickel Plated

No.		List
7150-E	Env. 50 Asst. Screws	$0.45

G-C OVAL HEAD RACK & CABINET SCREWS

No.	ENVELOPE	List
6039-E	30 Asst. Rack Screws & Washers	$0.45
6543-E	20 10-32 x ¾″ Rack Screws	.45
	GLASS JAR	
6628	45 Asst. Screws & Washers	.75

G-C ORNAMENTAL HEAD SCREWS

Steel — Statuary Bronze — for speakers, baffles, etc.

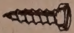
No.	ENVELOPE	List
1094-E	15 Asst. Screws	$0.45
	GLASS JAR	
6631	50 Asst. Screws	.75

G-C WOOD SCREWS

Round Head — Steel — Nickel Plated

No.	ENVELOPE	List
6110-E	30 Asst. Sizes	$0.45
	GLASS JAR	
6633	45 Asst. Sizes	.75

G-C SHEET METAL SCREWS



Hex Head — Slotted — Nickel Plated — Self Tapping Type — With Point "A" Tip

No.	ENVELOPE	List
297-E	25 Asst. Sheet Metal Screws	$0.45
6092-E	25 No. 6 x ⅜″ Sheet Metal Screws	.45
6093-E	25 No. 6 x ½″ Sheet Metal Screws	.45
6095-E	20 No. 8 x ⅜″ Sheet Metal Screws	.45
6096-E	20 No. 8 x ½″ Sheet Metal Screws	.45
	GLASS JAR	
6608	50 Asst. No. 4 & No. 6 Screws	.75
6609	45 Asst. No. 8 & No. 10 Screws	.75
	AUTO SHEET METAL SCREWS	
8102	20 No. 8 x ¼″ Screws	.45

G-C ESCUTCHEON SCREWS

Round head, slotted type statuary bronze plated. For mount dial and indicator plates, etc.

No.	ENVELOPE	List
1090-E	30 Asst. Escutcheon Screws	$0.45
	GLASS JAR	
6632	50 Asst. Escutcheon Screws	.75

G-C SPADE BOLTS

Steel — Nickel Plated

No.	ENVELOPE	List
6080-E	20 Asst. Spade Bolts	$0.45

G-C KNOB SET SCREWS

Slotted Head Type—Cup Point — Hardened Steel

No.	ENVELOPE	List
1062-E	15 Asst. Set Screws	$0.45
6061-E	15 Asst. 6-32 Screws	.45
6062-E	15 Asst. 8-32 Screws	.45
6063-E	15 Asst. 10-32 Screws	.45
	GLASS JAR	
6605	30 Asst. Set Screws	.75

G-C ALLEN HEX SET SCREWS

Steel — Hardened — Headless

No.	ENVELOPE	List
7190-E	5 Asst. 4-30 Screws	$0.45
7195-E	5 Asst. 6-32 Screws	.45
7200-E	5 Asst. 8-32 Screws	.45

G-C THREADED STEEL ROD

Steel running thread in 6-32 and 8-32 sizes.

No.	ENVELOPE	List
6665-E	Asst. 6-32 and 8-32 Rods	$0.45

G-C HEXAGON NUTS

Steel — Nickel Plated

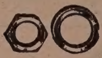
No.	ENVELOPE	List
293-E	35 Asst. Hex Nuts	$0.45
6041-E	40 4-36 Hex Nuts	.45
6042-E	35 6-32 Hex Nuts	.45
6043-E	30 8-32 Hex Nuts	.45
6044-E	25 10-32 Hex Nuts	.45
	GLASS JAR	
6606	60 Asst. 4-36 & 6-32 Hex Nuts	.75
6607	60 Asst. 8-32 & 10-32 Hex Nuts	.75
6045	80 4-36 Hex Nuts	.75
6046	75 6-32 Hex Nuts	.75
6047	60 8-32 Hex Nuts	.75

G-C BRASS HEX NUTS

Nickel Plated

No.	ENVELOPE	List
7245-E	40 6-32 Hex Nuts	$0.45
7248-E	25 8-32 Hex Nuts	.45

G-C MOUNTING NUTS



Steel — Nickel Plated
For toggle switches, rotary switches, volume controls, etc.

No.	ENVELOPE	List
6050-E	12 Asst. Nuts	$0.45
	GLASS JAR	
6615	25 Asst. Nuts	.75

G-C TIMMERMAN SPEED NUTS

No.	ENVELOPE	List
6055-E	30 Asst. Speed Nuts	$0.45
	GLASS JAR	
6630	60 Asst. Speed Nuts	.75

G-C ACORN NUTS

Solid Brass — Nickel Plated

No.	ENVELOPE	List
6030-E	12 Asst. Acorn Nuts	$0.45
	GLASS JAR	
6627	18 Asst. Acorn Nuts	.75

G-C THUMB NUTS

Brass — Nickel Plated

No.	ENVELOPE	List
6654-E	10 Asst. Thumb Nuts	$0.45

G-C WING NUTS

Nickel Plated

No.	ENVELOPE	List
6658-AE	10 Asst. Wing Nuts	$0.45

G-C METAL WASHERS

Steel — Nickel Plated

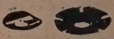
No.	ENVELOPE	List
6150-E	80 Asst. Metal Washers	$0.45
	GLASS JAR	
6612	135 Asst. No. 4 & No. 6 Washers	$0.75
6614	100 Asst. No. 8 & No. 10 Washers	.75

G-C LOCK WASHERS

Internal, external, and split types lock washers. For all purposes.

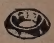
No.	ENVELOPE	List
1717-E	65 Asst. All Types	$0.45
7320-E	60 Asst. Internal Type	.45
7350-E	60 Asst. External Type	.45
6502-E	60 Asst. Split Type	.45
	GLASS JAR	
6614	90 Asst. All Types	.75

G-C SPRING TYPE FRICTION WASHERS



No.	ENVELOPE	List
6190-E	25 Asst. Sizes	$0.45

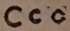
G-C CUP FINISHING WASHERS



Nickel Plated

No.	ENVELOPE	List
6159-E	40 Asst. Cup Washers	$0.45
6039-E	30 Asst. Rack Screws & Washers	.45
	GLASS JAR	
6628	45 Asst. Rack Screws & Washers	.75

G-C "C" WASHERS



No.	ENVELOPE	List
6180-E	50 Asst. C-Washers	$0.45
	GLASS JAR	
6636	85 Asst. C-Washers	.75

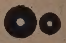
G-C COTTER PINS

No.	ENVELOPE	List
6440-E	60 Asst. Cotter Pins	$0.45
	GLASS JAR	
6642	90 Asst. Cotter Pins	$0.75

G-C HAIR PIN COTTER SPRINGS

No.	ENVELOPE	List
6475-E	50 Asst. Cotter Springs	$0.45
	GLASS JAR	
6637	75 Asst. Cotter Springs	.75

G-C FIBRE WASHERS



Best grade hard fibre — flat and extruded types.

No.	ENVELOPE	List
6512-E	30 Asst. Flat & Extruded Washers	.45
6520-E	40 Asst. Extruded Washers	.45
	GLASS JAR	
6634	85 Asst. Flat Fibre Washers	.75

G-C SNAP BUTTON HOLE PLUGS

Popular size hole plugs used in radio, experimental, electrical work, etc. Just snap in hole.

No.	ENVELOPE	List
1716-E	8 Asst Hole Plugs	$0.45

G-C SNAP-IN TRIMOUNTS

To hold small parts in place, etc. Just snap into place.

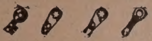
No.	ENVELOPE	List
1719-E	25 Asst. Trimounts	$0.45
1727-E	18 Large Size Trimounts	.45
	GLASS JAR	
6620	45 Asst. Trimounts	.75

GENERAL G-C CEMENT Electronic Hardware

G-C DIAL CORD CLIPS

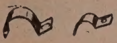
No.	ENVELOPE	List
6220-E	35 Asst. Cord Clips	$0.45
	GLASS JAR	
6621	75 Asst. Cord Clips	$0.75

G-C SOLDERING LUGS



No.	ENVELOPE	List
1019-E	30 Asst. Soldering Lugs	$0.45
	GLASS JAR	
6618	75 Asst. Soldering Lugs	.75

G-C CABLE HOLDER CLAMPS



Steel, nickel plated clamps for cables ⅛" to ½". Standard mounting holes.

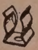
No.	ENVELOPE	List
6250-E	20 Asst. Cable Clamps	$0.45
	GLASS JAR	
6644	40 Asst. Cable Clamps	.75

G-C GRID CAPS

Assortment of popular types for glass and metal tubes.

No.	ENVELOPE	List
6290-E	12 Asst. Grid Caps	$0.45
	GLASS JAR	
6635	25 Asst. Grid Caps	.75

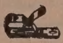
G-C FUSE CLIPS



For ¼" glass fuses. No. 6 mounting hole.

No.	ENVELOPE	List
6311-E	10 Fuse Clips	$0.45

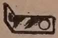
G-C FAHNESTOCK CLIPS



Nickel plated clips for fastening wires, etc.

No.	ENVELOPE	List
6300-E	12 Asst. Fahnestock Clips	$0.45
	GLASS JAR	
6639	30 Asst. Fahnestock Clips	.75

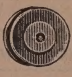
G-C ANGLES & BRACKETS



Nickel plated angles and brackets of assorted shapes.

No.	ENVELOPE	List
6260-E	15 Asst. Angles & Brackets	$0.45

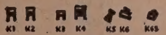
G-C DIAL PULLEYS



Free running brass pulley for dials, etc.

No.	ENVELOPE	List
6057-E	6 Asst. Dial Pulleys	$0.45
	GLASS JAR	
6638	12 Asst. Dial Pulleys	$0.75

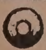
G-C KNOB SPRINGS



For all types of knobs using springs. All fully tempered.

No.	ENVELOPE	List
1049-E	16 Asst. Knob Springs	$0.45
	GLASS JAR	
6619	35 Asst. Knob Springs	.75

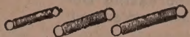
G-C RADIO KNOB FELTS



Soft felt pads to fit behind radio knobs, ¼" hole.

No.	ENVELOPE	List
1065-E	50 Knob Felts	$0.45
	GLASS JAR	
6641	70 Knob Felts	.75

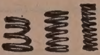
G-C DIAL DRIVE AND TENSION SPRINGS



Finest Tempered Spring Steel

No.	ENVELOPE	List
1054-E	10 Asst. Dial Drive Springs	$0.45
1054-SE	10 Asst. Small Dial Drive Springs	.45
6420-E	10 Asst. Small Tension Springs	.45
6421-E	8 Asst. Large Tension Springs	.45
6480-E	10 Asst. Small Phono Springs	.45
6481-E	8 Asst. Large Phono Springs	.45
	GLASS JAR	
6616	15 Asst. Dial Drive Springs	.75

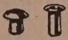
G-C COMPRESSION SPRINGS



For push-button tuners, switching mechanisms, dials, etc.

No.	ENVELOPE	List
6430-E	20 Asst. Small Springs	$0.45
6431-E	15 Asst. Large Springs	.45

G-C RIVETS AND EYELETS



Popular sizes used to mount tube sockets, parts, etc.

No.	ENVELOPE	List
1027-E	55 Asst. Rivets & Eyelets	$0.45
1028-E	60 Asst. Eyelets & Dial Cable Clamps	.45
6900-E	55 Asst" Eyelets	.45
6850-E	60 Asst. Rivets	.45
	GLASS JAR	
6622	85 Asst. Rivets & Eyelets	.75

G-C CORD STRAIN RELIEFS

Fits P.O.S.J. Cord. Fits ¼" hole.

No.	ENVELOPE	List
6675-E	4-Cord Strain Reliefs	$0.45

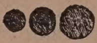
G-C ESCUTCHEON PINS

Decorative bronze — for fastening dial escutcheons, etc.

No.	ENVELOPE	List
6670-E	100 Asst. Escutcheon Pins	$0.45

G-C VOICE COIL DUST FELTS

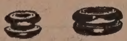
Assorted sizes to fit popular voice coil openings.



No.	ENVELOPE	List
1079-E	25 Asst. Felts	$0.45
	GLASS JAR	
6640	50 Asst. Felts	.75

G-C RUBBER GROMMETS

Black, soft rubber, oil and solvent resistant.



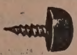
No.	ENVELOPE	List
1039-E	15 Asst. Rubber Grommets	$0.45
1041-E	12 $\frac{3}{16}$" ID x $\frac{5}{16}$" OD Grommets	.45
1042-E	10 ¼" ID x ⅛" OD Grommets	.45
1043-E	10 ⅜"ID x ½" OD Grommets	.45
	GLASS JAR	
6626	20 Asst. Soft Grommets	.75
6625	25 Asst. Grommets	.75

G-C PURE GUM RUBBER GROMMETS

For tuner mountings, etc.

No.	ENVELOPE	List
7580-E	12 Asst. Pure Gum Grommets	$0.45

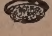
G-C RUBBER FEET



Asst. sizes. Supplied with wood screws.

No.	ENVELOPE	List
1075-AE	8 Asst. Feet	$0.45

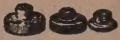
G-C CHASSIS FELT FEET



Quality type supplied with machine and sheet metal screws

No.	ENVELOPE	List
1086-E	4 Asst. Felt Feet	$0.45

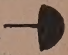
G-C RUBBER CHASSIS MOUNTS



Live rubber to absorb shock. Assorted sizes.

No.	ENVELOPE	List
1038-E	10 Asst. Chassis Mounts	$0.45

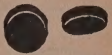
G-C TACK BUMPERS



⅜" Bumper with tack molded in place.

No.	ENVELOPE	List
1075-E	10 Tack Bumpers	$0.45
	GLASS JAR	
6624	18 Tack Bumpers	.75

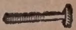
G-C FELT PADS



Soft felt pads to glue on bottom of cabinets, etc.

No.	ENVELOPE	List
1069-E	40 Asst. Felt Pads	$0.45
	GLASS JAR	
6623	60 Asst. Felt Pads	.75

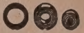
G-C PHONO STYLUS SCREWS



Assorted sizes to fit most record players.

No.	ENVELOPE	List
1052-E	7 Asst. Stylus Screws	$0.45

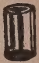
G-C BUSHINGS AND SPACERS



Brass and insulated types for insulating and spacing radio parts.

No.	ENVELOPE	List
6760-E	12 Asst. Insulated Spacers	$0.45
6761-E	12 Asst. Metal Spacers	.45
	GLASS JAR	
6617	12 Asst. Metal & Insulated Spacers	.75

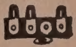
G-C REDUCING BUSHINGS



Split type bushing for auto radio knobs, etc. Reduces from ¼" to $\frac{3}{16}$".

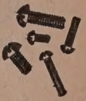
No.	ENVELOPE	List
6751-E	8 Bushings	$0.45

G-C TERMINAL STRIP ASSORTMENT



No.	ENVELOPE	List
6855-E	4 Asst. Terminal Strips	$0.45

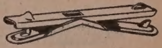
G-C PICK-UP AND CARTRIDGE SCREW ASSMT.



Asst. of hard to get screws for mounting pick-up cartridges.

No.	ENVELOPE	List
6000-E	60 Asst. Screws, Small Size	$0.45

NEW! G-C TELEVISION 300-OHM WIRE STRIPPER



A handy pocket size tool for stripping, slitting, and skinning any 300-ohm wire. Every television installer and service man needs this tool. Steel, cadmium plated.

No.		List
8400	TV Stripper	$1.65

SPECIAL NOTICE TO QUANTITY USERS

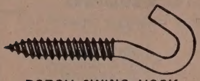
All G-C hardware as supplied in the assortments on these pages is available in specific sizes and types in packages of a gross and a thousand at attractive prices. Also, on large quantities for industrial users, etc., quantity prices will be quoted. See your Distributor or write the factory for specific information.

CHAS. O. Larson CO. - STERLING, ILL. CLEAN-CUT CAREFULLY MADE WIRE· HARDWARE

CASH IN ON THE BIG TV BUYING!

Stock the Larson Wire Goods for the Ever-Increasing Demand. All Larson Wire Goods are Zinc Coated, Weather Proofed Finish.

Sold Exclusively Through Jobbers

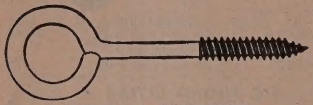


PORCH SWING HOOK
No. 222

PORCH SWING HOOKS No. 222—Zinc Coated

Dis. Wire	Length Overall	Lbs. Per Gross	List Per Gross
5/16″	3⅝″	14.00	$ 9.25
⅜″	4¼″	23.00	12.10

Packed 1 Dozen in Box. Order by Gross.

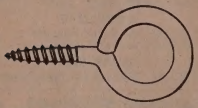


EYE BOLT—LAG SCREW
No. 11

EYE BOLTS LAG SCREW THREAD No. 11—Zinc

Stock No.	Wire Size and Length Overall	Length of Thread	Inside Diameter Eye	Lbs. Per Gross	List Per Gross
EL1	¼″ x 3¾″	1¼″	½″	8.00	$ 8.60
EL2	5/16″ x 4″	1¾″	⅝″	18.00	15.95
EL3	⅜″ x 4½″	1½″	¾″	27.00	20.80
EL4	7/16″ x 5¼″	2¼″	1″	43.00	33.05

Packed 1 Dozen in Box. Order by Gross.

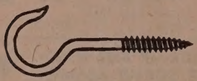


LARGE EYE—SCREW EYE

SCREW EYES—Large Eye—Zinc Coated

Wire Size	Length Overall Inches	Length of Stem Inches	Inside Dia. of Eye Inches	Length of Thread Inches	Lbs. Per Gross	List Per Gross
000	3⅞	2 1/16	1⅛	1⅝	27.00	$21.65
0	2⅞	1 9/16	13/16	1¼	14.50	8.70
2	2⅝	1 15/16	23/32	1⅛	9.25	6.05
4	2 3/16	1⅛	39/64	15/16	6.00	3.85
6	1 15/16	31/32	17/32	¾	3.75	2.40

Size 000 to 4 packed ¼ Gross in Box. Size 6 packed ½ Gross in Box. Order by Gross.

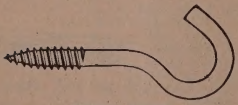


CEILING SCREW HOOK

SCREW HOOKS—Ceiling—Zinc Coated

Wire Size	Length Overall Inches	Inside Dia. of Hook	Length Thread Inches	Lbs. Per Gross	List Per Gross
0	4 15/16	1⅛	1⅝	21.00	$12.40
2	4 7/16	1 1/32	1½	14.00	9.30
3	4⅛	31/32	1½	11.00	7.60
4	3⅞	29/32	1⅜	8.50	6.20
6	3⅜	13/16	1⅛	5.50	4.15

Size 0 to 5 packed ¼ Gross in Box. Size 6 packed ½ Gross in Box. Order by Gross.

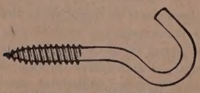


SCREW HOOK
No. 322

LARGE WROUGHT SCREW HOOKS No. 322—Zinc Coated

Wire Size	Length Overall Inches	Length of Thread	Lbs. Per Gross	List Per Gross
¼″	4¼″	1¼″	12.00	$ 9.40
5/16″	4½″	1½″	21.00	11.90
⅜″	4⅞″	1½″	31.90	15.00
7/16″	5¼″	2″	48.00	25.00

Packed 3 Dozen in Box. Order by Gross.



CLOTHES LINE HOOK
No. 422

CLOTHES LINE HOOKS—Lag Screw Thread No. 422—Zinc Coated

Length Overall Inches	Dia. of Wire	Length of Thread	Lbs. Per Gross	List Per Gross
4¼″	5/16″	1½″	16.00	$10.00

Packed 1 Dozen in Box. Order by Gross.

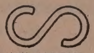
CHAS. O. Larson CO. - STERLING, ILL. CLEAN-CUT CAREFULLY MADE WIRE HARDWARE

Sold Exclusively Through Jobbers

"S" HOOKS—Heavy Blunt Style No. 172—Zinc Coated

Length Overall Inches	Inside Diameter Eye	Size Wire	Lbs. Per Gross	List Per Gross
1½"	7/16"	7	3.50	$ 4.15
1¾"	17/32"	6	5.00	5.50
2"	9/16"	2	8.50	7.25
2½"	25/32"	0	16.00	10.50
3"	15/16"	0	20.00	13.00

1½" and 1¾" packed 1 gross in box, 2" packed ½ gross in box, 2½" and 3" packed ¼ gross in box. Order by Gross.



"S" HOOKS
No. 172

TURNBUCKLES—Only Zinc Coated Turnbuckles Stocked

Eye and Eye	Wire Size	Hook and Eye	Hook and Hook	Take Up	Length Closed	Length Open	Lbs. Per Doz.	List Per Doz.
EE11	5/32"	HE 21	HH 31	1¼"	3½"	4¾"	.875	$1.50
EE12	3/16"	HE 22	HH 32	1⅝"	3⅞"	5½"	1.25	1.85
EE13	7/32"	HE 23	HH 33	1⅞"	4⅜"	6¼"	1.50	2.05
EE14	¼"	HE 24	HH 34	2⅛"	5½"	7¾"	2.00	2.35
EE15	5/16"	HE 25	HH 35	2⅝"	6¾"	9⅜"	4.00	3.15
EE16	⅜"	HE 26	HH 36	3"	7¾"	10½"	6.00	4.60
EE17	⅜"	HE 27		6"	10¾"	16¼"	13.00	7.85

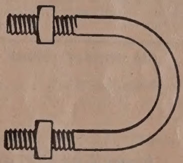
Packed 1 Dozen in Box. Order by Dozen.

TURNBUCKLES

"U" BOLTS No. 103—Zinc Coated

Stock No.	Pipe Size	Wire Dia.	Outside Length	Width Between Legs	Lbs. Per Doz.	List Per Doz.
A-¼"	½" - ¾"	¼"	2¼"	1⅛"	.90	$1.35
TA-¼"	1"	¼"	3"	1⅜"	1.00	1.45
TV-¼"	1"	¼"	4"	1⅜"	1.25	1.70
A-5/16"	1"	5/16"	2½"	1⅜"	1.60	2.05
B-5/16"	1¼"	5/16"	3"	1¾"	1.84	2.20
C-5/16"	1½"	5/16"	3"	2"	1.88	2.25
D-5/16"	2"	5/16"	3½"	2½"	2.06	2.40
A-⅜"	1¼"	⅜"	3¼"	1¾"	2.94	2.95

Packed 1 Dozen Bolts in Box with Square Nuts. Order by Dozen.

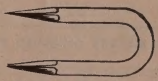


"U" BOLTS

ROLLED DIAMOND POINT STAPLES No. 1976

Overall Length	Spread at Shoulder	Wire Size	Lbs. Per Gross	List Per Gross
1"	5/16"	.120	.87	$1.60
1¼"	5/16"	.120	1.07	1.75
1½"	⅜"	.148	1.81	1.85
1¾"	⅜"	.148	2.25	2.10
2"	½"	.162	3.25	2.50
2¼"	½"	.162	3.75	2.95
2½"	9/16"	.162	4.18	3.40
2¾"	9/16"	.162	4.75	4.00
3"	⅝"	.187	6.75	4.40
3½"	⅝"	.187	8.75	4.95
4"	¾"	.207	10.75	6.90

1" to 1¾" inclusive packed 1 Gross in Box; 2" to 4" inclusive packed ½ Gross in Box. Order by Gross.



DIAMOND POINT STAPLES
No. 1976

RECOMMENDED HARDWARE FOR TV INSTALLATIONS

EYE BOLTS—Lag Screw Type—¼" - 5/16" - ⅜"
PORCH SWING HOOKS—5/16" - ⅜"
SCREW EYES—Large Eyes—No. 000 - 0 - 2 - 4 - 6
SCREW HOOKS—Ceiling—No. 0 - 2 - 3 - 4
SCREW HOOKS—Large Wrought—5/16" - ⅜"

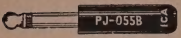
CLOTHES LINE HOOKS—5/16"
TURNBUCKLES—No. 12 - 13 - 14 - 15 - 16
"U" BOLTS—TA ¼" - TV ¼"
"S" HOOKS—All sizes listed above
DIAMOND POINT STAPLES—3" - 3½" - 4"

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

U. S. ARMY-NAVY SPECIFICATION PLUGS

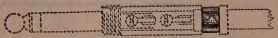


DESIGNED TO MEET THE LATEST JAN SPECIFICATION P-642. High compression-molded insulation for high di-electric and tensile strengths Features durability with low moisture absorption characteristics.

No. PJ-055B .... Dealer Cost $ .75
No. PJ-054 .... Dealer Cost .75

No. PL-68—3 Conductor Microphone Plug.... Dealer Cost $1.35

STRAIN RELIEF CLAMP



For firm attachment of cables to PJ0 and PL type plugs. Approved by government services.
No. 5695 .... Dealer Cost $2.00C

ICA BAKELITE DOUBLE PHONE PLUG

Molded bakelite ribbed barrel. Takes 2 cord tips. Fits all jacks.

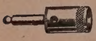
No.	Dealer Cost
24B—Black	$ .34
Display Card of 24 above	
D-70024B	8.16
24R—Red	.34
Display Card of 24 above	
D-70024R	8.16
34B—Black barrel only	13.36C
34R—Red barrel only	13.36C
34P—Plug only	.27

ICA MIDGET PHONE PLUG

Overall length—2 ¼″.
Diameter of barrel 9/16″.

No.	Dealer Cost
29B—Black	$ .34
Display Card of 24 above	
D-70029B	8.16
29R—Red	.34
Display Card of 24 above	
D-70029R	8.16

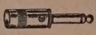
ICA STUBBY SHIELDED PHONE PLUG



Barrel measures 11/16″ diameter x 1″ long.

No. 27 .... Dlr. Cost $ .49
No. 37—Barrel only .... Dlr. Cost .32

ICA MIDGET SHIELDED PHONE PLUG



Diameter of Barrel 9/16″.
Overall size of Plug 2 ¼″.
No. 30 .... Dealer Cost $ .48

ICA 3-WIRE MICROPHONE PLUG

Has solder connections for cable or microphone use. Barrel molded of bakelite; brass parts, nickel plated.
No. 1901 .... Dealer Cost $ .83

ICA SHIELDED DOUBLE PHONE PLUG

Nickel Barrel—Brass Shell Nickel Plated

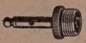
Supplied with fibre insulating tube.
No. 25 .... Dealer Cost $ .60

ICA SHIELDED 3-WIRE MICROPHONE PLUG

Shielded Nickel Barrel

No. 1900 .... Dealer Cost $1.10

PHONE PLUG ADAPTER



Soldering or wiring not necessary.

No. 33 .... Dealer Cost $ .30

ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS

Set screw provided at side of barrel to fasten screw without soldering.

1½″ Long

No. 883B—Black .... Dlr. Cost $15.00C
No. 883R—Red .... Dlr. Cost 15.00C

Display Card of 20 each above

No. D-70883B-R .... Dlr. Cost $6.00

2½″ Long

With sleeve covering set screws.

No. 882B—Black .... Dlr. Cost $ .27
No. 882R—Red .... Dlr. Cost .27

Display Card of 10 each above

No. D-70882B-R .... Dlr. Cost $5.40

4″ Long

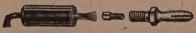
With sleeve covering set screws.

No. 881B—Black .... Dlr. Cost $ .34
No. 881R—Red .... Dlr. Cost .34

Display Card of 8 each above

No. D-70881B-R .... Dlr. Cost $5.44

ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS With Solderless Wire Nut

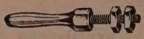


No. 434B—Black .... Dlr. Cost $18.00C
No. 434R—Red .... Dlr. Cost 18.00C

WIRE CONNECTOR WITH BANANA PLUG RECEPTACLE

Ideal for quick splicing for testing point.
No. 1933.... Dlr Cost $ .25

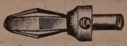
ICA SPLIT BANANA PLUGS



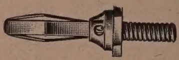
For positive and durable spring action. Allows spring to fit into jack, cannot bend out of shape — Complete with two nuts.
No. 403 .... Dealer Cost $11.66C

BERYLLIUM BANANA PLUGS

Approved by the Signal Corps and other government agencies. These plugs are used in all government equipment. Made of Beryllium copper and guaranteed for its spring and durability. Threaded plug accommodates 6/32 nuts.



No. 419—Overall size 13/16″ long. Shank length ¼″ long. Diameter of shank ⅛″.
Dealer Cost $13.35C



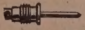
No. 421—Overall size 1 5/32″ long. Threaded shank length 13/32″ long threaded for 6/32 nuts .... Dealer Cost $21.00C

INSULATED MIDGET PHONE TIP PLUG

Fits all standard jacks. Tip is threaded. Overall length 1¼″.

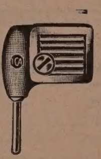
No.	Dealer Cost
876R—Red	$12.00C
876B—Black	12.00C

MIDGET SHARP POINT PHONE TIP THREADED—NOT INSULATED



Threaded to fit all test prods.
No. 365........ Dlr. Cost $10.00C

ICA GRIP-RITE MOLDED PHONE TIP PLUG



Replacement for ICA and Weston — as well as other make Test Leads.

No.	Dlr. Cost
868—Red	$ .34
869—Black	.34

Display Card of 12 each above

No. 70868-9
Dealer Cost $8.16

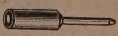
ICA PHONO NEEDLE CHUCKS

Push on type can be forced into handles — Threaded type can be screwed into handles. Machined of brass, nickel plated with needle point.

No.	Dlr. Cost
508—Push-on Type, Overall size 1″	$12.00C
509—Threaded Type, Overall size 1″	15.00C

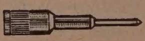
STANDARD PHONE TIPS

Overall Length 1″



No. 360
Dealer Cost $16.67M

HEAVY DUTY PHONE TIPS



Overall Length 1 11/32″.
Dlr. Cost
No. 361 .... $7.80C

Net

SINCE 1921 insuline *Corporation of America*

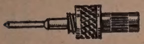
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA INSULATED SOLDERLESS PLUG

2" long — fits all standard phone tip jacks.

No.	Dealer Cost
No. 885B—Black	$13.80C
No. 885R—Red	13.80C

ICA SR. SOLDERLESS PLUGS

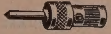


1½" over-all length.

No. 358
Dealer Cost......$9.58C

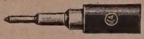
ICA JR. SOLDERLESS PLUGS

1½" over-all length.
Tip ½".



No. 359
Dealer Cost............$9.58C

ICA INSULATED NEEDLE POINT TIP PLUG

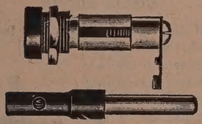


No.	Dlr. Cost
No. 886B—Black	$14.16C
No. 886R—Red	$14.16C

Above with Insulating Sleeve

No.	Dealer Cost
No. 341B—Black	$10.00C
No. 341R—Red	10.00C

TRANSMITTING PLUGS AND JACKS

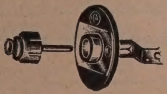


A new line of heavy duty transmitting plugs and jacks. Plug-in type with positive grip contacts. Equipped with heavy insulated threaded heads and handles for safe handling on high R.F. currents. Supplied with large hex nuts for panel mounting.

Handle 1,000 Volts at 10 Amps

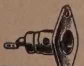
No.	Dealer Cost
450—Medium Plug—RED	$ .42
451—Medium Plug—BLACK	.42
452—Medium Jack—RED	.80
453—Medium Jack—BLACK	.80
454—Giant Plug—RED	.63
455—Giant Plug—BLACK	.63
456—Giant Jack—RED	.88
457—Giant Jack—BLACK	.88

ICA PLUGS AND JACKS

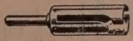


Used on RCA recording units, receivers and auto sets.

No.	Dealer Cost
2383—Pin Plug	$6.00C
2385—Socket and Shield	8.35C



2378

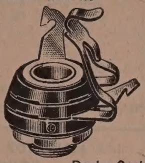


2375

No.	Dealer Cost
2375—Motorola Pin Plug	$ 8.33C
2378—Motorola Shielded Jack	13.33C

ICA DELUXE PHONE JACKS

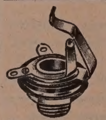
Greater Efficiency



New design. Tension fatigue minimized. Spring members made of phosphor bronze. Hooked type soldering lugs — Cannot turn or short. For standard ¼" plug.

No.	Dealer Cost
1920—Single Open Circuit	$ .50
1921—Single Closed Circuit	.58
1922—Three-Way Microphone Jack	.75

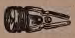
ICA PHONE JACKS



Smaller type precision made jacks for limited space. Complete with nut and metal washer.

No.	Dealer Cost
1870—Single Open Circuit	$ .34
1871—Single Closed Circuit	.37
1872—3-Way Microphone Jack	.42

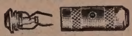
ICA PANEL MOUNTING JACKS



Small and compact. Insulated shoulder washers. Phosphor-bronze, nickel-plated springs.

No.	Dealer Cost
325—Single Open Circuit	$ .34
1905—3-Way Microphone Jack	.75

ICA SHIELDED 3-WAY PORTABLE MICROPHONE JACK



For all types of microphones. Sturdily constructed of brass parts with phosphor bronze springs. Nickel plated and thoroughly insulated.
No. 1904..........................Dealer Cost $1.00

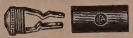
No. 1903—Portable Jack, black Bakelite barrel ....Dealer Cost $ .75

ICA SHIELDED PORTABLE JACK

Single Open Circuit

No.	Dealer Cost
No. 1913—2⅛" Long, 11/16" Diameter	$ .84

ICA BAKELITE PORTABLE JACKS

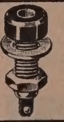


Single Open Circuit

No.	Dealer Cost
1911—Overall Size 1⅝"; Diam. ¾"	$ .50

Display Card of 16 above

No. D-71911......................Dealer Cost $8.00

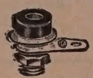


ICA INSULATED TIP JACKS

With receptacle for standard phone tips.

No.	Dealer Cost
889B—Black	$12.00C
889R—Red	12.00C

INSULATED BANANA JACKS

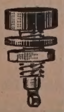


With receptacle for banana plugs.

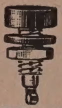
No.	Dealer Cost
888B—Black	$12.00C
888R—Red	12.00C

ICA BAKELITE INSULATED TIP JACKS

Molded Bakelite Head



No.	Dealer Cost
1889—Black	$15.00C
Display Card of 40 above	
D-71889	$6.00
1890—Red	$15.00C
Display Card of 40 above	
D-71890	$6.00



INSULATED TIP JACKS

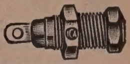
Bakelite. Spring contact of heat treated beryllium copper.

No.	Dealer Cost
1897—Black	$ .36
1898—Red	.36

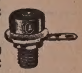
ICA BRASS TIP JACKS

Nickel Plated

No. 357
Dealer Cost..........$9.00C

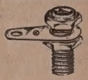


BAKELITE BANANA TYPE JACKS



No.	Dealer Cost
1891—Black	$15.00C
Display Card of 40 above	
D-71891	$6.00
1892—Red	$15.00C
Display Card of 40 above	
D-71892	$6.00

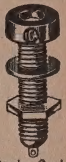
ICA TRANSMITTING BANANA JACKS



Nickel Plated Brass

No. 402....Dealer Cost $9.00C

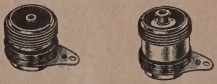
ICA COMBINATION BANANA PLUG OR PHONE TIP JACK



Made to take banana plug or standard phone tips interchangeably. Insulated cap in black and red — With washers and nuts.

No.	Dealer Cost
528R—Red	$15.00C
Display Card of 48 above	
D-70528R	$7.20
528B—Black	$15.00C
Display Card of 48 above	
D-70528B	$7.20

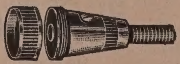
MICROPHONE CONNECTORS



No. 1929—For use on chassis unit or in microphone. Single Contact.
Dealer Cost $18.00C

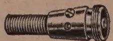
No. 1930—Closed circuit connector. With spring actuated contact.
Dealer Cost .27

MICROPHONE CONNECTORS



NEW Universal shielded cable single contact microphone connector. Newly designed non-fixed coupling ring permits easy cable connection. Male-female connector in one. Eliminates necessity for mating connectors.
No. 1931..........................Dealer Cost $ .30

MICROPHONE CONNECTOR



Shielded cable type. Single contact male microphone connector. Chrome-plated brass.
No. 1932.........................Dealer Cost $24.00C

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA INSULATED BINDING POSTS WITH JACK FOR BANANA TYPE PLUG

Length 1⅜″ overall when top is up. Extends ⅝″ above panel when top is screwed down. Fitted with 8/32 screw 9/16″ long, and two hex nuts.

No.	Dealer Cost
622—Red	$24.00C
623—Black	24.00C

Display Card of 16 each above
D-70622-3........**Dealer Cost $7.68**

ICA ALL METAL BINDING POST

Designed for high amperage use and where low resistance connections are necessary on test equipment, etc. Nickel plated brass. Dimensions same as No. 617 below.

No.	Dealer Cost
620	$21.00C

ICA BAKELITE BINDING POSTS

9/16″ Diameter Head with Brass Threaded insert. Nickel Plated Screw; Knurled nut.

No.	Dealer Cost
617—Red	$15.00C
618—Black	15.00C

ICA VICE-GRIP BINDING POST

Engineered on principle of a vise. Can cause no damage to even finest wire strands. Wire hole and designating symbol always in alignment. Two styles.

No. 630 Series—Has 8/32 Male Threaded Shank..........................**Dealer Cost $ .34**

No. 690 Series—Has 8/32 Female Thread.........................**Dealer Cost $ .40**

No.	Marking	No.	Marking
630	ANT	690	ANT
631	GND	691	GND
632	A	692	A
633	G	693	G
634	+	694	+
635	—	695	—
636	Rec.	696	Rec.
637	PLAIN (No Marking)	697	PLAIN (No Marking)

BAKELITE BINDING POST HEADS

Bakelite Heads only with Brass Threaded Insert for 8/32 Screw.

No. 628—Red................**Dealer Cost $10.00C**
No. 629—Black.............**Dealer Cost 10.00C**

ICA ALLIGATOR CLIPS

Good firm grip. Ideal for work in tight places. Overall length 2″.

No. 364..........................**Dealer Cost $6.66C**

Display Card of 40 above
No. D-70364.......................**Dealer Cost $2.67**

ICA ALLIGATOR CLIP WITH SCREW CONNECTION

Good firm bite. Convenient screw connection eliminates the necessity for soldering. Overall length 2″.

No. 376..........................**Dealer Cost $8.35C**

ICA INSULATED ALLIGATOR CLIPS

No. 884B—Black...........**Dealer Cost $15.00C**
No. 884R—Red.............**Dealer Cost 15.00C**

Display Card of 20 each above
No. D-70884B-R...............**Dealer Cost $6.00**

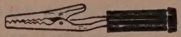
ICA INSULATED ALLIGATOR CLIP WITH PHONE TIP JACK

Has standard phone tip jack in insulated sleeve. Will accommodate phone tip or solderless plug tips.

No.	Dealer Cost
525R—Red	$ .37
525B—Black	.37

Display Card of 12 each above
D-70525R-B..**8.88**

ICA INSULATED COMBINATION JACK ALLIGATOR CLIP



An insulated alligator clip with a dual purpose Jack in catalin sleeve. Equipped with the new combination Jack which takes either solderless phone tip or Banana plug. Overall length—3¼″.

No.	Dealer Cost
520R—Red	$ .42
520B—Black	.42

INSULATED SPADE LUG

Insulated Spade Lug with banana plug receptacle on lead end.

No.	Dealer Cost
887B—Black	$10.85C
887R—Red	10.85C

ICA SPADE LUG

Can be used on any size screw or terminal up to size 10. Receptacle fits all I.C.A. and other make Banana Plugs.

No. 879..........................**Dealer Cost $3.35C**

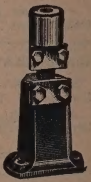
ICA SHEARING PUNCHES

Now! No Hammering Necessary to Punch Chassis Holes

Shearing is accomplished with a wrench which forces shear punch into die. Made of High Grade Steel.

No.	Size of Hole	Dealer Cost
723	⅝″	$2.75
725	¾″	2.75
724	1″	3.17
727	1⅛″	3.33
726	1 5/32″	3.33
728	1 3/16″	3.33
729	1¼″	3.33
730	1⅜″	3.67

ICA SQUARE HOLE SHEARING PUNCH



This new punch permits the cutting of any size odd-shape hole (square rectangular, hexagon, oblong, etc.) on any size panel or chassis. Good for Enlarging or punching TRANSFORMER Holes.

No. 790.....**Dealer Cost $13.35**

ICA IMPROVED ALL-PURPOSE CIRCLE CUTTER

Will Cut Holes from 1½ to 8 Inches

Cutting bar holder is ⅞″ in diameter and also accommodates a centering drill or any size pilot pin. Cutting bar is ⅜″ square and is arranged to hold a 3/16″ high speed cutting bit.

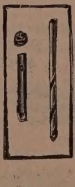
No. 775............................**Dealer Cost $3.97**

ICA UNIVERSAL MULTI-PURPOSE CUTTING TOOL

This handy tool can be used for counter-sinking, beading, drilling or cutting holes. Equipped with 3/16″ drill for holes from 7/16″ diameter up to 3″ diameter. Can be used either in drill press or hand brace. Also acts as a boring tool when used in a lathe.

No. 780.............................**Dealer Cost $3.08**

REPLACEMENT DRILLS AND CUTTERS



Used as replacement on ICA No. 775 and No. 780 circle cutters as well as on other make cutters.

No. 776—Replacement drill for No. 775 Circle Cutter
Dealer Cost $ .50

No. 777—Replacement cutter for No. 775 Circle Cutter
Dealer Cost $ .67

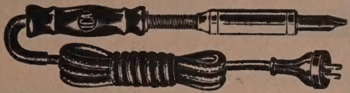
No. 781—Replacement drill for No. 780 Circle Cutter
Dealer Cost $ .50

No. 782—Replacement cutter for No. 780 Circle Cutter
Dealer Cost $ .67

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

TOP QUALITY SOLDERING IRONS AND ACCESSORIES



ICA Soldering Irons represent the finest in durable material and precision fabrication . . . submitted to rigid tests for maximum performance.

- Fully insulated, removing slightest possibility of grounding
- Heats to operating temperature in three minutes
- Special air chamber reduces heat losses, assuring cool grip
- Plunger type soldering tip offers proper operating heat at soldering point

60 WATT IRON

No. 1960-A—105-120 Volts....**Dlr. Cost $3.33**
No. 1963—220 Volts ....**Dlr. Cost 3.33**

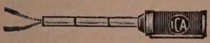
85 WATT IRON

No. 1962-A—105-120 Volts....**Dlr. Cost $4.33**
No. 1964—220 Volts **Dlr. Cost 4.33**

115 WATT IRON

No. 1961-A—105-120 Volts....**Dlr. Cost $5.00**
No. 1965—220 Volts ....**Dlr. Cost 5.00**

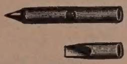
REPLACEMENT ELEMENTS FOR ICA SOLDERING IRONS



Because of the practical design of ICA Soldering Irons, burnt out elements may be easily replaced.

105-120 Volts			220 Volts		
No.	Watts	Dlr. Cost	No.	Watts	Dlr. Cost
1985	60	$2.00	1990	60	$2.00
1986	85	2.33	1991	85	2.33
1987	115	2.33	1992	115	2.33

REPLACEMENT TIPS For ICA Soldering Irons

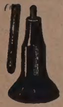


Available in All Sizes

Made of a special copper alloy. Electrolytically pure. For replacement in ICA Soldering Irons. Can also be used in American Beauty and irons of similar construction.

No.	Watts	Tips	Dia.	Length	Dealer Cost
1970	60	Flat	⅜"	3"	$ .42
1972	85	Point	⅜"	3½"	.58
1971	115	Point	$\frac{7}{16}$"	3½"	.67

ICA RIVET AND EYELET PUNCH SET



A Universal Tool that can be used for either riveting or eyeletting. Holder is made of cast iron with hexagonal sides, thus permitting the tool to be placed in a vise without slipping.

No. 785—Complete with ample assortment of eyelets and rivets.

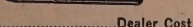
Dealer Cost $3.33

RIVET AND EYELET ASSORTMENT

Additional eyelets and rivets can be purchased separately.

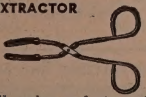
No. 5265—(Asstmt. of 100)....**Dlr. Cost $.57**

RIVET & EYELET SETTING TOOL



No. 786..................................**Dealer Cost $.64**

TUBE EXTRACTOR



For removing all makes and sizes of tubes. Molded rubber cushion over claws offers full tube protection. Sturdy Cadmium plated steel.

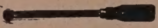
No. 1001...........................**Dealer Cost $1.35**

Display Card of 3 above

No. D-71001......................**Dealer Cost $4.05**

ICA "TURN-TITE" SOCKET WRENCHES

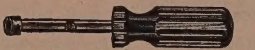
HOLLOW SHAFTS



Made of hardened steel, cadmium plated, with sturdy Black japanned wooden handles.

6 Inches Long		9 Inches Long	
No.	Dlr. Cost	No.	Dlr. Cost
898—$\frac{3}{16}$"	$.45	900—$\frac{3}{16}$"	$.53
890—¼"	.45	894—¼"	.53
891—$\frac{5}{16}$"	.45	895—$\frac{5}{16}$"	.53
892—⅜"	.45	896—⅜"	.53
893—$\frac{7}{16}$"	.45	897—$\frac{7}{16}$"	.53
899—½"	.45	901—½"	.53
910—Set of 6 Wrenches	$2.70	911—Set of 6 Wrenches	$3.18

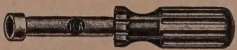
ICA UNBREAKABLE "TURN-TITE" SOCKET WRENCHES



7" long. Handle is of ribbed shockproof unbreakable material.

No.	Socket	Dlr. Cost	No.	Socket	Dlr. Cost
940	$\frac{3}{16}$"	$.75	944	⅜"	$.75
941	¼"	.75	945	$\frac{7}{16}$"	.75
942	$\frac{5}{16}$"	.75	946	½"	.75
943	$\frac{11}{32}$"	.75	949	Set of 7 wrenches as above	5.25

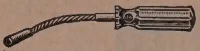
ICA UNBREAKABLE VOLUME CONTROL WRENCH



Socket is $\frac{3}{16}$" diameter.

No. 937..............................**Dealer Cost $1.38**

ICA FLEXIBLE SOCKET WRENCH



Especially designed for hard-to-reach spots. Can actually be used around corners or under obstructing objects.

No. 913—¼" Hex ....**Dealer Cost $1.00**

Display Card of 6 above

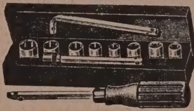
No. D-70913 ....**Dealer Cost $6.00**

No. 914—$\frac{5}{16}$" Hex ....**Dealer Cost $1.00**

Display Card of 6 above

No. D-70914 ....**Dealer Cost $6.00**

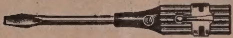
ICA LOCK SOCKET WRENCH AND SCREW DRIVER SET



The all-purpose socket wrench, packed in neat, enameled steel case. Includes sturdy 6½" Wood Grip Screw Driver—4" L Handle—3¾" Extension Adaptor, ¼", $\frac{5}{16}$", ⅜", $\frac{7}{16}$" and ½" Hex—⅜" Round Knurled Socket—¼" and $\frac{5}{16}$" Square Sockets.

No. 999.............................**Dealer Cost $2.35**

ICA AMBER COLORED UNBREAKABLE MIDGET SCREW DRIVER



Particularly shaped to fit into set screws of knobs. No. 1013 has convenient pocket clip.

1013—4¼" length **$16.67C**

Display Card of 24 above

D-71013 .... **3.96**

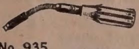
1017—7" length **21.68C**

Display Card of 16 above

D-71017 .... **3.46**

ICA FLEXIBLE SCREW DRIVER

For the Hard to Reach Spots



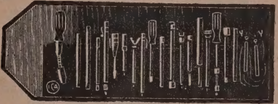
Allows access to screws in hard to reach and out of the way places. Can go under objects or around corners.

No. 935 ....**Dealer Cost $1.35**

Display Card of 6 above

No. D-70935 ....**Dealer Cost $8.10**

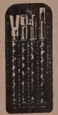
ICA COMPLETE NEUTRALIZING TOOL KIT



The kit consists of one of each of the following ICA tools, described herein:—Nos. 382, 1008, 987, 1015, 977, 996, 992, 985, 990, 1024, 1019, 1026, 1022, 1002, 1013, 1028, 1039, 1029, 1033, 935, 937.

No. 995—Kit, Complete with Carrying Case **Dealer Cost $14.50**

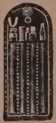
ICA UTILITY NEUTRALIZING AND ALIGNING TOOL KIT



A handy Service Man's Kit containing carefully selected tools suitable for varied uses. Packed in vest pocket leatherette case.

No. 997..........**Dealer Cost $2.17**

ICA NEUTRALIZING AND ALIGNING TOOL KIT



The Kit consists of twelve separate and distinct parts, some of which can be employed for several operations. These units telescope into each other, forming four separate tools when assembled.

No. 998............**Dealer Cost $4.58**

Complete with Carrying Case

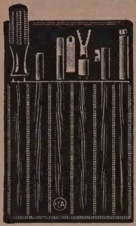
Net

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA DE LUXE NEUTRALIZING AND ALIGNING TOOL KIT



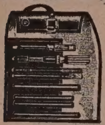
For Every Service Need

Consists of 14 tools, most of which telescope into one another, forming six assembled units in attractive leatherette pocket case.

Includes the following: No. 1039 Screw Driver (double blade); No. 1026 Balancing Tool (2 tools: Screw Driver and Side Wrench); No. 1024 Fork Type Wrench and Screw Driver; No. 1022 5-in-1 neutralizing tool (thin metal nib Screw Driver—¼″ hex slotted wrench—$\frac{5}{16}$″ hex wrench—Steel Screw Driver Nib—Steel Socket Head Wrench $\frac{5}{16}$″); No. 996 Neutralizing Tool; No. 977 Aligning Tool; No. 935 Flexible Screw Driver; Fibre Wrench, $\frac{5}{16}$″ hex.

No. 994 .... **Dealer Cost $5.50**

ICA NEUTRALIZING AND ALIGNMENT TOOL KIT — SIGNAL CORPS No. TE45-A



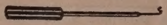
ICA Catalog No. 993

This versatile kit, designed for and used by the Signal Corps, is also strongly recommended for general service use. Compact, and contained in a handsome leatherette case, this kit consists of the following:

1—No. 935 Screw Driver	1—Bone Fibre No. 1015 Neutralizing Tool
1—4¼″ Screw Driver No. 1013	2—No. 980—Hex Tools, ¼″ I.D.
1—Insulated Screw Driver No. 1028	2—No. 981—Hex Tools, $\frac{5}{16}$″ I.D.

No. 993 .... **Dealer Cost $4.90**

ICA DIAL CABLE ADJUSTER



Handy aid to replacing slipped-off dial cable over drive drum. Permits easy manipulation in cramped places.

No. 437 .... **Dealer Cost $ .55**

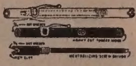
Display Card of 12 above

No. D-70437 .... **Dealer Cost $6.60**

ICA 4-in-1 NEUTRALIZING TOOLS,

SCREW DRIVER AND WRENCH

Made of Fenoline
Fully Insulated



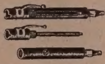
No. 1019—Complete ....**Dealer Cost $ .60**

Display Card of 12 above

No. D-71019 .... **Dealer Cost $7.20**

ICA 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL

Same features as the 4-in-1 tool described above with an additional all metal screw driver.

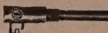


No. 1022 .... **Dealer Cost $1.00**

Display Card of 12 above

No. D-71022 .... **Dealer Cost $12.00**

ICA BALANCING TOOL



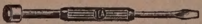
Fits into No. 1019 Neutralizing Tool.

No. 1026 .... **Dealer Cost $ .37**

Display Card of 16 above

No. D-71026 .... **Dealer Cost $5.92**

ICA ALL PURPOSE ALIGNING TOOL



Handle is of ⅜″ Fenoline. End has Socket Screw Driver for neutralizing all iron core tuning systems.

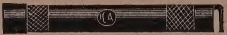
No. 1002 .... **Dealer Cost $ .55**

Display Card of 16 above

No. D-71002 .... **Dealer Cost $8.80**

ICA ALIGNMENT WRENCH

For RCA, Philco, etc.



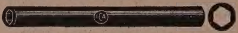
Used on all makes Air Trimmer. Made of ½″ Fenoline Rod—8½″ long—one end has hollow shaft hexagon wrench—other end has an especially shaped hook.

No. 1008 .... **Dealer Cost $1.08**

Display Card of 12 above

No. D-71008 .... **Dealer Cost $12.96**

INSULATED NEUTRALIZING WRENCHES



Hexed—Full Length

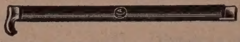
For Philco, Majestic and Other Receivers

⅜″ Diameter

No.	Dealer Cost
985—6″ long	$21.68C
986—8″ long	.24
980—5″ long	20.00C
981—5″ long, $\frac{7}{16}$″ dia.	.25

ICA Alignment Tool for Philco Receivers

For Air Trimmer Sets



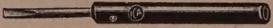
Has specially designed metal clip for air trimmers. Made of narrow fibre rod, $\frac{7}{32}$″ diam. by 6″ long.

No. 1033 .... **Dealer Cost $ .45**

Display Card of 16 Above

No. D-71033 .... **Dealer Cost $7.20**

ICA Insulated Adjustable Neutralizing Tools



Absolutely no metal parts. Screw driver slides into inside of neutralizing wrench.

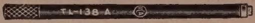
No. 990—Ext. from 6″ to 10″ **Dlr. Cost $.65**

No. D-70990 .... **Dealer Cost $7.80**

No. 991—Ext. from 12″ to 16″ **Dlr. Cost .73**

Display Card of 12 Above

ICA NEUTRALIZING AND ALIGNING TOOL



U. S. Army No. TL138A — ICA No. 1011

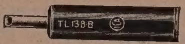
Used for general radio tuning and aligning. Approved by U. S. Army and Navy.

No. 1011 .... **Dealer Cost $ .73**

Display Card of 12 Above

No. D-71011 .... **Dealer Cost $8.76**

BAKELITE NEUTRALIZING TOOL

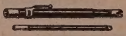


Neutralizing tool used by U. S. Army Signal Corps (U. S. Army No. TL-138B).

No. 1010 .... **Dealer Cost $ .37**

Display Card of 12 above

No. D-71010 .... **Dealer Cost $4.44**



ICA Neutralizing Tools with Metal Nibs

Patent No. U.S. 83,321.

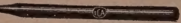
Sturdy, unbreakable, will outlast all other type neutralizing tools.

No. 996 .... **Dealer Cost $1.08**

Display Card of 10 Above

No. D-70996 .... **Dealer Cost $10.80**

ICA BONE FIBRE SCREW DRIVER



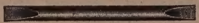
Of $\frac{5}{16}$″ bone fibre rod with a sturdy blade.

No. 1029 .... **Dealer Cost $ .53**

Display Card of 16 above

No. D-71029 .... **Dealer Cost $8.48**

ICA BONE FIBRE SCREW DRIVER



Double Edged—No Metal—Fully Insulated
Made of ¼″ Bone Fibre Rod

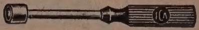
No. 1039 .... **Dealer Cost $ .27**

Display Card of 16 above

No. D-71039 .... **Dealer Cost $4.32**

ICA NEUTRALIZING TOOL

For Push Button Tuners



The Socket is $\frac{9}{64}$″ in diameter, and contains a screw driver blade.

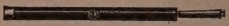
No. 1003 .... **Dealer Cost $ .55**

Display Card of 16 Above

No. D-71003 .... **Dealer Cost $8.80**

ICA SET TRIMMER NEUTRALIZING TOOLS

For Philco, Zenith, RCA, etc.



Fits the smallest size trimmer condensers. Trimmer end is $\frac{7}{32}$″ diam. to fit ¼″ hole.

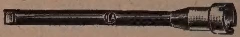
No. 992—6″ long............... **Dealer Cost $ .73**

Display Card of 12 above

No. D-70992 .... **Dealer Cost $8.76**

No. 933—10″ long............. **Dealer Cost $ .92**

ICA NARROW SHAFT ALIGNMENT TOOL



RCA—Zenith—etc. $\frac{7}{32}$″ Bakelite Shaft

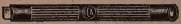
No. 987 .... **Dealer Cost $ .65**

Display Card of 16 above

No. D-70987 .... **Dealer Cost $10.40**

ICA ALIGNMENT TOOLS

For RCA Receivers



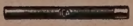
Narrow shaft Neutralizing Tools made of Bone Fibre—$\frac{7}{32}$″ wide. Has screw nib inserted in one end; screw driver other end.

No. 1015 .... **Dealer Cost $ .55**

Display Card of 16 above

No. D-71015 .... **Dealer Cost $8.80**

ICA MAGIC TUNING ALIGNMENT TOOL



Consists of a Bakelite rod with a Brass cylinder at one end, and a special finely divided iron core at the other end.

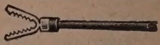
No. 977 .... **Dealer Cost $ .73**

Display Card of 12 above

No. D-70977 .... **Dealer Cost $8.76**

ICA FORK TYPE NEUTRALIZING WRENCH and SCREW DRIVER

For RCA and Other Sets

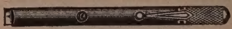


No. 1024 .... **Dealer Cost $ .37**

Display Card of 16 above

No. D-71024 .... **Dealer Cost $5.92**

ICA Fenoline Neutralizing Screw Drivers



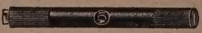
Made of Fenoline. Strong and sturdy, completely insulated for neutralizing and aligning coils, condensers, receivers, etc.

No. 1028 .... **Dealer Cost $ .27**

Display Card of 16 above

No. D-71028 .... **Dealer Cost $4.32**

ICA NEUTRALIZING AND ALIGNING TOOL



Machined of bakelite rod 9/32 inch diameter. Designed for Western Electric Co. Approved by U. S. Army and Navy.

No. 1006 .... **Dealer Cost $ .84**

Display Card of 10 above

No. D-71006 .... **Dealer Cost $8.40**

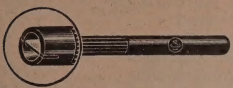
Net

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

LATEST TELEVISION TOOL KIT, TOOLS — ACCESSORIES

DEEP-NIB ALIGNER



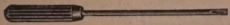
Tough fibre. Metal nib entirely insulated and set within barrel end. For tuning IF and RF shielded coils and trimmers. Small enough to fit under television tubes without removing. Length: 2½" x ¼" diameter.

No. 6156 ....Dealer Cost $ .36

Display Card of 16 above

No. D-76156........................Dealer Cost $5.76

TELEVISION "CHANNEL TUNER"



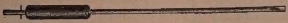
A narrow all-insulated screw driver of machined fiber. Ideal for deep, inaccessible tuning. Overall: 7" Length. ⅛" blade on 4½" shaft.

No. 6157 ....Dealer Cost $ .55

Display Card of 12 above

No. D-76157........................Dealer Cost $6.60

"BIG STRETCH" ALIGNER



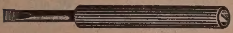
Extra thin, extra long (9"), bone fibre aligning tool, 6½" blade. Specially designed for adjustment of nested iron cores of "Admiral," "Zenith" and similar make TV sets. Permits use on RCA front ends and normally inaccessible areas.

No. 6162 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76162........................Dealer Cost $8.76

TUNING WRENCH



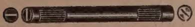
Insulated fibre tuning wrench with extra thin recessed blade. Extra thin screw driver blade on other end (4¾" L.). Tenite handle. Especially designed for "Zenith" TV sets, etc.

No. 6164 ....Dealer Cost $ .55

Display Card of 16 above

No. D-76164........................Dealer Cost $8.80

CORE ALIGNER



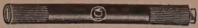
For Stewart-Warner, Belmont and other television receivers employing Stackpole adjustable cores. The 6" insulated fibre shaft has brass insert at one end for milled end cores; recessed screw driver blade at other end for standard slotted cores. Inserts are "pinned-in" and flush with shaft end for durability and ease of use.

No. 6170 ....Dealer Cost $ .55

Display Card of 16 above

No. D-76170........................Dealer Cost $8.80

DUAL ALIGNER



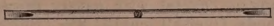
Dual purpose narrow shaft, fibre alignment tool for trimmers, IF transformers, etc. Recessed screw nib on one end; metal screw driver on other end.

No. 6166 ....Dealer Cost $ .54

Display Card of 16 above

No. D-76166........................Dealer Cost $8.64

DURA-DUAL FIBRE TV ALIGNER



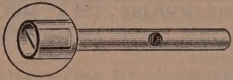
A double bladed aligning tool, measuring 7 inches in length. Made of durable fibre for complete insulation and sturdiness. Narrow shaft is ⅛" in diameter. Serves many TV servicing requirements.

No. 6158 ....Dealer Cost $24.00C

Display Card of 16 above

No. D-76158........................Dealer Cost $3.84

DOUBLE END "KLEER ALIGNER"



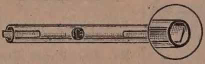
Low-loss CLEAR PLASTIC all-insulated shaft. Has two recessed blades set within rod ends, completely insulated. One blade suitable for No. 6 screw and smaller; other blade for No. 4 screw and smaller. Shaft is 7" long x 7/32" diameter.

No. 6193 ....Dealer Cost $ .60

Display Card of 12 above

No. D-76193........................Dealer Cost $7.20

"KLEER-ALIGNER"



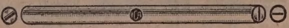
A low-loss CLEAR PLASTIC all-insulated aligning tool. Narrow shaft. Has recessed insulated blade on one end; extended blade on other end. Designed for many aligning uses. For trimmers, IF transformers, etc. Measures 7" in length x 7/32" diameter.

No. 6192 ....Dealer Cost $ .60

Display Card of 12 above

No. D-76192........................Dealer Cost $7.20

"SUPER STRETCH KLEER ALIGNER"



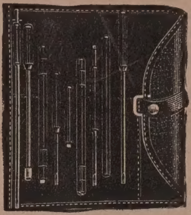
All insulated extra long TV aligner for inaccessible areas. The low-loss CLEAR PLASTIC Rod is 12" long x 7/32" diam. Carries an extended blade at one end; brass slotted insert at other end. A handy tool for those hard-to-reach spots.

No. 6194 ....Dealer Cost $ .83

Display Card of 12 above

No. D-76194........................Dealer Cost $9.96

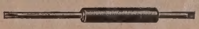
TELEVISION HANDI-KIT



For Television servicing. Contains nine (9) latest tools especially designed for television needs. Includes Aligner for IF and RF and "K-Tran" Transformers (No. 978); slim aligning tool for cramped spaces (No. 6161); thin diameter tuning wand (No. 6163); deep nib aligner (No. 6156); narrow insulated screw driver for deep tuning (No. 6157); extra thin long (9") aligner (No. 6162); tuning wrench (No. 6164); stackpole core aligner (No. 6170); dual aligner, narrow shaft (No. 6166).

No. 6165............................Dealer Cost $5.00

TRAN-ALIGNER



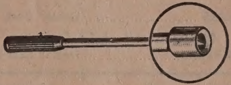
Newly designed all-insulated aligning tool for standard IF and RF and "K-Tran" midget transformers. Trim fiber; milled at one end, screw driver at other end. 2½" length blade; 6" overall.

No. 978 ....Dealer Cost $ .54

Display Card of 16 above

No. D-70978........................Dealer Cost $8.64

SLIM-ALIGNER



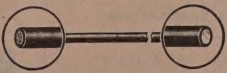
Alignment tool with extra thin recessed blade and slim metal shaft for cramped probing in television receivers. Fiber handle. Especially suitable for "Admiral" and similar make television sets.

No. 6161 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76161........................Dealer Cost $8.76

TUNING WAND



Extra thin diameter to fit small coil openings in television sets. Flexible vinylite. Brass insert in one end; molded powdered iron core in other end. Lowers or increases inductance. Suitable for "Zenith," etc. TV sets.

No. 6163 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76163........................Dealer Cost $8.76

Net

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

HEXY-SQUARE ALIGNER

All bone fibre iron core aligning tool especially designed for Raytheon-Belmont IF transformers and similar type transformers. 6" shaft has 3/16" diam.; 3/32" hex one end; 1/8" square other end.

No. 6171 ....Dealer Cost $ .75

Display Card of 12 above

No. D-76171........................Dealer Cost $9.00

HEX-ALIGNER

All bone fibre iron core aligning tool. Has 3/32" hex one end; 1/8" hex other end. Especially designed for Dumont, Raytheon-Belmont receivers and other sets, using similar type iron cores. Shaft 6" long; 3/16" diam.

No. 6199 ....Dealer Cost $ .83

Display Card of 12 above

No. D-76199........................Dealer Cost $9.96

ALL-PURPOSE ALIGNER

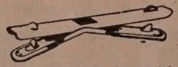
Bone fibre screw driver ends set in red tenite handle. Overall length 6"; blade width 3/32"; tip thickness 1/64". Designed for general aligning purposes for Motorola and other popular receivers.

No. 6248 ....Dealer Cost $ .55

Display Card of 16 above

No. D-76248........................Dealer Cost $8.80

300 OHM WIRE STRIPPER



A new, unique stripper for quick and easy stripping and skinning of any 300 ohm wire. Cadmium plated.

No. 6285 ....Dealer Cost $ .65

Display Card of 12 Strippers

No. D-76285........................Dealer Cost $7.80

STUB ALIGNER

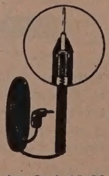
Ideal when cramped space demands short insulated tuning tool. Exposed nib for screw driver type controls not carrying high voltages. Tough fibre. Length: 2½" x 3/32" diameter.

No. 6155 ....Dealer Cost $ .30

Display Card of 16 above

No. D-76155........................Dealer Cost $4.80

ICA SAFE-T-TESTER



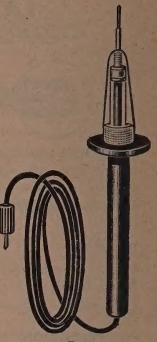
A new, unique, non-shorting prod that makes contact only when pressure is applied to barrel. Ideal for cramped spaces where probing is necessary. Specially applicable to television needs.

No. 446............................Dealer Cost $1.00

Display Card of 6 above

No. D-70446........................Dealer Cost $6.00

"KILOVOLTER" MULTIPLIER PROBE



A skilfully-made probe that combines the finest high voltage design principles with precision fabricating —a superb multiplier probe whose efficiency . . . sturdiness . . . popular price, is beyond compare.

Equipped with 15 K.V. range multiplier that provides full range PLUS existing meter voltage. For example, use of the ICA probe will increase the range of a 5,000-volt range voltmeter to 20,000 volts full scale.

The three (3) built-in 1% resistors (totaling 6 watts dissipation) are coaxially mounted, providing air-spacing to further assure heat dissipation and a completely insulated probe.

Highest grade components include sturdy thermoplastic barrel with safety finger guard and sealed ends. Over-all length: 8½". Supplied with 5-ft. heavy duty lead with insulated phone tip.

No.		Dealer Cost
6167	—20,000 ohms per volt (50 micro amps. meter movement)	$6.95
6168	—10,000 ohms per volt (100 micro amps. meter movement)	6.95
6169	— 5,000 ohms per volt (200 micro amps. meter movement)	6.95

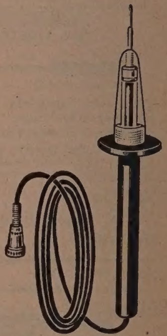
NOTE: Probes of special resistance values up to 2000 megohms are available on order to quantity users.

NEW 30-KV PROBE

Similar to the Insuline "Kilovolter" No. 6167 above, for 20,000 ohm per volt, 50 micro amp. meters only. A precision instrument . . . 600 megohms 2% high voltage multiplier

No. 6220..**Dealer Cost $7.95**

THE INSULINE "100 X" MULTIPLIER PROBE



6222

A new 30KV to 50KV VTVM Multiplier Probe (Internal resistance 1090 megohms). For ALL 10 to 11 megohm input instruments.

This VTVM probe will multiply existing meter ranges by a factor of 100; thus, if the top range of the instrument is 300 volts, meter will read 30,000 volts with probe. If top range is 500 volts, meter with probe will read 50,000 volts.

A few of the most popular VTVM's with which this probe may be used follows:

30-KV TOP RANGE

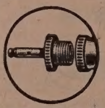
RCA No. WV65A; WV75A; 165A Electronic Design Radio City 664; Reiner 661; Triplett 2541
Heath No. V1; V2; V2A; V4

50-KV TOP RANGE

RCA No. WV95A; 162A; 162B; 162C

No. 6222—With microphone type connector and ground lead

Dealer Cost $7.95

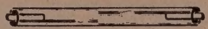


For phone plug instruments, the Insuline No. 33 Adapter is required.

No. 33—Phone Plug Adapter

Dealer Cost $ .30

DUAL BLADED "KLEER" ALIGNER



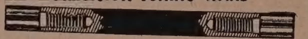
Low-loss clear plastic; 4½" handle, 7/32" diam. Two corrosion-proof extended blades (Govt. "spec" plated nibs)—one thickness .018", the other .025". Designed specifically for ARC-27 but excellent for television and general aligning purposes.

No. 6247 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76247........................Dealer Cost $8.76

PRECISION TUNING WAND



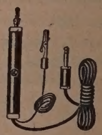
High-grade phenolic handle (4¾" L. x ¼" d.) has precision molded powdered iron core in one end (permeability tolerance ±2%; "Q" tolerance ±10%); silver-plated brass core in other end—both securely threaded and cemented into shaft. Increases or decreases inductance. Designed specifically for ARC-27, the high-grade properties of this wand make it an excellent tool for general servicing.

No. 6249 ....Dealer Cost $ .90

Display Card of 12 above

No. D-76249........................Dealer Cost $10.80

RF AND SIGNAL TRACER PROBE



Germanium Crystal Circuit. Assures accurate analysis of circuit defects. May be used with audio amplifier for audible tracing or with V.T.V.M. for RF and AF measurements. Low input capacitance. The ideal probe for the audio section of television circuits. The sturdy bakelite barrel has sealed tenite ends with solderless phone tip and includes 48" RG59/U coaxial cable with phone plug and 18" rubber covered ground lead with alligator clip.

No. 4310............................Dealer Cost $6.75

SINCE 1921 insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA ALL-PURPOSE TEST LEAD KIT

Complete For Every Testing Need

Equipped with one pair of test leads which have 48″ of red and black kinkless live rubber wire. One end has insulated removable banana-type plugs.

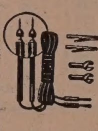
Included in this test kit:
1 pr. all-purpose test leads.
1 pr. insulated alligator clips—red and black No. 884.
1 pr. insulated spade lugs—red and black No. 887.
1 pr. insulated needle points—red and black No. 886.

No. 1005—Kit, complete......Dlr. Cost $2.67

ICA PHONO-NEEDLE POINT TEST LEADS

With Slim Handles and Flexible Wire

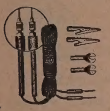
Flexible rubber-covered, kinkless wire, 48″ long. Tenite handles 4″ long.



No. Dlr. Cost
382—With Phone Tips....$ .73
Display Card of 6 above
D70382 .... 4.38
381—With Spade Terminals .73
Display Card of 6 above
D-70381 .... 4.38
379—With alligator Clips.. .74

ICA DE LUXE EXTRA-FLEXIBLE TEST LEADS

Slim Handles and Solderless Plugs

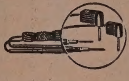


48″ Extra-Flexible Test Leads with 4″ Tenite handles. New non-kinking, rubber insulated wire.

No. Dlr. Cost
355—With Phone Tips..$ .73
Display Card of 6 above
D-70355 .... 4.38
356—With Spade Terminals .73
Display Card of 6 above
D-70356 .... 4.38

ICA PENCIL TYPE TEST LEADS

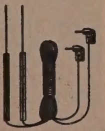
Finger-Grip Molded Tips



All connections are properly soldered providing low resistance connections vital in all precision tests. The Molded Finger Grip Tips are provided with rivets for easy removal of wire. Length of test leads is 48″. Handles are 5″ long.

No. 373....................Dealer Cost $1.35
Display Card of 6 above
No. D-70373................Dealer Cost $8.10

NEW ICA SLIM-LINE TEST LEADS

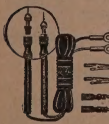


Long vinyl-insulated shaft permits probing in closely wired circuits without fear of shorting. Black and red Tenite handles. 48″ wire lead. With molded phone tip plug.

No. Dlr. Cost
438 .... $1.17 pr.
Display Card of 6 above
D-70438 .... $7.02

ICA HEAVY DUTY LABORATORY TEST LEADS

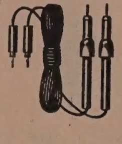
Long Slim Handles and Removable Phono Needle Chuck



Extra long slim red and black handles knurled at end for finger grip ease. Handles 6″ long. 48″ of heavy duty kinkless, flexible rubber wire.

No. Dlr. Cost
400—With knurled grip handle. Insulated solderless plug.....$1.20
388—With alligator clip................. 1.13
391—With spade lugs..................... 1.00
392—With non insulated phone tips........ 1.00

HEAVY DUTY TEST LEADS

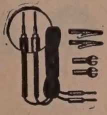


Engineered for TV's high voltage measurements. Insulated to withstand 15,000 volts D.C. Thick-walled bakelite handles with finger guards. 48″ heavy duty cable.

No. 4317.................Dealer Cost $3 per pair
Display Card of 3 above
No. D-74317......................Dealer Cost $9.00

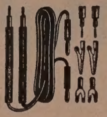
ICA SLIM HANDLE TEST LEADS

Made of sturdy Tenite Handles. 48″ of Kinkless Live Rubber wire. Handles 6″ Long — Overall Length 7″. Prods have pointed large phone tip plugs.



No. Dlr. Cost
313—Phone Tips on end.$ .92
Display Card of 6 above
D-70313 .... 5.52
314—Spade Lugs on end. .92
315—Alligator Clips on end 1.00
Display Card of 6 above
D-70315 ....$6.00

ICA ALL PURPOSE TEST LEADS

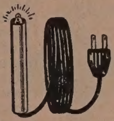


Made of sturdy Tenite Tubing. Slim handles, 6″ long. Overall length 7¼″. Rubber covered wire 48″ long.

With Interchangeable Tips

No. Dlr. Cost
312—Complete Kit $1.83

ICA TEST-LITE

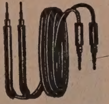


Provides a steady, bright light—without annoying flickering—for dark, narrow spaces around chassis, cabinets, etc. Plugs into any AC-DC socket, 105-125 volt., 4½ ft. cord. Includes standard 6 volt lamp, No. 47, .15 amp., and plug complete.

No. 938............................Dealer Cost $1.10

ICA UNBREAKABLE TEST PRODS

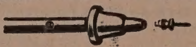
Long Metal Prod with Shock-proof Rubber Handles



One end has standard needle point Tips. Other end has Insulated Solderless Plugs. Supplied with 48″ Kinkless Rubber Wire.

No. 332—With Phone Tips Non Insulated **Dlr. Cost $.75**
No. 331—Insulated Solderless Plug Ends...**Dlr. Cost $.84**

HIGH VOLTAGE ICA HEAVY-DUTY BAKELITE TEST PROD HANDLES

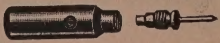


High Voltage, 10,000 Volts

Has midget threaded phone tip. Ideal for all high voltage work. Made of black bakelite with finger guard ring. Minimum amount of metal exposed. Prods are 6″ long overall. Used for high voltage test purposes.

No. 480............................Dealer Cost $ .84

HIGH VOLTAGE HEAVY-DUTY BAKELITE TEST PRODS



High Voltage, 10,000 Volts

Made of black bakelite. Fully insulated with threaded midget sharp pointed phone tips. Minimum amount of metal exposed. Measures 2″ overall. Exposed metal tip is only ½″ long.

No. 485............................Dealer Cost $ .42

ICA HEAVY-DUTY TEST PRODS

Slim tapped Tenite handle fitted with threaded heavy-duty phone tip. Length 5″.

No. 387R—Red ....**Dealer Cost $ .37**
No. 387B—Black................**Dealer Cost .37**

ICA SOLDERLESS PLUG TEST PRODS

With Solderless Plug Chuck

Slim tapped Tenite handles in black or red, threaded to take the solderless plug chuck. All brass parts are nickel plated. Available in two sizes.

5¼ Inch Long Prods

No. 390R—Red ....**Dealer Cost $ .27**
Display Card of 16 above
No. D-70390R ....Dealer Cost 4.32
No. 390B—Black................**Dealer Cost .27**
Display Card of 16 above
No. D-70390B ....Dealer Cost 4.32

7¼ Inch Long Prods

No. 335R—Red ....**Dealer Cost .34**
Display Card of 16 above
No. D-70335R ....Dealer Cost 5.44
No. 335B—Black................**Dealer Cost .34**
Display Card of 16 above
No. D-70335B ....Dealer Cost 5.44

ICA FENOLINE PHONO. NEEDLE POINT TEST PRODS

With Removable Chuck

Supplied in black or red Tenite tapped handles. Needle point chuck is tapped to screw into handle. Available in two sizes.

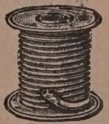
5 Inch Test Prod

No. 389R—Red ....**Dealer Cost $ .27**
Display Card of 16 above
No. D-70389R ....Dealer Cost 4.32
No. 389B—Black................**Dealer Cost .27**
Display Card of 16 above
No. D-70389B ....Dealer Cost 4.32

7 Inch Test Prod

No. 334R—Red ....**Dealer Cost .30**
Display Card of 16 above
No. D-70334R ....Dealer Cost 4.80
No. 334B—Black................**Dealer Cost .30**
Display Card of 16 above
No. D-70334B ....Dealer Cost 4.80

NON-KINK FLEXIBLE TEST LEAD WIRE



Flexible rubber covered wire that will not kink or wear down in service. Consists of very fine tinned stranded copper wire with a heavy wall of live rubber insulation.

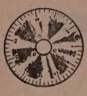
No. 307—100 ft. spool, Black ....**Dlr. Cost $3.35**
No. 309—100 ft. spool, Red......**Dlr. Cost 3.35**

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA CHROME SILVER DIAL PLATES

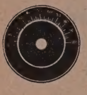


2¾″ and 4″ diameter. Two types, calibrated 180 degrees 0-100 and 325 degrees, 0-100.

No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2196	325	2¾″	0-100	$.85
2197	180	2¾″	0-100	.85
2194	325	4″	0-100	1.03
2195	180	4″	0-100	1.03

ICA BRASS BLACK SATIN FINISH DIAL PLATES

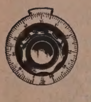
With Etched Silver Numerals



No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2230	325	3⅛″	0-100	$.47
2232	180	3½″	0-100	.47
2233	180	2″	100-0	.37
2234	325	2″	0-100	.37
2236	180	2″	0-100	.37

ICA CHROME SILVER DIALS

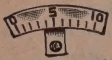
With Finger Grip Flange Knobs



Beautiful dial plates accurately Etcho-engraved with black numerals and calibrations.

No.	Size	Degrees	Calib.	Dlr. Cost
2170	2¾″	325	0-100	$1.50
2171	2¾″	180	0-100	1.50
2168	4″	325	0-100	2.00
2169	4″	180	0-100	2.00

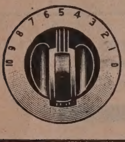
ICA VERNIER DIAL MARKER



Complete with self-tapping screws for mounting on metal, wood, bakelite or brass panels.

No. 21[illegible]—For 2¾″—325° Dials. Dealer Cost $.37
No. 2190—For 2¾″—180° Dials. Dealer Cost .37
No. 2191—For 4″ —325° Dials. Dealer Cost .37
No. 2192—For 4″ —180° Dials. Dealer Cost .37

ICA MINIATURE DIALS

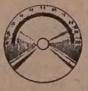


Beautiful Chrome Silver dials with black etched numerals. Finger grip black knob. Only 1⅝″ diameter. Fit ¼″ shafts.

No.	Dlr. Cost
2164—10-0-180	$.63
2165—10-0-270	.63

ICA CHROME SILVER DIAL PLATES

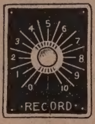
Attractive grain satin finish. Black Etcho Engraving on Chrome Silver Background Plates.



No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2294	180	2″	0-100	$.58
2295	325	2″	0-100	.58
2296	180	3½″	0-100	.92
2297	325	3½″	0-100	.92
2298	180	4″	0-100	1.00
2299	325	4″	0-100	1.00

ICA ETCHED DIAL PLATES

RECTANGULAR TYPES

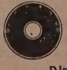


Made of brass—finished in black with etched silver markings. Calibrated for 300 degree rotation. Marked 0 to 10. Will fit on ⅜″ bushing. Size 2¼″ x 1-11/16″.

No.	Marking	Dlr. Cost
2244	Record	$21.66C
2245	Microphone	21.66C
2246	Gain	21.66C
2247	Tone	21.66C

2248—Plain (Calibrated but not worded) . . $21.66C

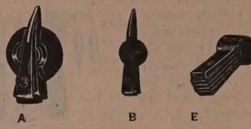
ICA INDICATING PLATES



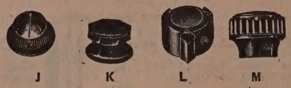
Made of heavy brass with black satin background. Silvered "Etcho Gravured" numerals and lettering. 7/16″ center mounting hole. 1 9/16″ Diameter.

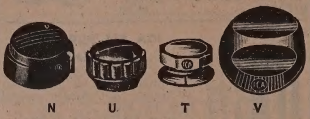
No.	Degrees	Dlr. Cost
2259—Marked 1 to 6	180	$.25
2450—Marked 1 to 5 (Volume)	325	.27
2451—Marked 1 to 5 (Tone)	325	.27
2452—Marked 1 to 10	325	.27
2453—Marked Off-On—with arrow	325	.27

RADIO REPLACEMENT AND INSTRUMENT KNOBS

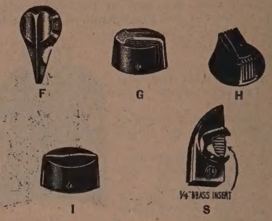


No.	Type	Color	Size	Dlr. Cost
1125	A	Black	1¼″	$13.33C
1127	A	Red	1¼″	16.67C
1126	B	Black	2″	16.67C
1128	B	Red	2″	18.34C
1153	E	Black	1¾″	20.00C
1154	E	Walnut	1¾″	20.00C



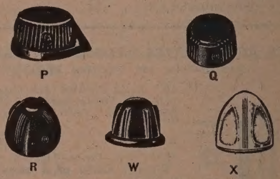


No.	Type	Color	Size	Dlr. Cost
248	J	Black	1⅛″	$18.35C
249	J	Black	1½″	20.00C
1076	K	Walnut	¾″	13.33C
1049	L	Walnut	13/16″	11.66C
1050	L	Walnut	1″	13.33C
1174	M	Black	15/16″	16.67C
1089	N	Walnut	15/16″	13.33C
1090	N	Walnut	1½″	15.00C
1147	U	Black	⅞″	13.33C
1148	U	Walnut	⅞″	13.33C
1077	T	Walnut	¾″	11.66C
1078	T	Walnut	⅞″	13.33C
1272	V	Black	¾″	15.00C
1273	V	Walnut	¾″	15.00C



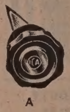
No.	Type	Color	Size	Dlr. Cost
1270	F	Black	1⅝″	$18.35C
1271	F	Black	2½″	21.66C
1137	G	Walnut	⅝″x¾″	13.33C
1138	G	Walnut	¾″x½″	11.66C
1139	G	Walnut	1″x½″	13.33C
1087	H	Walnut	1″	15.00C
1088	H	Black	1″	15.00C
1133	I	Walnut	¾″x½″	11.66C
1134	I	Walnut	1″x⅝″	13.33C
1274	S	Black	1¼″x⅝″	18.35C
1274-S*	S	Black	1¼″x⅝″	.25
1275	S	Black	2″x⅝″	20.00C

*With 2 Set Screws.



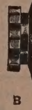
No.	Type	Color	Size	Dlr. Cost
1081	P	Black	⅞″	$10.00C
1082	P	Red	⅞″	10.00C
1084	P	Brown	⅞″	10.00C
1085	P	White	⅞″	10.00C
1116	Q	Walnut	⅞″	11.66C
1117	Q	Walnut	1″	13.33C
1135	R	Walnut	¾″	10.00C
1136	R	Walnut	⅞″	11.66C
1310	W	Black	¾″	8.35C
1311	W	Walnut	¾″	8.35C
1312	W	Ivory	¾″	8.35C
1320	W	Black	15/16″	8.35C
1321	W	Walnut	15/16″	8.35C
1322	W	Ivory	15/16″	10.00C
1331	X	Walnut	¾″	8.35C
1332	X	Ivory	¾″	10.00C

ICA FINGER-GRIP POINTER KNOBS



Moulded of black bakelite with ¼″ hole. Pointer type knobs have white indicators, flange type knobs have white indicating line.

With ¼″ Brass Inserts



TYPE A—WITH POINTER

No. 1166—1⅛″ . . . . Dealer Cost $.40
No. 1168—1⅝″ . . . . Dealer Cost .55
No. 1170—2⅜″ . . . . Dealer Cost .70

TYPE A—LESS POINTER

No. 1165—1⅛″ . . . . Dealer Cost $.32
No. 1167—1⅝″ . . . . Dealer Cost .38
No. 1169—2⅜″ . . . . Dealer Cost .55

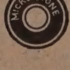
TYPE B—WITH FLANGE

No. 1171—2 1/16″ . . . . Dealer Cost $.55
No. 1172—3″ . . . . Dealer Cost .65

NOTE: Above Knobs also furnished with 2 set screws. Order by adding "S" to each number.

ICA NAME PLATES

1-INCH ROUND



No. 2237—For "Microphone"
No. 2238—For "Phono"
No. 2239—For "On Off"
Dealer Cost $15.00C

ICA KNOB ASSORTMENTS

ASSORTED
KNOBS

Walnut Bakelite Junior Assortment

50 Knobs. Contains 5 each of 10 popular type knobs listed above.

No.	Dealer Cost
1048	$5.90

MASTER ASSORTMENT

100 Knobs. Contains 12 different type popular knobs, including pointer knobs.

No. 1043 . . . . Dealer Cost $11.50

ECONOMY ASSORTMENT

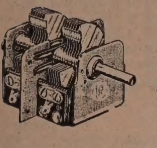
50 Knobs. Contains 25 each (assorted colors) of the modern bakelite bullet and crown shaped knobs. Suitable for wide variety of applications.

No. 1064 . . . . Dealer Cost $3.50

Net

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA MIDGET PRECISION CONDENSERS



Better mechanical design insures constancy of calibration and uniformity between units. Ball-bearings on both ends of shaft insure long life without wear or side play. Heavy brass springs make direct contact with rotor shaft, insuring a clean wiping contact at all times.

Single Gang Condenser

No.		Dealer Cost
533	135 mmfd.	$2.17

Two Gang Condenser

No.		Dealer Cost
538	135 mmfd.	2.58
534	365 mmfd.	2.58

Three Gang Condenser

No.		Dealer Cost
532	135 mmfd.	3.25
531	365 mmfd.	3.25

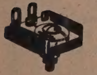
SUPERHETERODYNE TYPE

Designed for 455KC IF. RF section is 27 plates; 435 Mmfd. Oscillator Section is 19 plates; 173 Mmfd. Measurements similar to two gang condensers shown above.

Overall Width: 1 13/16" Overall Height: 2"
Overall Length: 3 3/16"

No. 545..............................Dealer Cost $2.58

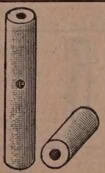
ICA CERAMIC PADDING CONDENSERS



Compact, yet rugged Padding Condensers. Designed for aligning tandem condensers, short wave band switch coils, antenna trimmers, etc. Uses high grade Mica and Phosphor Bronze Spring contacts.

No.	Min. Cap.	Max Cap.	Dlr. Cost
611	4.0 mmfd.	40 mmfd.	$ .37
612	12.0 mmfd.	100 mmfd.	.37
613	70.0 mmfd.	350 mmfd.	.40
614	160.0 mmfd.	500 mmfd.	.40

CERAMIC RODS

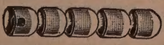


Made of Alsimag. Suitable for mounting insulators, condensers, coils, etc.

Available in two lengths.

No.	Length	Dia.	Tap.	Dlr. Cost
2310	1¼"	½"	6-32	$18.35C
2311	3¼"	½"	6-32	.25

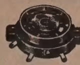
CERAMIC BEAD INSULATORS



⅜" Diam.

Used for construction of short concentric link lines.

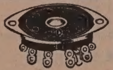
No. 2315—(100 beads)........Dealer Cost $.87



ICA BASE-MOUNTING BAKELITE SOCKETS

No.		Dealer Cost
2480	4 Prong	$ .34
2481	5 Prong	.39
2482	6 Prong	.42
2483	7 Prong comb. large and small	.45
2489	8 Prong OCTAL	.50
2490	Contact for above Sockets	$2.08C

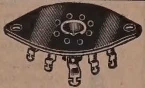
ICA MOLDED BAKELITE SNAP-ON SOCKETS



Octal—Loktal

Mounted in cadmium plated steel "Saddle." Equipped with 4 grounding lugs on saddle—Positive grip contacts.

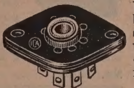
No.
2470—Octal Socket..... Dealer Cost $12.00C
Mtg Center 1½"—Chassis Hole 1⅛"
2471—Loktal Socket.. Dealer Cost 15.00C
Mtg Center 1 5/16"—Chassis Hole 1"



ICA BAKELITE WAFER SOCKETS

No.		Dealer Cost
1118	4 Prong	$ 9.16C
1096	5 Prong	9.16C
1095	6 Prong	9.16C
1119	7 Prong, small	9.16C
1120	7 Prong, large	9.16C
1121	8 Prong OCTAL	11.66C
1123	Loktal Wafer	11.66C

BAKELITE WAFER SOCKETS



Wafer socket of punched bakelite for miniature seven pin button base tubes. Phosphor bronze contacts. Standard mounting centers.

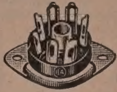
No. 1122........................Dealer Cost $10.00C

BAKELITE WAFER SOCKET

Similar to No. 1122 above but with grounding strap.

No. 1124........................Dealer Cost $10.00C

MOLDED BAKELITE SOCKET

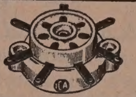


For Miniature Tubes

Black molded general purpose bakelite with mounting saddle.

Standard mounting centers. Phosphor bronze contacts.

No. 2475........................Dealer Cost $15.00C
Same as above but mica filled.
No. 2476........................Dealer Cost $18.00C

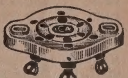


ICA "INSULEX" BASE MOUNTING SOCKETS

Especially adapted for ultra short-wave work and transmitters.

No.		Dealer Cost
290	4 Prong	$ .67
291	5 Prong	.67
292	6 Prong	.75
294	Comb. 7 Prong, large and small	.75
300	8 Prong OCTAL	.84

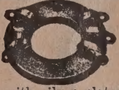
ICA "INSULEX" WAFER SOCKETS



An ideal low loss socket designed for ultra high frequency reception.

No.		Dealer Cost
2600	4 Prong	$ .30
2601	5 Prong	.30
2602	6 Prong	.34
2603	7 Prong, large	.37
2604	7 Prong, small	.37
2605	8 Prong OCTAL for new metal tubes	.38
2636	Contact for above Sockets	$3.33C

ACORN TUBE WAFER SOCKET

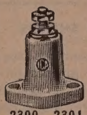


Of Navy approved ceramic with silver plated contacts. Can be easily inserted and removed and no amount of vibration will cause the tube to become loose.

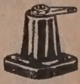
No. 961............................Dealer Cost $ .60
No. 2466—Contact only....Dealer Cost 2.08C

INSULEX INSULATORS

Made of white glazed Insulex . . . non-porous; low-loss.
All feed-thru types have cork washers.



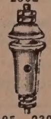
2300 2301
2302



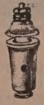
2304

STAND OFF INSULATORS

No.	Description	Height	Base Size	Dlr. Cost
2300	Little Pete	1"	½" x ⅞"	$10.00C
2301	Junior Pete	1⅜"	¾" x 1¼"	11.66C
2302	Big Pete	1⅞"	1" x 1½"	16.67C
2303	Beehive	2⅜"	2" Diam.	20.00C
2304	Jack Type	1½"	1" x 1½"	20.00C



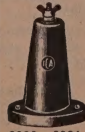
2305 2306
2307



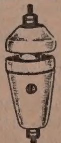
2320 2321

FEED-THRU INSULATORS

No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
2305	Sub-Panel	1¾"	⅝"	5/16"	$15.00C
2306	Sub-Panel	2"	¾"	⅜"	20.00C
2307	Sub-Panel	2¾"	⅞"	7/16"	21.66C
2334	Large Sub-Panel	4"	1½"	⅝"	.53
2320	Jack Type	1 3/16"	¾"	7/16"	.27
2321	Jack Type	2 3/16"	⅞"	7/16"	.30



2330 2331



2332 2333

GIANT INSULEX INSULATORS

No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
*2330	Stand Off	4½"	3½"	¼"	$ .75
**2331	Stand Off	4½"	3½"	¼"	.67
*2332	Feed thru	4"	2"	⅞"	.72
**2333	Feed thru	4"	2"	⅞"	.67

*With Wing Nuts **With Screws and Nuts

SINCE 1921

insuline *Corporation of America*

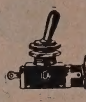
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA TOGGLE SWITCHES

Furnished in Nickel or Antique Bronze. Capacity 1 Amp. 250 Volts. 3 Amps. 125 Volts. Mfd. by H & H for ICA.

No.	Shank Length	Description	Finish	Dlr. Cost
1230	⅜"	S.P.S.T.	Nickel	$.50
1232	⅜"	S.P.S.T.	Bronze	.50
1233	¾"	S.P.S.T.	Bronze	.60
1235	¾"	S.P.S.T.	Nickel	.60
1236	⅜"	S.P.D.T.	Nickel	.63
1237	¾"	S.P.D.T.	Nickel	.72
1238	⅜"	D.P.S.T.	Nickel	.84
1365	⅜"	D.P.D.T.	Nickel	1.00
1366	¾"	D.P.D.T.	Nickel	1.12

BAT-HANDLE TOGGLE SWITCH



Made by H & H. Identical to toggle switches listed at left, except that handle is longer and shaped like a baseball bat.

Less on and off plate.

Nickel plated only—15/32" shank.

No.	Description	Dealer Cost
1296	S.P.S.T.	$ .50
1297	S.P.D.T.	.63
1298	D.P.S.T.	.84
1299	D.P.D.T.	1.00

BAT HANDLE DOUBLE THROW SWITCH

A sturdy double throw bat handle toggle switch featuring center "OFF" position. Made by H. & H. Has many uses: Television Antenna installations; for reversing motor direction; model railroads, etc.

Case Measurements: 1 13/16" L., 11/16" W., 1" H., 7/16" Shank.

No.	Dealer Cost
1386—Single Pole Double Throw	$1.08
1387—Double Pole Double Throw	1.65

ICA BAKELITE KNIFE SWITCHES

Hardware of brass, heavily nickel-plated. Mounted on highly polished bases of black BAKELITE. Firm contact assured.

No.	Description	Dlr. Cost	No.	Description	Dlr. Cost
1216	S.P.S.T.	$ .55	1220	3 P.D.T.	$1.33
1217	S.P.D.T.	.60	1221	4 P.S.T.	1.67
1218	D.P.S.T.	.75	1222	4 P.D.T.	2.00
1219	D.P.D.T.	.90	1364	5 P.D.T.	2.35
1360	3 P.S.T.	1.23			

ICA PORCELAIN KNIFE SWITCHES

Moisture-proof base. Recommended for outdoor use. Hardware of brass, heavily nickel plated.

No.	Description	Base Size	Dlr. Cost
235	S.P.S.T.	1¾"x1"	$.27
236	S.P.D.T.	2⅝"x1"	.34
237	D.P.S.T.	1¾"x1⅝"	.47
238	D.P.D.T.	2⅝"x1½"	.58

ICA SLIDER SWITCHES

SMALL . . . COMPACT. Switch dimensions: 1½" x ½" x ¼". S.P.S.T. includes chrome mounting plate.

No.	Description	Dealer Cost
1255	S.P.S.T.	$21.68C
1259	S.P.D.T.	23.35C
1260	D.P.D.T.	.34
1264	D.P.S.T.	.30

MINIATURE BAKELITE SWITCHES

Can be mounted on panel or base. Black Bakelite base—highly nickel-plated brass parts with insulated handles.

No.	Description	Base Size	Dlr. Cost
2223	S.P.S.T.	1¼"x½"	$ .25
2224	S.P.D.T.	1¼"x½"	.42
2225	D.P.D.T.	1¼"x1"	.53
2226	D.P.S.T.	1¼"x1"	.50

ICA ROTARY SWITCHES

Rated 3 Amps. at 125 Volts. Over-all Length of shafts 1½". Made by H & H for ICA. Underwriters Approved.

No.	Threaded Shank	Description	Dealer Cost
1228*	⅜"	S.P.S.T.	$ .67
1229*	1"	S.P.S.T.	.82
1286	⅜"	S.P.D.T.	.80
1287	1"	S.P.D.T.	.97
1288	⅜"	D.P.D.T.	1.25
1289	1"	D.P.D.T.	1.35

*Rated 3 Amps. at 250 V.

ICA HI-POWER SWITCH

Push Button Type

Designed to break primary circuit when rack door is open. D.P.S.T. Made by H & H for ICA. Capacity 12 Amp. 125 Volt. Overall size 1¾" long, ¾" wide, ¾" high, 7/16" shank.

No. 1280........Dealer Cost $1.58

ICA PUSH-BUTTON SWITCH

Single pole 2 circuit momentary switch. One circuit is "ON"; other normally "OFF." One Amp., 125 Volt, made by H & H for ICA. Shank ⅝" long.

No. 1282........Dealer Cost $1.05

ICA EXTRA HEAVY DUTY SWITCH

D.P.D.T. With Neutral Center

An extra large heavy duty, Double Pole, Double Throw Switch with neutral position in the center for use in heavy current circuits such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 Amps., 125 Volts. Size of switch case, 2⅛" long, 1" high, 1¼" wide. Mounting sleeve diameter ¾".

No. 1283 ....Dealer Cost $3.75

"ON-OFF" PLATE

For Toggle Switch

Nickel Plated

No.	Dlr. Cost
1300	$3.35C
Antique Bronze	
1300BR	3.35C

ICA POWER SWITCH

(Toggle Type)

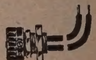
Characteristics and dimensions same as No. 1280 described above.

No. 1281
Dealer Cost $1.08

ICA ROTARY CANOPY SWITCH

Single pole switch ¼" shank with brown bakelite knob and 6" leads—1 ampere—250 volts.

No. 1257...................................Dealer Cost $ .42



GT AND GT/G TYPE TUBE SHIELDS

Latest type seamless, drawn shell type. Length 2¼".

No.	Dlr. Cost
1744—Open top* For tube diam. 1.218"	$10.00C
1745—Closed top* For tube diam. 1.218"	10.00C
1746—Open Top** For tube diam. 1.165"	10.00C
1747—Closed top**† For tube diam. 1.165"	10.00C

*For GT and GT/G tubes with large metal base.

**For GT tubes with small metal base.

†For Loktal tubes.

ICA COIL SHIELDS

With Detachable Base

A sturdy coil shield made of aluminum with a detachable base.

No.	Dealer Cost
1539—2⅛" x 3" High	$ .42
1540—2½" x 3½" High	.47
1549—3" x 3½" High	.50

FORM FIT TUBE SHIELDS

A tube shield that assures a snug, positive fit. Vertical grooves provide flexibility. Includes ground clip as illustrated. Protects tubes against excessive vibration.

No. 1727B—For GT; GT/G and Loktal tubes. Length 2½"................**Dealer Cost $10.00C**

No. 1729B—For GT and GT/G tubes. Length 2¾"................**Dealer Cost 10.00C**

ICA GRID CAP SHIELDS

(For Metal Tubes)

Fits firmly over grid cap, affording complete shielding. Slotted cap permits passage of grid wire.

No.	Dealer Cost
1552	$10.83C
1558—With Bakelite Insert	20.00C

ICA ALUMINUM TUBE SHIELD

For 55, 57, 68, etc. type tubes

No.	Dealer Cost
1708—1 11/16" mounting centers	$.30

ICA 807 TUBE SHIELD

For use with Transmitter Pentodes, and Tetrodes, to prevent oscillation. Can also be used on RK 20, RK 39 and 804 tubes.

No.	Dealer Cost
1545	$ .42

MINIATURE TUBE SHIELD AND CLIP

For miniature tubes with T5½ bulbs. Includes base clip. Length 1⅞" Mtg. Centers (base clip) ⅞" for standard miniature tubes.

No. 1735.........Dealer Cost $10.00C

SINCE 1921

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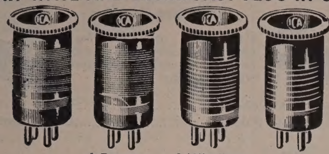
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

SHORT-WAVE AND BROADCAST PLUG-IN COILS

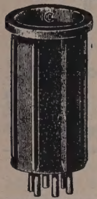


4 Prongs . . . 2 Windings

Wound on Low-Loss Bakelite Forms. Diam. 1¼"; height 2¼". Rim handle for easy changing. Uniformly spaced winding. Used with either 140 or 150 mmfd. tuning condenser.

No.	Dealer Cost
1471—Set of 4 short wave coils—from 9½ to 217 Meters	$2.50
1473—Set of 2 Broadcast coils—190 to 550 Meters	2.00

ICA LARGE LOW-LOSS "RIBBED" COIL FORMS



For use in 4, 5, and 6-prong sockets. Designed for easy grooving or threading. Size 3⅝ x 1⅝".

No.	Dealer Cost
1051—4-Prong	$ .45
1052—5-Prong	.45
1053—6-Prong	.50

ICA SMALL BAKELITE COIL FORMS

Equipped with special rim on top making it easy to insert and pull out of socket. Black Bakelite. Ridge is grooved for color coding.

No.	Dealer Cost
1108B—4-Prong	$ .35
1113B—5-Prong	.37
1114B—6-Prong	.38

ICA TRANSMITTING COIL FORMS

Made of Low-Loss RX-47 Di-electric. Coil forms ribbed for air space winding. Knurled flange for easy handling. Supplied in standard bases, either 4, 5, or 6 prongs to fit standard sockets. Eight ¼" ribs insure low-loss winding.

No.	Dealer Cost
2670—4-Prong	$ .73
2671—5-Prong	.77
2672—6-Prong	.83

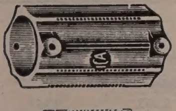
ICA SMALL RIBBED BAKELITE COIL FORMS

Rugged and durable, these coil forms are designed for long service. Measures 1⅜" diameter, 2¼" high with molded ribs for low-loss winding and special rim on top. There is a recess in the rim to insert the ICA Round Labels to signify wave lengths.

No.	Dealer Cost
2158—4-Prong	$ .35
2159—5-Prong	.40
2160—6-Prong	.40

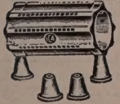
ICA GROOVED INSULEX TRANSMITTING COIL FORMS

Particularly suited for winding low-loss Inductors for Oscillators, R.F. Amplifiers, Short Wave Diathermy machines, etc. The forms are grooved to hold the turns in place and holes are provided for tapping at every other turn if desired. Raised bosses are provided for mounting supports. Grooved for 25 and 28 turns respectively with .143" spacing.



For 20 and 40 Meters

No.	Dealer Cost
2650—Without supporting legs	$1.17
2651—Complete with mounting legs and hardware	1.58



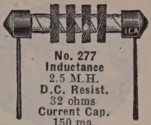
For 80 and 160 Meters

No.	Dealer Cost
2652—Without supporting legs	$2.00
2653—With supporting legs	2.25

INSULEX R.F. CHOKE COIL

HIGH FREQUENCY. Consists of four narrow sections each universally wound spaced on an Insulex form. Designed especially for high frequency receivers.

Low distributed capacity. Supplied with wire leads for mounting. May be mounted in grid leak clips.



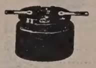
No. 277
Inductance
2.5 M.H.
D.C. Resist.
32 ohms
Current Cap.
150 ma.
Dlr. Cost $.37

ICA INSULEX R.F. CHOKES

Can be used in any circuit or position. Designed particularly for short wave but equally effective over the broadcast band. Insulex forms are used with a special Radio Frequency Lacquer for impregnation and ample moisture proofing. Solder lugs for firm electrical and mechanical contacts.

No.	Inductance	D.C. Resis.	Current Cap.	Dealer Cost
1777	2.5	30	150	$ .45
1775	5.5	57	150	.57
1774	10	73	150	.60
1772	30	136	125	.67
1773	60	196	125	.87
1771	80	222	125	.92

IRON CORE HIGH "Q" R.F. CHOKES

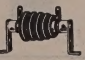


A high impedance choke coil with low distributed capacity winding on magnetic core, specially impregnated for high frequency purposes. Designed for minimum loss with smallest diameter and space requirements, and minimum D.C. resistance. Ideal for detector plate circuits and R.F. filtering systems in general.

No.	Ind. M.H.	D.C. Res. Ohms	Dealer Cost
6200	2.5	17	$1.07
6201	3.5	22	1.17
6202	5.5	28	1.17
6203	10	55	1.23
6204	30	83	1.43
6205	60	142	1.60
6206	80	168	1.70
6207	125	214	2.00

ICA TRANSMITTING R.F. CHOKES

Tapered Sections

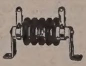


Wound on Insulex low-loss core. Has a continuous universal winding in five tapered sections. Designed for maximum impedance in amateur bands from 160 meters downward.

No.	Ind. M.H.	Cur.Ma.	Res. Ohms	Dealer Cost
266	2.8	1000	5	$2.00
267	5.3	600	12.5	1.83

HEAVY DUTY TRANSMITTING CHOKES

Heavy duty transmitting chokes designed for durable service. Extremely low power loss and distributed capacity. Coils securely fastened.



No.	Ind. M.H.	Cur. Cap. Ma.	D.C. Res. Ohms	Dealer Cost
280	2.5	1000	5	$1.83
278	5.6	600	12	1.67

Net

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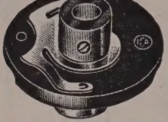
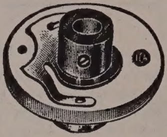


ICA BAKELITE FLEXIBLE SHAFT COUPLING

Flexible phosphor bronze spring contact mounted on a round bakelite disc. 1⅛″ diam. Has ¼″ bushing.

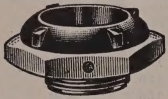
No. 2142...............**Dealer Cost $ .50**

ICA INSULEX FLEXIBLE SHAFT COUPLING



Flexible phosphor bronze spring contact. Mounted on Insulex disc for efficient low-loss coupling. 1⅛″ diam. ¼″ bushing.

No. 2143...............**Dealer Cost $ .58**



BAKELITE BUSHINGS

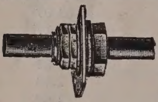
Molded bakelite bushings for complete insulation. Strong seamless threads. Heat resisting to 300°F. Complete with stamped lock nuts.

No.	Hole Size	Dealer Cost	No.	Hole Size	Dealer Cost
606	17/64″	$10.00C	609	9/16″	$11.68C
607	5/16″	10.00C	610 (Two holes)	7/32″	13.35C
608	13/32″	11.66C			

ICA INSULATED BUSHINGS

Equipped with knurled nut that can be tightened easily. Used as insulated grommet on condenser shafts, panel bearing, etc.

No.	Dealer Cost
670—Black. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	$13.33C
671—Red. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	13.33C
672—Black. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C
673—Red. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C



ICA PANEL BEARING ASSEMBLY

Can be used with either rigid or flexible couplings for mounting volume controls, condensers, etc., at a distance away from the panel. Will fit on panels up to 3/16″ thickness.

No. 1248—Overall length 3″	**Dealer Cost $ .30**
No. 1249—Overall length 6″	**Dealer Cost .35**

UNIVERSAL PANEL BEARING

Designed to accommodate ¼″ shaft wherever a panel bushing is desired. Furnished with nut and insulating washers.

No. 1250..................................**Dealer Cost $15.00C**

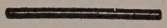
Display Card of 60 Above

No. D-71250..................................**Dealer Cost $9.00**

ICA BRASS EXTENSION RODS

No.	Dealer Cost
2117—6″ L., ¼″ O.D.	$18.00C
2118—12″ L., ¼″ O.D.	$ .36

FENOLINE EXTENSION RODS

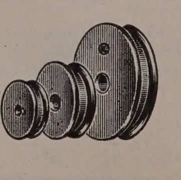


No.	Dealer Cost
2120—6″ L., ¼″ O.D.	$15.00C

ALUMINUM IDLER PULLEYS

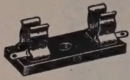
Precision made. Distortion free. Non-warping. Permits closer tolerances. Supplied in any quantity in any type — with or without shoulders. Listed here are typical sizes without shoulders, hole diam. .128″.

No.	O.D.	Cord Diam.	Dlr. Cost
601	⅜″	¼″	$3.35C
602	7/16″	5/16″	3.67C
603	½″	⅜″	4.00C
604	⅝″	½″	4.35C
605	¾″	⅝″	4.66C

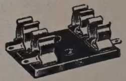


ICA BAKELITE BASE FUSE MOUNTINGS FOR 3 AG TYPE FUSES

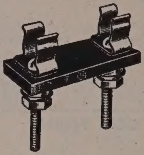
Flush Type Mounting



For radio or automotive fuses. Countersunk center hole for mounting. Equipped with soldering lugs.



No. 2340—Single Pole	**Dealer Cost $13.33C**
No. 7201—Double Pole	**Dealer Cost 21.66C**

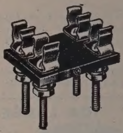


Panel Type Mounting

Equipped with 6-32 mounting screws.

No. 2341—Single Pole
Dealer Cost $16.67C

No. 7203—Double Pole
Dealer Cost $.27



FOR 8 AG TYPE FUSES

FLUSH MOUNT		PANEL MOUNT	
No.	**Dealer Cost**	**No.**	**Dealer Cost**
7202—Single Pole	$11.66C	**7205**—Single Pole	$15.00C
7204—Double Pole	21.66C	**7206**—Double Pole	15.00C

STANDARD FUSE HOLDERS

Top quality fuse holder and parts

2348

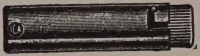
2360

2364

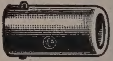
	Dealer Cost
No. 2348—Standard fuse holder complete	$12.00C
No. 2360—Female sleeve only	3.00C
No. 2364—Fibre Insulator only	5.33M

JUMBO FUSE HOLDERS

Fuse holders of various needed values



2349



2359

2367

2358

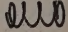
	Dealer Cost
No. 2349—SFE 30 Amperes (2⅝″ L. x ½″ d.)	$20.00C
No. 2346—SFE 20 Amperes (2½″ L. x ½″ d.)	20.00C
No. 2345—SFE 14 Amperes (2¼″ L. x ½″ d.)	20.00C
No. 2344—SFE 9 Amperes (2⅛″ L. x ½″ d.)	20.00C
No. 2359—Male sleeve only	3.75C
No. 2367—Bakelite bushing only	3.00C
No. 2358—Female sleeve only	5.00C

ANTENNA CONNECTOR . . . PARTS

2347

2362

2361



2363

	Dealer Cost
No. 2347—Antenna Connector Complete	$ 7.50C
No. 2362—Male part only (also part for 2348)	1.80C
No. 2361—Female sleeve only	2.10C
No. 2363—Spring only for 2347 and 2348	6.00M

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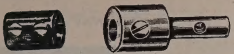


ICA SHAFT COUPLINGS AND EXTENSION RODS

To increase lengths of shafts of different diameters. In two types—Brass . . . Fenoline.

Brass Couplings and Reducers

No.	Length	Hole	O.D.	Dlr. Cost
2105	¾″	¼″ coupler	7/16″	$15.00C
2106	¾″	⅜″ coupler	9/16″	15.00C
2107	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2111	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C
2112	1⅛″	¼″ to ⅜″ shaft	9/16″	18.00C
2113	1⅛″	⅜″ to ¼″ shaft	7/16″	18.00C

ICA Fenoline Couplings and Reducers

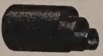
No.	Length	Hole	O.D.	Dlr. Cost
2116	¾″	¼″ coupler	7/16″	15.00C
2109	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2110	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C

Long Extension Couplings

Made of Brass with extra long extension.

No.	Length	I.D.	O.D.	Dlr. Cost
2123	1¾″	¼″	7/16″	$18.00C

BAKELITE AND FENOLINE TUBING



ICA tubing is strong mechanically, has extremely low electrical absorption and is highly resistant to moisture. Absolute perfection in winding of coils is assured by the use of ICA tubing—thus affording relief from complaints or failure in performance.

Finished in Natural and Black Colors
Small sizes up to one inch in Black only.

1/16″ Wall Thickness, Full Lengths.
Approximately 36 to 48″

BAKELITE			FENOLINE	
No.	Dlr. Cost Per Ft.	Size O.D.	No.	Dlr. Cost Per Ft.
100	$ .65	¼″	161	$ .58
101	.78	⅜″	162	.63
102	.83	7/16″	163	.70
103	.90	½″	164	.73
104	.97	⅝″	165	.77
105	1.07	¾″	166	.78
106	1.12	⅞″	167	.87
147	1.17	1″	134	.78
148	1.33	1¼″	135	.93
149	1.42	1½″	136	.95
150	1.55	1¾″	137	1.07
151	1.75	2″	138	1.17
152	1.80	2¼″	139	1.27
153	2.17	2½″	140	1.40
154	2.40	2¾″	141	1.67
155	2.75	3″	142	1.83
156	2.90	3¼″	143	1.97
157	3.10	3½″	144	2.32
158	3.10	3¾″		
159	3.80	4″		

STOCK SIZES OF BLACK AND BROWN FENOLINE TUBING

Individual lengths tubing in following diam.: 1″; 1¼″; 1½″; 1¾″; 2″; 2¼″; 2¾″; 3″; Wall thickness 1/16″.

No.	Dealer Cost
2131—3″ long—1″ O.D. to 3″ O.D.	$ .45
2132—4″ long—1″ O.D. to 3″ O.D.	.55
2133—6″ long—1″ O.D. to 3″ O.D.	.78

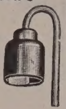
When ordering, specify exact diameter.

SPECIAL LENGTH BAKELITE TUBING

Cut to Order — Wall Thickness to 1/16″

Outside diameters range from 1″ to 4″. Prices on request. Other diameters and thicknesses quoted on request.

FENOLINE INSULATED GRID CAPS



Improved type for standard and transmitting tubes. Sturdy cadmium plated brass clip. Furnished with 12″ wire.

For 866 Transmitting Tubes

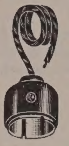
No. 683—Black..**Dealer Cost $.42**

For Standard Glass Receiving Tubes with small caps

No. 680—Red ....**Dealer Cost $20.00C**

No. 681—Black.............**Dealer Cost 20.00C**

RUBBER INSULATED GRID CAPS



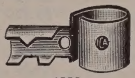
For Transmitting Tubes

New improved type. Insulation made of special soft rubber over spring bronze.

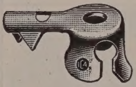
For 866 Type Tubes

No.	Dealer Cost
870—With Leads	$ .25
For Receiving Tubes	
872—With 12″ Lead......	16.67C
For New Metal Tubes	
874—With 12″ Lead......	16.67C

SPRING ACTION GRID CAPS



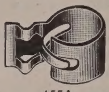
1553



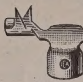
550

For all types of tubes. Positive contact. All grid caps are hot tinned ready for soldering.

No.	Dealer Cost
1550—For standard glass receiving tubes with small caps (.360 dia.)........	$7.50M
1551—For tubes with miniature caps (.250 dia.)	7.50M
1553—For glass tubes...........................	8.35M
1554—For glas stubes...........................	8.35M

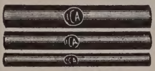


1554



1551

ICA "INSULOID" RODS



Made of phenolic material of high electrical insulating properties and great tensile strength.

No.	Color	Size	Dlr. Cost
2175	Black	12″ x ¼″	$ .30
2176	Black	24″ x ¼″	.53
2179	Black	12″ x ⅜″	.42
2180	Black	24″ x ⅜″	.85
2183	Black	12″ x ½″	.57
2184	Black	24″ x ½″	1.13

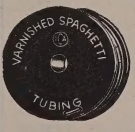
BAKELITE RODS / FENOLINE RODS

Lengths of 18″ to 24″

BAKELITE RODS			FENOLINE RODS		
No.	Diam.	Dlr. Cost Per Ft.	No.	Diam.	Dlr. Cost Per Ft.
175	¼″	$ .87	168	¼″	$ .57
178	5/16″	1.05	169	⅜″	.77
176	⅜″	1.25	170	½″	.95
177	½″	1.65			

ICA FLEXIBLE SPAGHETTI TUBING

20 Foot Lengths



A flexible tubing, heavily varnished, in attractive colors. Average dielectric strength, 5000 volts. Will accommodate from No. 10 to No. 18 wires

Furnished in one length —20 feet long on handy spools.

No.	Color		Dealer Cost
210	Red	Per Spool	$ .84
211	Yellow	Per Spool	.84
212	Brown	Per Spool	.84
213	Green	Per Spool	.84
214	Black	Per Spool	.84

500 Foot Spools, spaghetti tubing, same grade and colors as above. Specify color per spool.

No. 197...........................**Dealer Cost $19.16**

ICA SPAGHETTI TUBING

For No. 10 to No. 18 gauge wire. Guaranteed not to crack. Furnished in 30″ lengths.

No. Color	Dealer Cost per length
182—Red	$10.00C
183—Yellow	10.00C
184—Brown	10.00C
185—Green	10.00C
186—Black	10.00C

SMALL SIZE SPAGHETTI TUBING

200—Red	$10.00C
201—Yellow	10.00C
202—Black	10.00C

LARGE SIZE SPAGHETTI TUBING

Supplied in 36″ lengths. Diameter 9/64″ I.D. x 3/16″ O.D.

No. 196—Supplied in black only
Dealer Cost—per length $.34

ICA GIANT SLEEVING

Made of high voltage insulation saturated cambric material. Inside diameter ⅜″. For Insulating Resistors, Small Condensers, Wire Cables, Leads, etc. 36″ lengths.

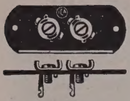
No. 198..............................**Dealer Cost $.34**

SINCE
1921

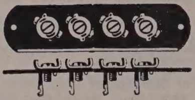
insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA TERMINAL STRIPS

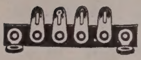


Specially suited for amplifiers, mixers, receivers, etc. Made of 3/32″ heavy black Bakelite, engraved in white. Terminals are brass cadmium plated.



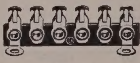
No.	Terminals	Marking	Mtg. Ctrs.	Size	Dealer Cost
2420	2	Plain	1½	⅞ x 2¼	$13.35C
2419	2	A & G	1½		13.35C
2418	2	Output	1½		13.35C
2417	2	Input	1½		13.35C
2414	3	Plain	2	⅞ x 2¾	18.33C
2415	3	1, 2, 3	2		20.00C
2413	4	Plain	2½	⅞ x 3⅜	23.32C
2408	4	1, 2, 3, 4	2½		.25
2405	5	Plain	3	⅞ x 4	.28
2406	5	1, 2, 3, 4, 5	3		.32
2404	6	Plain	3½	⅞ x 4⅝	.34
2402	6	1, 2, 3, 4, 5, 6	3½		.40
2412	7	Plain	4	⅞ x 5¼	.42
2411	7	1, 2, 3, 4, 5, 6, 7	4		.45
2410	8	Plain	4½	⅞ x 5¾	.47
2409	8	1, 2, 3, 4, 5, 6, 7, 8	4½		.52
2424	9	Plain	5	⅞ x 6⅜	.52
2423	9	1, 2, 3, 4, 5, 6, 7, 8, 9	5		.57
2422	10	Plain	5½	⅞ x 7	.57
2421	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	5½		.63

BAKELITE TERMINAL MOUNTING STRIPS



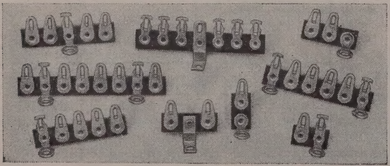
Type A

Mounting tie strips for fastening Resistors, Condensers, etc. Mounting Lug hole diameter .140″. Type A shows non-ground mounting lug. Type B shows combination grounding-mounting lug:



Type B

No.	Type	Terminals	Mtg. Centers	Mounting Lugs	Dealer Cost
2434	A	1	One Hole	1	$1.92C
2455	B	1		1	2.20C
2435	A	2		1	2.70C
2456	B	2		1	2.70C
2436	A	3	1½	2	4.75C
2457	B	3	1½	2	4.75C
2437	A	4	1⅞	2	5.75C
2458	B	4	1⅞	2	5.75C
2438	A	5	2¼	2	6.75C
2459	B	5	2¼	2	6.75C
2439	A	6	1⅞	2	8.50C
2460	B	6	1½	2	8.50C
2440	A	7	1½	2	9.25C
2461	B	7	1½	2	9.25C
2441	A	8	1⅞	2	10.50C
2462	B	8	1⅞	2	10.50C

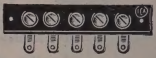


SPECIFICATION TERMINAL STRIPS

Special type terminal strips with terminals in any required position, including offset bracket type. Made to specifications. Send us your print.

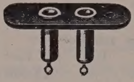
BAKELITE TERMINAL STRIPS

Brown bakelite 1/16″ thick. Suitable light duty radio work, experimental purposes, etc.



No.	Terminals	Mtg. Ctrs.	Dlr. Cost
2520	2	1 5/16	$ 9.00C
2521	3	1¾	12.00C
2522	4	2 3/16	15.00C
2523	5	2⅝	18.00C
2524	6	3 1/16	20.00C
2528 Terminal Lug & Screw only......			3.46C

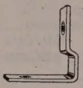
TWIN JACK STRIP



With two terminals. Takes standard phone tips. Base width 11/16″. 1 11/16″ between Mounting holes.

No. 2443..........................Dealer Cost $15.00C

Terminal Strip Offset Mounting Bracket



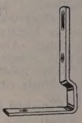
For more rigid mounting of terminal strips. Mounting hole for No. 6 screw.

No. 2430....Dlr. Cost $1.67C

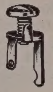
Terminal Strip Offset Mounting Bracket and Lug Combination

For sturdy mounting of terminal strips. Affords solder connection for ground. Mounting hole for No. 6 screw.

No. 2431........Dlr. Cost. $1.67C

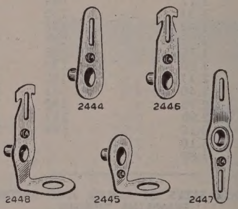


TERMINAL LUGS



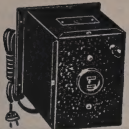
No.	Dealer Cost
2425—Lugs only (less screws)	$4.03C
2426—Terminal Screws, ⅜″ L.	1.07C

TERMINAL LUGS



No.	Description	Dealer Cost
2444	Terminal Lug	$5.00M
2445	Mounting Lug—#6 hole	.83C - 5.00M
2446	Notched Terminal Lug	.67C - 5.00M
2448	Combination Term. and Mounting Lug—#6 hole	1.00C - 8.00M
2638	Same as 2448—#8 hole	1.00C - 6.66M
2447	Double lug with center eyelet	1.00C - 8.00M
2463	Combination lug—eyelet type and bracket..	.83C - 5.00M

FILTERVOLT NOISE FILTER



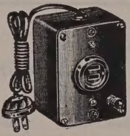
An efficient filter for disturbances caused by electrical appliances. For use with any all-wave or broadcast receiver.

Rated conservatively at 250 watts for 32, 110 and 220 volt AC or DC circuits. Can be installed either at the radio or at the source of disturbance.

Contains heavy duty R.F. chokes, large filter capacitor, and has a "PI" Filter circuit arrangement.

No. 338..............................**Dealer Cost $5.00**

ICA FILTERVOLT



Improves extremely noisy radio reception due to interruptions in power line caused by electrical appliances, lights, etc.

No. 394
Dealer Cost $3.00

DUPLEX FILTERVOLT

Eliminates Radio Noises Caused By—

- Electric Shavers
- Refrigerators
- Fans
- Elevators
- Motors, etc.

Unit is equipped with Dual outlet, both sides being filtered for noise elimination.

No. 90..............................**Dealer Cost $1.17**

UNIVERSAL VOLTAGE REGULATOR

Voltage fluctuation often occurs not gradually but suddenly, thus bringing a tremendous strain on the tubes. This regulator protects tubes through scientific regulation of current fluctuations. Housing body and end rings are neatly constructed and of perforated japanned metal. For all Radio Sets, AC, DC.

No. 92..............................**Dealer Cost $1.17**

ICA 3-IN-1 RADIO TUNER

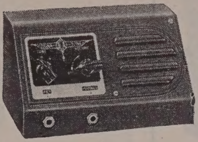
Functions as either an Antenna Tuner, Wave Trap, or Aerial Eliminator. Operates on any make or model radio set.

As an Antenna Tuner, it will improve the reception of a weak station. As a Wave Trap, it will separate interfering stations and improve selectivity. As an Aerial Eliminator, it makes unnecessary the outdoor aerial. Easily installed within a few minutes.

No. 93..................................**Dealer Cost $.60**
Complete with Instructions.

ICA DELUXE SIGNA-TONE

AUDIO OSCILLATOR — CODE PRACTICE SET — KEYING MONITOR



The ICA Signature is a perfected Audio Oscillator, having 3 different output frequencies and a continuously variable volume control. The Audio notes are similar to those of high quality commercial CW stations.

1. CODE PRACTICE SET—A number of phones and keys may be connected for intercommunication or for classroom or radio club instruction in code.
2. KEYING MONITOR—An invaluable aid in improving any ham's "fist." Will follow the "bug" at all speeds. No well-equipped station should be without this keying monitor. (A double pole keying relay is required for this function—one set of contacts for keying transmitter; other set for monitor.)
3. MODULATION SIGNAL—The steady note of the Signature is ideal for adjusting both the Modulator and modulated stages of your transmitter for 100% modulation.
4. SIGNAL TRACER—By feeding the output of the Signatone into each stage of your modulator and listening to the output of that stage, defects and "bugs" can easily be located. Complete with tube and self-contained speaker, for 110 V AC-DC.

No. 4300—Dealer Net Cost..**$15.75**
No. 4301—Classroom Model (No Speaker)—Dealer Net Cost.................. **13.50**

ICA UNBREAKABLE MORSE CODE RECORDS

INTERNATIONAL MORSE CODE
MORSE CODE

Learn the International Morse Code Quickly, Easily — Uses EYE - EAR Method. The Complete Linguaphone Code Equipment consists of 5 Double-faced, electrically transcribed records in durable album. Contents: 3 Tables, 10 Lessons.

No. 1800—Complete ....**Dealer Cost $10.95**
No. 1800R—Record only ....**Dealer Cost 2.03**
No. 1800B—Booklet only ....**Dealer Cost .98**

ICA EAR PHONES

Complete With Head Bands

Made of molded Bakelite and light-weight nickel-plated metal. 2000 ohms.

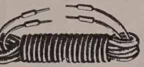
No. 23—Double Head Phone....**Dlr. Cost $2.71**

EAR CUSHIONS

Made of soft rubber. Ideal for the amateur wireless operator, etc.

No. 195.........................**Dealer Cost $.84 pr.**

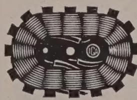
DOUBLE PHONE CORDS



No.	Dealer Cost
192—Tips on both ends.......................	**$ .64**
193—Spades on one end, tips on other..	**.64**

ICA TENNA-SCOPE LOOP

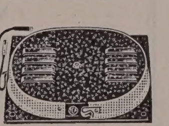
For Midgets or Portables



Eliminates necessity of outdoor or indoor antenna. Replaces the antenna coil in portable or midget sets. Easily assembled.

No. 4385............................**Dealer Cost $ .83**

ICA TENNA-SCOPE

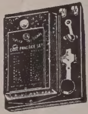


A new style built-in tuned radio antenna. Easily connected. Eliminates use of outside aerial and ground. Features: Better selectivity — Higher signal to noise ratio —Easily connected, no soldering.

No. 4380............................**Dealer Cost $2.00**

ICA "TRIPLEX"

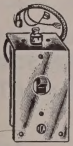
Radio & Telegraph Code Practice Set
Blinker Light
Radio Signal—Telegraph



No.	Dlr. Cost
70—Single Unit (less batteries)	**$1.95**
71—Double Unit (50 ft. wire)	**4.12**

ICA RECORD-PLAYER SWITCH

Replacement for RCA Switch 9824A



Recommended for quickly connecting Record Players, F.M. attachments, Television attachments, Microphones and similar devices into the audio amplifier of existing radio receivers.

No. 1740..........................**Dealer Cost $1.55**

RESISTOR CORDS

A series of replacement resistor cords for practically all AC-DC requirements.

No.	Resistance-Ohms	Dlr. Cost
513	135	$ .84
514	160	.84
515	190	.84
516	220	.84
517	290	.84
518	340	.84
519	540	.92

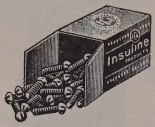
UNIVERSAL RESISTOR CORD

Replacement Resistor Cord for all makes receivers. From 22 to 330 ohms on one cord. Instructions with each cord.

No. 205............................**Dealer Cost $1.25**

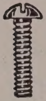
SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

RADIO HARDWARE



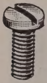
HARDWARE
5000

ICA offers a wide variety of radio hardware items suitable for practically any use in the radio-electronic and allied fields. ICA hardware is offered in standard package quantities or in handsome glass display jars for convenient storing.



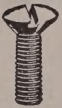
ROUND HEAD MACHINE SCREWS NICKEL-PLATED

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5504	1000	2-56 x ¼″ long	$4.17M
5000	100	5500	1000	4-36 x ¼″ long	4.17M
5001	100	5501	1000	4-36 x ½″ long	4.17M
5002	75	5502	1000	4-36 x ¾″ long	4.50M
5007	90	5507	1000	6-32 x ¼″ long	4.42M
—	—	5511	1000	6-32 x ⅜″ long	5.00M
5008	80	5508	1000	6-32 x ½″ long	5.16M
5009	70	5509	1000	6-32 x ¾″ long	5.50M
5010	50	5510	1000	6-32 x 1″ long	6.50M
5014	75	5514	1000	8-32 x ⅜″ long	5.42M
5015	70	5515	1000	8-32 x ½″ long	6.00M
5017	40	5517	1000	8-32 x 1″ long	7.50M
5022	60	5521	1000	10-32 x ½″ long	7.50M



BINDING HEAD MACHINE SCREWS

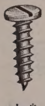
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5546	100	6-32 x 3/16″ long	$9.00M
5030	80	5547	100	6-32 x ¼″ long	9.00M
5031	75	5548	100	6-32 x ⅜″ long	9.00M



OVAL HEAD MACHINE SCREWS NICKEL-PLATED

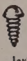
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5042†	40	5710†	100	10-32 x ⅝″ long	$7.50M

†For Transmitting Racks.



PARKER-KALON SELF-TAPPING SCREWS

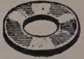
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5562	1000	No. 3x 3/16″ long	$1.00C-$9.16M
5051	50	5555	1000	No. 4x½″ long	1.17C-10.00M
5052	50	5556	1000	No. 6x¼″ long	1.50C-10.00M
5053	45	5557	1000	No. 6x⅜″ long	1.50C-13.33M
5054	40	5558	1000	No. 7x½″ long	1.75C-15.00M
5055	35	5559	1000	No. 10x¾″ long	2.00C-18.33M



ESCUTCHEON PLATE SCREWS

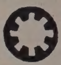
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5182	100	5677	1000	No. 1 x ¼″ long	$11.00M

FLAT STEEL PLATED WASHERS



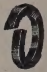
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5090	100	5595	1000	For No. 6 Screw	$2.50M
5091	100	5596	1000	For No. 8 Screw	2.50M
5092	100	5597	1000	For No. 10 Screw	2.50M
5093	100	5603	1000	For ¼″ Screw	3.75M
—	—	5607	1000	For ⅜″ Screw	4.17M

EVERLOCK LOCK WASHERS



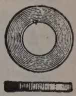
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5085	100	5592	1000	For No. 6 Screw	$3.33M
5086	90	5593	1000	For No. 8 Screw	3.75M
5087	80	5594	1000	For No. 10 Screw	4.17M

KANTLINK SPLIT TYPE LOCKWASHERS



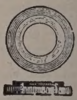
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5080	125	5589	1000	For 6-32 Screw-1/32″ thick	$3.33M
5081	125	5590	1000	For 8-32 Screw-1/32″ thick	3.33M
5082	100	5591	1000	For 10-32 Screw-3/64″ thick	3.33M
5083	75	5602	1000	For ¼-32 Screw-1/16″ thick	4.33M

FLAT FIBRE WASHERS



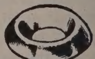
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Diam.	Thick.	Hole	Bulk Dlr. Cost
5100	125	5601	1000	5/16	1/16	3/32	$4.17M
—	—	5612	1000	⅜	1/16	⅛	4.83M
5102	90	5609	1000	½	1/32	5/32	5.00M
—	—	5626	1000	⅜	1/16	5/32	5.00M
5101	100	5605	1000	⅜	1/16	7/32	5.00M
5104	50	5610	1000	½	.020	5/16	5.00M
5105	50	5611	1000	⅝	1/32	⅜	6.42M

FIBRE SHOULDER WASHERS



Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Overall Diam.	Shoulder Diam.	Overall Hgt.	Bulk Dlr. Cost
—	—	5618	100	5/16	3/16	3/32	$5.83M
5111	50	5620	100	7/16	7/32	3/32	6.66M
5110	50	5615	100	⅜	¼	5/64	5.83M
5114	50	5619	100	7/16	5/16	⅛	6.66M
5115	40	5616	100	½	5/16	1/16	5.83M
5112	50	5624	100	½	⅜	3/64	6.66M
5113	50	5628	100	⅝	½	3/32	8.35M

CUP WASHERS

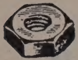


Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Hole Size	Bulk Dlr. Cost
5212	45	5712	100	No. 8	$5.00M
5213	20	5713	100	No. 10	$1.17C-$5.00M

All JARS ARE $.50 each, DEALER COST. BULK QUANTITIES AS SHOWN. ORDER BY Cat. No.

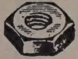
SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS



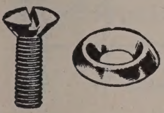
STEEL HEXAGON NUTS NICKEL PLATED

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5070	100	5572	1000	4-36 x ¼	$5.00M
—	—	5573	1000	4-36 x 3/16	5.00M
5074	80	5577	1000	6-32 x 5/16	5.50M
5071	90	5576	1000	6-32 x ¼	5.50M
5072	80	5580	1000	8-32 x 5/16	5.50M
5073	50	5584	1000	10-32 x ⅜	$ .85C- 6.66M
5075	12	5583	1000	¼-20 x 7/16	1.00C- 8.33M
—	—	5579	1000	¼-32 x ⅜	8.00M
5076	10	5575	1000	⅜-32 x ½	2.50C-22.50M



BRASS HEXAGON NUTS NICKEL PLATED

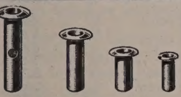
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5564	100	4-36 x 3/16	$ 5.83M
—	—	5566	100	6-32 x ¼	8.33M
—	—	5567	100	6-32 x 5/16	8.35M
—	—	5570	100	8-32 x 5/16	10.00M
—	—	5574	100	⅜-32 x ½	10.83M



RACK SCREW AND WASHER ASSORTMENT

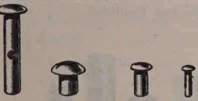
Packed in handy ICA jars. Includes 20 Oval Head Screws (10-32 x ⅝") and 20 Cup Washers (10-32).

No. 5210......................**Dealer Cost $ .50**



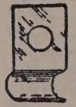
BRASS EYELETS

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Diam. Shank	Length	Bulk Dlr. Cost
5172	80	5672	1000	.115	5/16	$6.00M
5171	90	5671	1000	.125	5/16	5.70M
5170	100	5670	1000	.132	3/16	5.10M



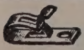
NICKEL PLATED TUBULAR STEEL RIVETS

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Diam. Shank	Length	Bulk Dlr. Cost
—	—	5730	1000	⅛	5/32	$5.00M
5160	100	5663	1000	⅛	3/16	6.00M
5161	80	5664	1000	⅛	¼	6.00M
5162	70	5665	1000	⅛	5/16	6.30M



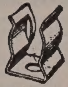
STEEL CABLE CLAMPS PLATED

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description		Bulk Dlr. Cost
				Length	Diam. Bend	
5200	35	5697	1000	¾	5/16	$1.33C-$12.00M
5201	30	5698	1000	15/16	9/16	1.67C- 15.00M



NICKEL PLATED SPRING CLIP

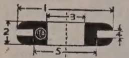
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description		Bulk Dlr. Cost
				Width	Length	
5190	40	5691	100	3/16	11/16	$15.00M
5191	40	5692	100	5/16	13/16	16.67M
5192	15	5693	100	⅜	1	19.16M



MIDGET FUSE CLIPS

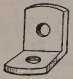
(For ¼" Glass Fuses)

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Height	Length	Bulk Dlr. Cost
5180	35	5681	100	7/16"	¼"	$15.00M



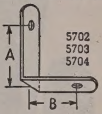
ICA FLEXIBLE RUBBER GROMMETS

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	(3) Hole Size	(1) O.D.	(2) Thickness	(4) Slot	(5) Mtg. Width	Bulk Dlr. Cost
5120	15	5633	100	7/64	½	9/32	3/32	19/64	$2.92C
5121	12	5634	100	⅜	21/32	¼	1/16	7/16	3.08C
5129	15	5683	100	⅜	11/16	9/32	1/16	½	3.00C
5122	15	5635	100	¼	½	5/16	5/32	11/32	3.33C
5123	12	5639	100	7/32	7/16	3/16	1/16	11/32	2.42C
5125	10	5637	100	¼	⅝	⅜	1/16	13/32	2.75C
—	—	5641	100	½	1	⅜	5/32	¾	6.25C
—	—	5642	100	5/16	11/16	¼	1/16	½	3.08C
5127	12	5687	100	5/16	⅝	¼	1/16	⅜	2.75C
AN GROMMET (931-4-7)									
—	—	5684	100	¼	⅝	3/16	1/16	7/16	$5.90C



5705

ANGLE BRACKETS



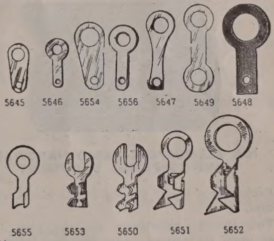
5702
5703
5704

†One Hole Tapped — One Plain.

‡One Slot — One Hole.

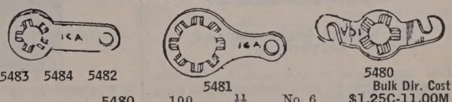
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	A	B	Width	Bulk Dlr. Cost
5205	16	5702	100	9/32	9/32	5/16	$2.08C
5206	15	5703	100	⅜	¾	⅜	2.25C
5207	25	5704	100	9/32	1⅛	⅜	3.50C
—	—	5705	100	5/16	5/16	½ †	4.17C-28.85M
—	—	5706	100	⅜	9/16	⅜ ‡	2.08C
—	—	5707	100	⅝	13/16	⅜ ‡	2.67C

BRASS TINNED TERMINAL LUGS



Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Length	Hole Size	Bulk Dlr. Cost
—	—	5645	100	17/32	No. 8	$ .72C-$4.62M
—	—	5654	100	⅞	¼	.72C- 4.62M
5135	125	5646	100	½	No. 6	.67C- 5.00M
—	—	5656	100	11/16	No. 6	.56C- 4.01M
5136	100	5647	100	⅞	No. 10	.72C- 4.62M
5137	75	5649	100	15/16	No. 8	6.50M
5141	75	5648	100	1	5/16	6.00M
—	—	5655	100	11/16	No. 8	.80C- 4.81M
—	—	5653	100	9/16	No. 6	.80C- 4.81M
5138	100	5650	100	¾	No. 8	.80C- 6.00M
5139	75	5651	100	13/16	No. 10	1.04C- 7.21M
5140	50	5652	100	1 1/16	¼	1.44C-12.66M

EVERLOCK TERMINAL LUGS



						Bulk Dlr. Cost
—	—	5480	100	11/16	No. 6	$1.25C-11.00M
5145	50	5481	100	13/16	¼	1.12C- 8.08M
5146	60	5482	100	¾	No. 4	1.12C- 8.08M
5147	55	5483	100	¾	No. 6	1.12C- 8.08M
5148	50	5484	100	⅞	No. 8	1.12C- 8.08M

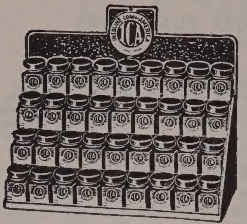
***All JARS ARE $.50 each, DEALER COST. BULK QUANTITIES AS SHOWN. ORDER BY Cat. No.**

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

DISPLAY "SALESMAN" MERCHANDISER OF HARDWARE AND RADIO ESSENTIALS



With this ICA display assortment you can now sell hardware in a packaged form. This assortment includes — all sizes Round Head Machine Screws — Nickel plated nuts to match — Parker-Kalon self-tapping screws — Kant-Link lock washers — Shake-Proof washers — plain washers — flat fibre washers — flexible grommets — lugs — eyelets — rivets — escutcheon plate screws — midget fuse clips — spade bolts — spring clips — clamps — angles — rack screws — and washers, etc.

EACH ITEM INDIVIDUALLY PACKED IN A GLASS DISPLAY JAR. Each jar contains an ample quantity of individual type and size hardware used by dealers, servicemen and amateurs. A complete radio hardware assortment, beautifully put up in these jars and stacked in a handsome durable metal rack which holds 36 jars.

No. 5275—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware, such as screws — nuts — bolts — washers — grommets, etc. .... **Dealer Cost $18.00**

No. 5276—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware and essentials such as fibre washers — lugs — metal washers — grommets — spring clips — fuse clips — angle brackets, etc. .... **Dealer Cost $18.00**

No. 5405—METAL DISPLAY AND UTILITY RACK—Consists of 4 shelves for storing 36 hardware jars — small parts and miscellaneous items. Measures 12″ high by 17¾″ wide by 8″ deep .... **Dealer Cost $4.17**

EVERYMAN'S 1000-PC. RADIO HARDWARE ASSORTMENT

An assortment of hardware commonly used by dealers, servicemen, amateurs, experimenters, etc. Contains 1000 pieces of assorted machine screws — wood screws — nuts — bolts — rivets — eyelets — lugs — lock washers — rubber grommets, etc.

No.	Dlr. Cost
5250	$2.00

ICA ALL-PURPOSE RADIO HARDWARE AND ESSENTIAL EQUIPMENT

Packed in a handy indestructible metal utility case.

This DeLuxe assortment includes such items as knob set screws — escutcheon screws — Parker-Kalon self-tapping screws — rubber grommets — screws — nuts, etc.

No. 5251 .... **Dealer Cost $3.92**

ICA MASTER SCREW AND NUT ASSORTMENT

This assortment is contained in the ICA UTILITY METAL INDESTRUCTIBLE COMPARTMENT CASE. Contains a substantial quantity of all the popular sizes machine screws, wood screws, Parker-Kalon self-tapping screws and nuts to match.

No. 5252 .... **Dealer Cost $4.42**

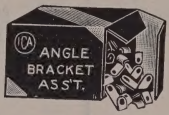
ICA UTILITY GLASS JARS

HARDWARE
5400

For use on service bench to store hardware, etc. 2½″ high x 1½″ deep.

No. 5400
Dealer Cost $9.00C

ICA ANGLE AND BRACKET ASSORTMENT



A complete assortment of 30 popular angles and brackets, nickel plated finish. This combination of angles and brackets has been carefully selected to fill a wide variety of requirements. Packed for ready availability.

No. 5800 .... **Dealer Cost $.60**

ICA RUBBER GROMMET ASSORTMENT

RUBBER
GROMMET
ASS'T.

Assortment contains popular sizes used in the Radio, Electrical and Television field. Carefully selected group to meet many requirements. Packed for ready use.

No. 5810 .... **Dealer Cost $ .60**
Contains 28 Rubber Grommets

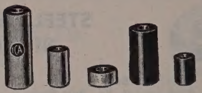
No. 5811 .... **Dealer Cost $1.20**
Contains 60 Rubber Grommets

ICA FIBRE WASHER ASSORTMENT

FIBRE
WASHER
ASS'T.

A representative assortment of fibre washers both plain and shoulder, to fit all popular size screws and bolts. Suitable for wide range of uses. Packaged for ready use.

No. 5805 .... **Dealer Cost $.60**
Contains 100 assorted washers



ICA INSULATED AND BRASS SPACERS AND BUSHINGS

Used for raising sub panels, chassis, condensers, etc. For manufacturers, experimenters and laboratory use.

Made of High Quality Brass

No.	Diameter	Length	Dealer Cost per C
5760	¼″	¼″	$4.00
5761	¼″	⅜″	4.83
5762	¼″	½″	5.66
5763	¼″	¾″	6.58
5767	¼″	1″	7.50
5764	⅜″	¼″	5.83
5765	⅜″	½″	6.66
5766	⅜″	¾″	7.92
5768	⅜″	1″	10.83

Made of Fenoline Insulation

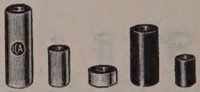
No.	Diameter	Length	Dealer Cost per C
5775	¼″	¼″	3.50
5776	¼″	⅜″	4.00
5777	¼″	½″	4.50
5778	¼″	¾″	5.50
5782	¼″	1″	6.50
5779	⅜″	¼″	4.00
5780	⅜″	½″	5.00
5781	⅜″	¾″	6.00
5783	⅜″	1″	7.50

Threaded Brass Bushings—¼″ Diameter

No.		Length	Dealer Cost per C
5785	for 6/32 screw	¼″	4.83
5786	"	⅜″	5.66
5787	"	½″	6.66
5788	"	¾″	7.50
5794	"	1″	8.35
5790	for 8/32 screw	¼″	5.50
5791	"	⅜″	6.50
5792	"	½″	7.50
5795	"	1″	9.16

SPACER AND BUSHING ASSORTMENTS

Brass and Insulated

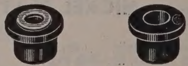


Assortment of 25 spacers and bushings in ¼ & ⅜. Diameters from ¼″ to ¾″. Ideal for raising sub panels, chassis, etc.

No.	Dealer Cost
5260—Insulated Assortment	$1.50
5261—Brass Assortment	1.50

Threaded Brass Bushing Assortments

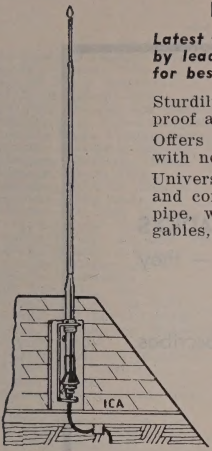
No.	Dealer Cost
5262—16 Assorted Brass bushings. Threaded for 6/32 from ¼″ to ¾″ lengths	1.50
5263—16 Assorted Brass bushings. Threaded for 8/32 from ¼″ to ¾″ lengths	1.50



Molded Bakelite Eyelet Bushing

No.	Dealer Cost
2365—Suitable for either spacer or bushing. With brass eyelet	$2.92C
2366—Same as above, without eyelet	1.92C

MAST ANTENNAS



Latest type home antenna suggested by leading radio set manufacturers for best standard reception results.

Sturdily made of guaranteed rust-proof admiralty brass.

Offers clear, noise-free reception with no power-line interference.

Universal bracket allows permanent and convenient installation on soil pipe, window pipe, chimney, roof, gables, cornices, wall copings, etc.

Includes all accessories for Universal Mounting—Lead-in Wire; Ground Wire; Brackets; Lightning Arrester; Screws; Insulators, etc.

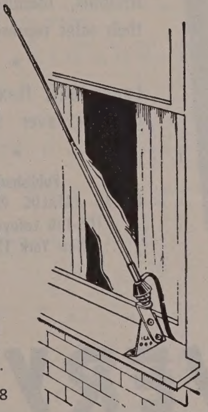
4 Sections—Extends to 12 Feet

No. 4516........Dlr. Cost $4.17

Individually boxed—10 to Standard Carton—Wt. 33 Lbs.

WINDOW ANTENNAS

Easily installed, sturdily made, rust-proof admiralty brass window antennas for homes, apartments, hotels!



Adjustable bracket at base permits focusing in any position for best results. Telescopic rods.

Completely assembled.

Includes mounting flange, insulator and lead-in strip. Individually boxed.

3 Sections—Extends to 96″

No. 4527B..........Dlr. Cost $2.92

3 Sections—Extends to 75″

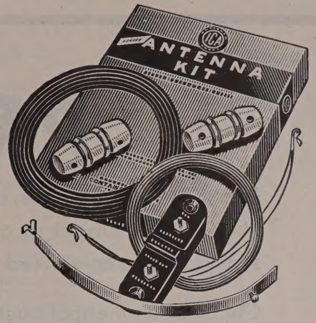
No. 4529............Dlr. Cost $2.50

Extra Length Window Antenna

4 Sections extends to 12 feet. Ideal for DX reception and rural sections where extra length needed for best results.

No. 4513............Dlr. Cost $4.58

INSULINE AERIAL KITS



DE LUXE KIT

Carries all the essentials for a complete antenna installation. Highest grade materials with Underwriters' Approved Lightning Arrester. Includes:

100 ft. Heavy 7 Strand Aerial Wire, 26 gauge — 30 ft. Stranded Copper, Heavily Insulated, Weatherproof Lead-in Wire — 10 ft. Ground Wire, 22 gauge — Ground Clamp — Lead-in Strip — Underwriters' Approved Lightning Arrester — 2 Porcelain Insulators — 2 Nail-it Knobs — Handsome 4-color Box.

No. 654-N..Dealer Cost $1.95

SPECIAL KIT

A quality Antenna Kit that includes all the necessary elements for an efficient aerial set-up. Kit contains:

100 ft. Heavy 7/26 Aerial Wire — 30 ft. Stranded Copper Heavily Insulated, Weatherproofed Lead-in Wire — 10 ft. No. 22 Ground Wire — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Lightning Arrester — Handsome 4-color Box complete with instructions.

No. 653-N..Dealer Cost $1.87

CAPITALIZER KIT

Contains high-grade components for fine performance. Includes:

100 ft. Aerial Wire, 7 Strand, 26 gauge — 30 ft. Insulated Lead-in Wire — Underwriters' Approved Lightning Arrester — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box.

No. 651..Dealer Cost $1.08

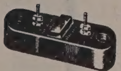
JUNIOR KIT

A utility Kit for satisfactory reception. Kit contains:

100 ft. 7/26 Aerial Wire — 30 ft. Insulated Lead-in Wire — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box with instructions.

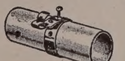
No. 649..Dealer Cost $ .90

LIGHTNING ARRESTER



Black porcelain, measures 3¾″ in length. Non-grounding and weather-proofed. Individually packed.
No. 336
Dealer Cost $.27

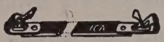
GROUND CLAMP



For a quick but firm connection to ground rod or pipe of varying diameters from ¾″ to 2½″. Equipped with adjustable screw and convenient clip for fast contact.

No. 223............................Dealer Cost $8.35C

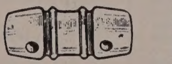
WINDOW LEAD-IN STRIP



Flexible metal strip, ½″ wide, with Duco varnished covering. Fully insulated. Convenient clips soldered to ends.

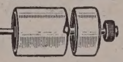
No. 1504.......................Dealer Cost $11.68C

PORCELAIN INSULATOR



Glazed porcelain insulator that will not crack or absorb moisture. Offers highest measure of strain safety.
No. 227
Dealer Cost $6.66C

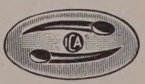
"NAIL-IT" KNOB



Made of durable glazed porcelain. Will not crack or absorb moisture.

No. 229............................Dealer Cost $9.00C

ICA AIRCRAFT TYPE INSULATOR



A strain insulator made of Insulex. Particularly adaptable for aircraft, automobile and TV installation. Two ¼″ mounting holes. Distance between holes ¾″.

No. 2325..........................Dealer Cost $7.83C

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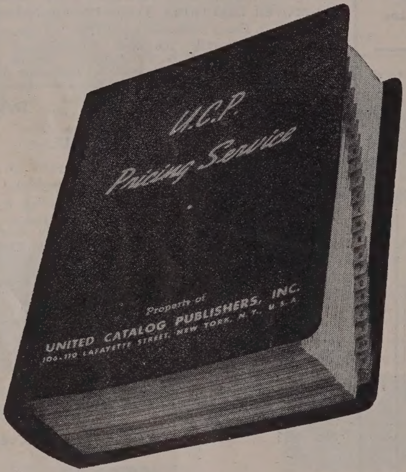
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